SAGE MANAGEMENT CONSULTANTS, LLC

MANAGEMENT AND AFFILIATE AUDITS

OF

SOUTH JERSEY GAS COMPANY

FOR THE

STATE OF NEW JERSEY
BOARD OF PUBLIC UTILITIES

FINAL REPORT
VOLUME II of II

September 27, 2022

SAGE

Management Consultants, LLC

CONTENTS

2. EXECUTIVE MANAGEMENT AND CORPORATE GOVERNANCE

This chapter is presented in six sections:

A. Overview
B. SJG Costs and Rates
C. Executive Compensation
D. Board of Directors Governance
E. Independence and Regulatory Compliance
F. Corporate Governance
G. Findings
H. Recommendations

A. OVERVIEW

SOUTH JERSEY GAS COMPANY

South Jersey Gas Company (SJG), a New Jersey corporation, is an operating public utility company engaged in the purchase, transmission, distribution, and sale of natural gas for residential, commercial, and industrial use. SJG also sells natural gas and pipeline transportation capacity (off-system sales) on a wholesale basis to various customers on the interstate pipeline system and transports natural gas purchased directly from producers or suppliers to their customers.

Following are excerpts of SJG's history from its website:

> *SJG traces its roots back to 1910 when Atlantic City Gas and Water Company merged with Atlantic City Gas Company. A series of acquisitions throughout Atlantic, Camden, Cumberland, Gloucester, and Salem counties eventually led to the creation of South Jersey Gas in 1947.*
>
> *South Jersey Gas returned to its hometown of Atlantic City in late 2018 with the construction of its new headquarters on Atlantic Avenue in the University District as part of the Atlantic City Gateway project.*

Service Territory

SJG's service territory covers approximately 2,500 square miles in the southern part of New Jersey. It includes 117 municipalities throughout the Atlantic, Cape May, Cumberland, and Salem counties and portions of the Burlington, Camden, and Gloucester counties. SJG's territory is near Philadelphia, Pennsylvania and Wilmington, Delaware on the western side, and the shore communities on the eastern side.

SJG has five geographic operating divisions, each with a work center:

- Atlantic
- Cape May
- Cumberland

- Glassboro
- Waterford

Each SJG Division work center houses the physical workers and their co-located support functions for each geographic division: Construction Operations, Field Operations, Utility Services, and the Division clerks. Two different contractors operate a warehouse and a garage at each Division work center.

SJG serves approximately 79% of households within its territory with natural gas. SJG also serves southern New Jersey's diversified industrial base that includes processors of petroleum and agricultural products; chemical, glass, and consumer goods manufacturers; and high technology industrial parks.

Customers

As of December 31, 2019, SJG served 370,693 residential customers, 25,985 commercial customers, and 412 industrial customers. This includes 2019 net additions of 5,684 residential customers and 314 commercial and industrial customers. As of December 31, 2019, SJG served a total of 397,090 residential, commercial, and industrial customers in southern New Jersey, compared with 391,092 customers on December 31, 2018, an increase of 1.5%.

Gas Supply and Throughput

Gas sales, transportation, and capacity release for 2019 amounted to 162.9 million dekatherms (MMDths), of which 55.6 MMDths were firm sales and transportation, 1.1 MMDths were interruptible sales and transportation, and 106.2 MMDths were off-system sales and capacity release. The breakdown of firm sales and transportation includes 46.8% residential, 23.0% commercial, 18.3% industrial, and 11.9% cogeneration and electric generation.

SJG has direct connections to the interstate pipeline systems of Transco and Columbia. SJG secures other long-term services from Dominion, a pipeline upstream of the Transco and Columbia systems. Services provided by Dominion are utilized to deliver gas into either the Transco or Columbia systems for ultimate delivery to SJG.

SJG had two separate Asset Management Agreements (AMAs) with gas marketers that extended through March 31, 2020. SJG released to the marketers its firm transportation rights, and, in return, the marketers managed this capacity and provided SJG with firm deliverability each day. The marketers' contracts were to optimize the capacity released to SJG under these AMA's and pay SJG an asset management fee.

SJG has committed to a purchase of a minimum of 15,000 dekatherms per day (Dths/d) and up to 70,000 Dths/d, from a supplier for a term of ten years at index-based prices. Also, in 2019, SJG entered into a two-year purchase agreement with a producer delivering 5,000 Dths/d at SJG's Leidy Line from November 1, 2019, through October 31, 2021.

Off-System Sales

SJG makes wholesale gas sales to gas marketers for resale and ultimate delivery to end users. During 2019, off-system sales amounted to 14.7 MMDths and capacity release amounted to 91.5 MMDths.

Peaking and Seasonality

SJG operates a peaking facility, located in McKee City, NJ, where it liquefies, stores, and vaporizes liquefied natural gas (LNG) for injection into its distribution system. SJG's LNG facility has a storage capacity equivalent to 434,300 dekatherms (Dths) of natural gas and has an installed capacity to vaporize up to 118,250 Dths of LNG per day for injection into its distribution system.

SJG plans for a winter season peak-day demand on the basis of an average daily temperature of two degrees Fahrenheit or 63 Heating Degree Days. Gas demand on such a design day for the 2019–2020 winter season was estimated to be 572,856 Dths for SJG (excluding industrial customers). SJG projects to have adequate supplies and interstate pipeline entitlements to meet design day requirements. SJG experienced its highest peak-day demand for calendar year 2019 on January 21st.

SJG experiences seasonal fluctuations in sales when selling natural gas for heating purposes. SJG meets these seasonal fluctuations in demand from firm customers by buying and storing gas during the summer months, and by drawing from storage and purchasing supplemental supplies during the heating season. As a result of this seasonality, SJG’s revenues and net income are significantly higher during the first and fourth quarters than during the second and third quarters of the year.

Supplies of natural gas available to SJG that are in excess of the quantity required by those customers who use gas as their sole source of fuel (firm customers) make possible the sale and transportation of gas on an interruptible basis to commercial and industrial customers whose equipment is capable of using natural gas or other fuels, such as fuel oil and propane. The term “interruptible” is used in the sense that deliveries of natural gas may be suspended by SJG at any time if this action is necessary to meet the needs of higher priority customers as described in SJG's tariffs. In 2019, usage by interruptible customers, excluding off-system customers, amounted to 1.1 MMDths, or approximately one percent of the total throughput.

See Chapter 10. Procurement and Purchasing, for more information on gas supply.

Financial and Customer Trends

The following is a summary of SJG’s financial and customer trends:

South Jersey Gas Company Financial and Customer Trends
(In Thousands Except for Ratios and Customers)

	Year Ended December 31						
	2013	2014	2015	2016	2017	2018	2019
Operating Revenues	$446,480	$501,875	$534,290	$461,055	$517,254	$548,000	$569,226
Net Income	$62,236	$66,483	$66,578	$69,045	$72,557	$82,949	$87,394
Property, Plant and Equipment, Net	$1,424,775	$1,589,369	$1,770,766	$1,952,912	$2,154,083	$2,383,459	$2,596,102
Total Assets	$1,909126	$2,185,672	$2,288,204	$2,551,923	$2,865,974	$3,118,236	$3,348,555
Total Customers	362,256	366,854	373,100	377,625	383,633	391,092	397,090
Operating Revenue per Customer	$1,232	$1,368	$1,432	$1,221	$1,348	$1,401	$1,433

SJG's operating revenues increased by 27.6% from 2013 to 2019 ($446 million to $569 million). (SJG's operating revenues dipped in 2016 and 2017 due to lower gas sales in those years.) SJG's net income increased by 40.3% over the same period ($62 million to $87 million).

Net property, plant, and equipment assets increased 85.7% from 2013 to 2019 ($1.4 billion to $2.6 billion) and total assets increased 73.7% ($1.9 billion to $3.3 billion).

SJG's total customer count increased 9.6% from 2013 to 2019 (362,256 to 397,090). The operating revenue per customer increased during the period from $1,232 in 2013 and $1,433 in 2019, an increase of 16.3%.

Dividends

SJG declared and paid cash dividends of $20.0 million in 2017 to SJI. Cash dividends were not declared or paid by SJG to SJI in 2018 or 2019. SJG received a $40.0 million equity contribution from SJI in 2017; there was no equity contribution to SJG in 2018 or 2019.

SOUTH JERSEY UTILITIES, INC.

SJG is a wholly owned subsidiary of SJI Utilities, Inc. (SJIU). Elizabethtown Gas Company (ETG) and Elkton Gas Company (EKG) assets were acquired by SJIU, on July 1, 2018, from Pivotal Utility Holdings, Inc., a subsidiary of Southern Company Gas, for a total consideration of $1.72 billion after the settlement of working capital. SJIU sold the EKG assets to a third-party buyer in 2020. SJG and ETG are the two current local distribution company (LDC) subsidiaries of SJIU.

SOUTH JERSEY INDUSTRIES, INC.

South Jersey Industries, Inc. (SJI), a New Jersey corporation, was formed in 1969 for the purpose of owning and holding all of the outstanding common stock of SJG and acquiring and developing non-utility lines of business. SJI provides a variety of energy-related products and services, primarily through a number of wholly owned subsidiaries:

- SJI Utilities, Inc. (SJIU) is a holding company that owns SJG and ETG.

- South Jersey Energy Company (SJE) acquires and markets electricity to retail end users. In November 2018, the Company sold SJE's retail gas business.
- South Jersey Resources Group, LLC (SJRG) markets natural gas storage, commodity, and transportation assets along with fuel management services on a wholesale basis in the mid-Atlantic, Appalachian, and southern states.
- South Jersey Exploration, LLC (SJEX) owns oil, gas, and mineral rights in the Marcellus Shale region of Pennsylvania.
- Marina Energy, LLC (Marina) develops and operates on-site energy-related projects, such as landfill gas-to-energy production facilities. Marina was divested during 2019.
- South Jersey Energy Service Plus, LLC (SJESP) receives commissions on service contracts from a third party.
- SJI Midstream, LLC (Midstream) invests in infrastructure and other midstream projects, including the PennEast Pipeline Company.
- South Jersey Energy Investments, LLC (SJEI) provides energy procurement and cost reduction services.

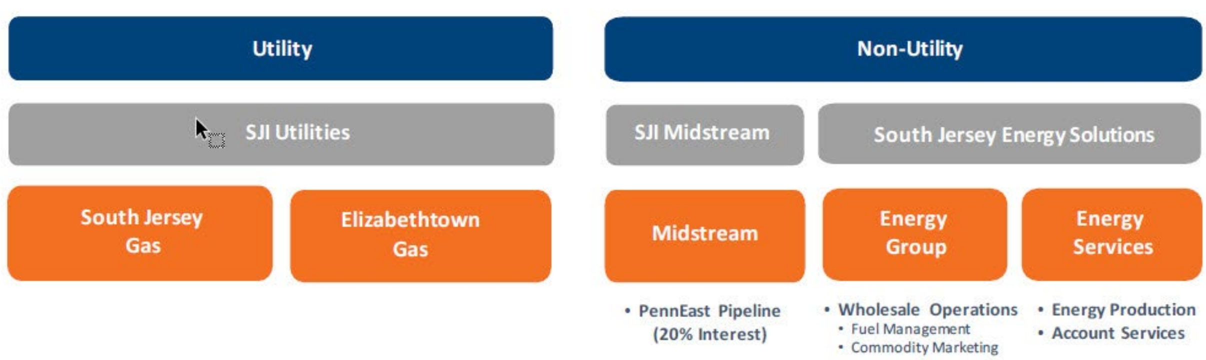
SJE, SJRG, SJEX, Marina, SJESP, Midstream, and SJEI are subsidiaries of South Jersey Energy Solutions, LLC (SJES). SJI established SJES as a direct subsidiary for the purpose of serving as a holding company for all of SJI's non-utility businesses, as SJIU is a direct subsidiary serving as a holding company for SJI's utility businesses.

SJI is also a 50% owner of Millennium Account Services, LLC (Millennium) which is jointly owned by Conectiv Solutions, LLC, an affiliate of Atlantic City Electric Company (ACE). Millennium provides meter reading services for SJG and ACE.

In 2019, SJES, SJI, SJRG, Marina, SJESP, SJE, ETG, ELK, and SJIU all had affiliate transactions with SJG. (See the Affiliate Relationships and Transactions Audit Report, for more information on affiliate transactions.)

The following exhibit is a simplified version of the SJI legal entity organization structure.

SJI Simplified Legal Entity Structure



SJI reports its segment information in six categories as shown in the following exhibit.

SJI 2019 Segment Information

Segment	Operating Revenues	Operating Income/(Loss)
SJI Utilities	$902,308	$217,530
Energy Group	$688,286	$(4,546)
Energy Services	$50,790	$(2,140)
Midstream	$ –	$(154)
Corporate and Services	$44,511	$(9,485)
Intersegment Sales (balancing entry)	(57,269)	$ –
Total	$1,628,626	$201,205
SJIU as a Percent of Total	**55.4%**	**108.1%**

The Energy Group includes wholesale energy, retail gas and other, and retail electric operations. Energy Services includes on-site energy production and appliance service operations.

While SJIU (SJG and ETG) makes up only 55.4% of SJI's revenue, it is 108.1% of its operating income. The non-regulated Wholesale Energy Operations of the Energy Group make up the lion's share of the non-regulated revenue, $607 million of $726 million, or 84%. In 2019, all non-regulated categories of SJI lost money. For individual components of the categories, only Wholesale Energy Operations and Appliance Service Operations made money, $439 thousand and $2.1 million, respectively.

HomeServe is an unaffiliated supplier of appliance warrantee and related products. SJI sold its interest in HomeServe in 2017 but continues to provide sales and billing support for a fee. (See Chapter 7. Customer Service, for more information on HomeServe.) This revenue is reported under Appliance Service Operations and is substantially all of the non-regulated segment's operating income.

SJI has been tilting its business mix toward regulated utilities from non-regulated businesses in recent years. For example, the ETG acquisition added substantially to the SJI regulated utility portfolio. Further, SJI divested several non-regulated businesses between 2013 and 2019, including:

- ACB Energy Partners, LLC
- NBS Energy Partners, LLC
- SBS Energy Partners, LLC
- SJEG retail natural gas assets
- SJESP appliance and warrantee services
- SJESP Plumbing Services
- Marina solar assets
- Marina Thermal Facility (combined power and heat co-generation facility)

B. SJG COSTS AND RATES

BACKGROUND

Oversimplifying, SJG recovers its natural gas delivery and customer service costs from rates charged to customers. Natural gas delivery and customer service rates have two components: the recovery of operations and maintenance (O&M) expenses at a Board of Public Utilities (BPU) approved cost, and a return on investment in utility assets (rate base) at a BPU approved percentage.

The amount of investment in utility assets each year is the prior investment minus depreciation plus new capital expenditures. If additional capital expenditures exceed the depreciation, the rate base increases and, when approved by the BPU, the rates go up to provide the additional return on investment.

Additionally, customers who choose to buy natural gas from SJG are charged a BPU approved at-cost rate that recovers SJG's natural gas commodity and transportation costs.

OPERATIONS AND MAINTENANCE COSTS

The following exhibit shows the SJG O&M expenditures from 2013 through 2019 for the major functions.

SJG Operations and Maintenance Expenditures ($ million)

Function	2013	2014	2015	2016	2017	2018	2019	2019 Percent of Total
Production	9.4	9.5	10.4	10.6	12.6	19.6	23.7	17.0%
Transmission	2.9	3.7	4.6	4.9	5.0	5.6	5.7	4.1%
Distribution	14.2	15.1	16.9	18.5	19.2	24.1	20.9	15.0%
Customer Accounts and Services	14.8	21.1	28.3	20.6	20.6	22.7	22.3	16.0%
Conservation Program	15.9	24.8	21.2	9.2	7.0	14.1	13.7	9.8%
Sales Expenses	1.6	1.9	1.2	1.7	1.9	2.1	1.5	1.1%
Energy Efficiency Programs	4.5	4.2	3.6	2.7	1.3	1.8	3.3	2.4%
Administrative and General	34.5	34.9	37.1	44.6	51.1	52.0	48.5	34.7%
Total Actual Expenditures	**97.9**	**115.2**	**123.4**	**112.8**	**118.7**	**142.0**	**139.6**	**100.0%**
Budget	95.4	107.7	106.0	115.5	124.5	142.2	145.2	
Budget Variance	-2.6%	-7.0%	-16.4%	+2.3%	+4.7%	+0.1%	+3.9%	

From 2013 to 2019, total annual O&M expenditures increased 42.6% ($97.9 million to $139.6 million) or by a simple average of 7% per year.

The largest category of O&M expenditures in 2019 was Administrative and General at 34.7% of the total expenditures, followed by Production, Customer Accounts and Services, Distribution, Conservation Program, Transmission, Energy Efficiency Programs, and Sales Expenses.

(See the individual function chapters, such as Chapter 6, Distribution and Operational Management, and Chapter 7, Customer Service, for more information on O&M expenditures.)

While SJG ran negative budget variances from 2013 to 2015, each of the years since 2015 have had positive budget variances (actual spending was less than budgeted).

CHARGES FROM SJI AND SJIU

SJG receives substantial executive and shared services support from both SJI and SJIU. The following exhibit shows the trends in those charges from SJI and SJIU from 2013 through 2019.

SJI and SJIU Charges to SJG ($ million)

Category	2013	2014	2015	2016	2017	2018	2019	2013–2019 Percent Change
SJI Charges to SJG	30.1	29.5	45.1	53.1	60.2	50.8	73.1	
SJIU Charges to SJG (beginning 4/19)							4.4	
Total SJI and SJIU Charges to SJG	**30.1**	**29.5**	**45.1**	**53.1**	**60.2**	**50.8**	**77.5**	157%

From 2013 to 2019, the charges more than doubled from $30.1 million to $77.5 million. (See Chapter 8, Affiliate Relationships, for more information on affiliate charges.)

CAPITAL EXPENDITURES

The following exhibit shows the annual SJG capital expenditures from 2013 through 2019.

SJG Capital Expenditures ($ million)

Category	2013	2014	2015	2016	2017	2018	2019	2019 Percent of Total
System Operations	139.3	165.3	190.7	200.9	231.2	207.9	253.2	95%
Facilities and Fleet	4.3	4.1	6.6	14.4	19.8	42.2	7.2	3%
Information Technology	29.2	33.6	24.7	5.6	7.9	6.5	6.5	2%
Total Actual Capital Expenditures	**172.8**	**203.0**	**222.0**	**220.9**	**258.9**	**256.6**	**266.9**	**100%**
Total Budget	177.2	235.5	233.7	232.3	249.7	276.8	277.3	
Budget Variance	2.5%	13.8%	5.0%	4.9%	-3.7%	7.3%	3.7%	

From 2013 to 2019, total capital expenditures increased 54.5% ($172.8 million to $266.9 million), or a simple average of 9% per year. In 2019, capital expenditures for system operations were 95% of the total capital expenditures, followed by facilities and fleet (3%) and information technology (2%). In all years except 2017, SJG underspent the capital budget.

(See Chapter 6. Distribution and Operational Management, for more information on capital expenditures.)

GAS COSTS

Gas costs are covered in detail in Chapter 10, Procurement and Purchasing. However, from 2013 to 2019, the Basic Gas Supply Service (BGSS) charge per therm decreased from $.532500 to $.447769, a decrease of 16%.

COST RECOVERY AND RATE MECHANISMS

SJG recovers its costs from customers through base rates and several other rate mechanisms. Following is an abbreviated explanation of its SJG's rate mechanisms and other regulatory matters as approved by the New Jersey Board of Public Utilities (BPU) as reported in the SJI 2019 SEC Form 10-K.

> *Basic Gas Supply Service (BGSS) Clause - The BGSS price structure allows SJG to recover all prudently incurred gas costs. Changes to BGSS charges to customers can occur either monthly or periodically (annually). Monthly changes in BGSS charges are applicable to large use customers and are pursuant to a BPU-approved formula based on commodity market prices. Periodic changes in BGSS charges are applicable to lower usage customers, which include all of SJG's residential customers, and those rates are evaluated at least annually by the BPU. However, to some extent, more frequent rate changes to the periodic BGSS are allowed. SJG collects gas costs from customers on a forecasted basis and defers periodic over/under recoveries to the following BGSS year, which runs from October 1 through September 30.*
>
> *Conservation Incentive Program (CIP) - The primary purpose of the CIP is to promote conservation efforts, without negatively impacting financial stability, and to base SJG's profit margin on the number of customers rather than the amount of natural gas distributed to customers. Each CIP year begins October 1 and ends September 30 of the subsequent year. On a monthly basis during the CIP year, SJG records adjustments to earnings based on weather and customer usage factors, as incurred. On an annual basis, SJG makes filings with the BPU to review and approve amounts recorded under the CIP. BPU-approved cash inflows or outflows generally will not begin until the next CIP year.*
>
> *Accelerated Infrastructure Replacement Program (AIRPII) - In October 2016, the BPU approved an extension of the AIRP for a five-year period ("AIRP II"), commencing October 1, 2016, with authorized investments of up to $302.5 million to continue replacing cast iron and unprotected bare steel mains and associated services. Pursuant to the BPU Order, AIRP II investments are to be recovered through annual base rate adjustments.*
>
> *Storm Hardening Accelerated Replacement Program (SHARP II) - In May 2018, the BPU approved the second phase of the SHARP for a three-year period ("SHARP II"). SHARP II is focused on four system enhancement projects within the coastal regions. SHARP II is for $100.3 million recoverable through annual base rate adjustments.*

<u>Energy Efficiency Tracker (EET)</u> - The BPU has authorized SJG to continue to offer Energy Efficiency Programs (EEPs). The Energy Efficiency Tracker (EET) is a rate mechanism that measures energy savings from EEP incentives to residential and commercial customers. In June 2019, SJG filed its annual EET rate adjustment petition, requesting a $1.3 million increase in revenues to continue recovering the costs of, and the allowed return on, investments associated with its EEPs. This was approved by the BPU in January 2020, effective February 1, 2020.

<u>Societal Benefits Clause (SBC)</u> - The SBC allows SJG to recover costs related to several BPU-mandated programs. Within the SBC are a Remediation Adjustment Clause (RAC), the Clean Energy Program (CLEP) and the Statewide Universal Service Fund (USF) program. SBC adjustments affect revenue and cash flows but do not directly affect earnings as related costs are deferred and recovered through rates on an on-going basis.

<u>Remediation Adjustment Clause (RAC)</u> - The RAC recovers environmental remediation costs of 12 former gas manufacturing plants. The BPU allows SJG to recover such costs over seven-year amortization periods. (See Chapter 22, Remediation Costs, for more information on environmental remediation expenditures.)

<u>Clean Energy Program (CLEP)</u> - The CLEP recovers costs associated with SJG's energy efficiency and renewable energy programs required under the New Jersey Clean Energy Program.

<u>Statewide Universal Service Fund (USF)</u> - The USF is a statewide program through which funds for the USF and Lifeline Credit and Tenants Assistance Programs are collected from customers of all New Jersey electric and gas utilities. USF adjustments affect cash flows but do not directly affect revenue or earnings as related costs are deferred and recovered through rates on an on-going basis.

Other Regulatory Matters -

Unbundling - This allows all natural gas consumers to select their natural gas commodity supplier. As of December 31, 2019, 21,693 of SJG's customers were purchasing their gas commodity from someone other than SJG. Customers choosing to purchase natural gas from providers other than the utility are charged for the cost of gas by the marketer. While customer choice can reduce utility revenues, it does not negatively affect SJG's net income or financial condition as the resulting decrease in utility revenues is offset by a corresponding decrease in gas costs. The BPU continues to allow for full recovery of prudently incurred natural gas costs through the BGSS. Unbundling did not change the fact that SJG still recovers cost of service, including certain deferred costs, through base rates.

Pipeline Integrity Costs - SJG is permitted to defer and recover incremental costs incurred as a result of Pipeline Integrity Management regulations, which are aimed at enhancing public safety and reliability. The regulations require that utilities use a comprehensive analysis to assess, evaluate, repair and validate the integrity of certain transmission lines in the event of a leak or failure. SJG is authorized to *defer future program costs, including related carrying costs, for recovery in the next base rate case proceeding, subject to review by the BPU.*

Tax Reform - In March 2018, SJG filed a petition with the BPU for a change in rates, customer refund and rider associated with the implementation of Tax Reform. The BPU subsequently approved an interim rate reduction, effective April 1, 2018, to reflect the change in the corporate tax rate within SJG's base rates. Annual true-up filings are required pursuant to Rider "H" of SJG's tariff.

RESIDENTIAL CUSTOMER BILLS

SJG bills to residential customers include the following line items:

- Customer Charge – a flat rate
- Delivery Charge – usage times a flat rate
- BGSS Gas Charge – usage times a flat rate or Marketer Charge if the customer has selected a gas supplier other than SJG
- If applicable, Plan(s) from HomeServe

The Delivery Charge is a compilation of several tariffed rates:

- Base Rate (which includes AIRPII and SHARPII)
- Transportation Initiation Clause (TIC)
- Clean Energy Program
- Remediation Adjustment Clause
- Universal Service Fund
- Conservation Incentive Program
- Energy Efficiency Tracker
- 2017 Tax Act Credit
- Balancing Service Clause (BSC)

C. EXECUTIVE COMPENSATION

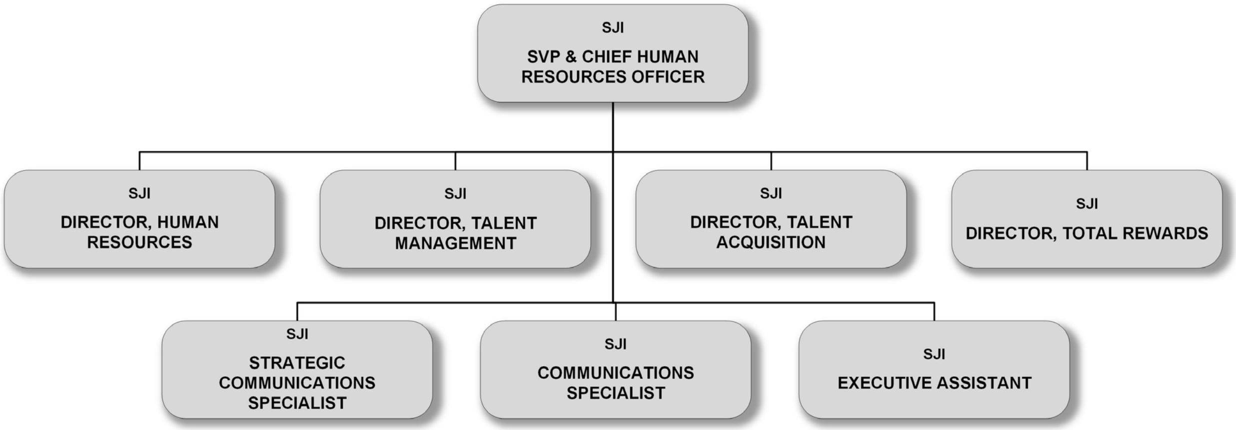
BACKGROUND

The Executive Compensation organizational function is part of the Human Resources (HR) department. For a discussion of the other HR functions see Chapter 12. Human Resources.

Organization and Staffing

At the start of the audit, the HR department was led by the SVP and Chief Human Resources Officer with eight direct reports. The department was undergoing organizational and staffing changes and by the end of 2020, the HR organization was structured as shown in the following exhibit.

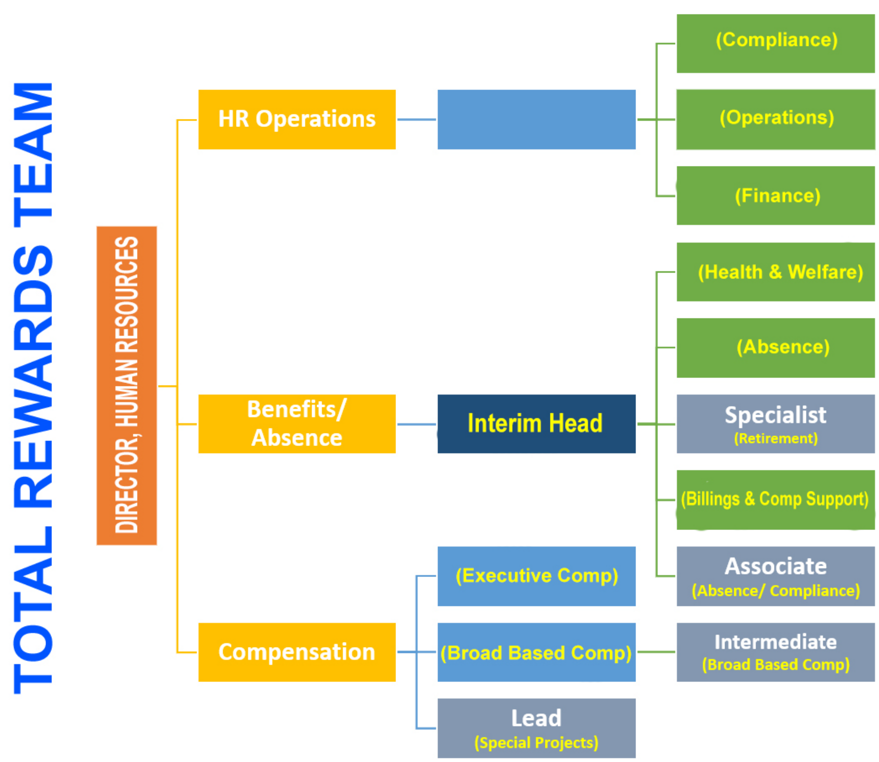
SJI Human Resources Organization Structure



At the beginning of 2021, a new Director was hired with consolidated responsibilities for HR Operations, Compensation, and Benefits, now organized as the Total Rewards Team. The Director continues to report directly to the SVP and Chief Human Resources Officer.

As shown in the chart below, the Executive Compensation Business Partner is part of the Compensation team and is responsible for the Executive Compensation Program for Executive Officers and certain Non-Executive Officers (NEO). The Compensation Team function is one of the three teams reporting to the Director of Total Rewards. Another Compensation Team member is responsible for the Broad-Based Compensation program for other company managers.

SJI Total Rewards Team Structure



The Executive Compensation Business Partner Position is responsible for all executive compensation programs for SJI. This includes cash incentive plans, long-term incentive compensation plan, executive supplemental benefits, executive deferred incentive compensation plan, and perquisite programs. The Business Partner leads:

- The development and coordination of materials for presentation to senior management and to the Compensation Committee of the Board of Directors
- Coordinates and provides information in support of Proxy filings, including the Compensation Discussion and Analysis (CD&A) and Compensation Tables
- Makes requests to third parties for data
- Responds to inquiries from internal departments.

Executive Compensation Program

The Executive Compensation program is cyclical during the year. The Compensation Committee of the Board of Directors meets in November to review the market data analysis and proposed annual program report prepared by Pearl Meyer, an external consultant.

Pearl Meyer serves as the independent consulting company to the Compensation Committee of the Board of Directors and provides counsel and advice on compensation programs for Executive Officers. Pearl Meyer is an international firm that provides a number of compensation and governance services, including surveys, analytics, and strategic and compliance advice for the energy and other industries.

The Pearl Meyer report includes target compensation levels for the five Executive Officers relative to market data and a review of SJI's executive compensation program features relative to the Proxy Peer Group practices, as well as other analyses. Pearl Meyer also conducts the annual peer group analysis that is submitted in June.

The Executive Compensation program includes the five Senior Executive Officers:

- President and CEO, SJI
- SVP and President, SJIU
- SVP and Chief Financial Officer, SJI
- SVP, SJI and President and COO, SJG
- SVP and Chief Human Resources Officer, SJI

Twelve NEOs are also subject to the program:

- Controller, SJES
- VP, Chief Information Officer
- VP, Investor Relations
- VP, SJES
- VP, Business Development
- President and COO, ETG and Elkton Gas
- VP, Accounting
- VP, Financial Planning and Analysis and Treasurer

- VP, Risk and Assurance
- VP, Enterprise Project Management
- VP, South Jersey Gas Operations
- VP, General Council

SJI identified the following Executive Compensation program principles:

- Alignment with shareholder interests: The program emphasizes variable compensation, with a focus on equity-based compensation, as a valuable means of aligning the interests of our NEOs with those of our shareholders.
- Accountability for Performance: The program directly and measurably links pay to business and individual performance with a substantial portion of compensation designed to create incentives for superior performance and meaningful consequences for below target performance.
- Support our Business Goals: The program drives short- and long-term financial, operational, and strategic objectives and rewards executives for performance relative to the overall company performance.
- Competition Among Peers: The program enables SJI to attract and retain key executives by providing a total compensation program that is competitive with the market in which SJI competes for executive talent.

The Executive Compensation package consists of Base Salary, an Annual Incentive Plan (AIP), and a Long-Term Incentive Plan (LTIP). The three components are briefly defined as:

- Base Salary – A fixed cash opportunity: Salary reflects role, level of position, responsibilities, experience, and market competitiveness.
- Annual Incentive Plan (AIP) – An annual at-risk cash compensation program with variable payout based on achieving quantitative company goals set at the beginning of the year. The program considers two components for final bonus, company results and achievement of individual Balanced Scorecard results.
- Long Term Incentive Plan (LTIP) – A restricted stock unit program with both performance-based restricted stock units (PBRSUs) and time-based restricted stock units (TBRSUs).

The LTIP is comprised of 70 employees from both the regulated and unregulated affiliates. These employees include Executive Officers, NEOs, Vice Presidents, and (employee) Directors. Eleven, or about 15.7%, of the 70 are SJG employees. The SJG workforce of about 450 is about 41% of the SJI total workforce of 1,100.

Base Salary. The Compensation Committee determines base salaries for the Executive Officers each year by considering multiple factors including breadth, scope, and complexity of the role; internal equity; succession planning and retention objectives; market positioning; and budget. The Committee also considers the analyses provided by Pearl Meyer, which include proxy peer data and survey data of similar positions.

The Executive Officers, with final approval from the CEO, determine base salaries for the NEOs each year based on the same criteria as above for the Executive Officers. Pearl Meyer provides market data for each officer's position.

Employee base salary compensation is reviewed on an annual basis and merit increases are based on budget, market competitiveness, and individual performance. Individual increases are based on both the Performance Management Program (PMP) rating and the employee's placement in the salary range. The PMP Ratings include: Exceeds, Meets and Exceeds, Successfully Meets, Partially Meets, and Fails to Meet. Salary Placement Includes: Below Minimum, 1st Quartile, 2nd Quartile, 3rd Quartile, 4th Quartile, and Above Maximum. For further details on the Performance Management Program, see Chapter 12 Human Resources.

Annual Incentive Plan. The AIP targets are a percentage of the officer's salary. Target percentages are pre-determined by level and are based on market competitiveness. Awards are based on meeting the goals of the AIP Corporate Balanced Scorecard (BSC), weighted 70% on the achievement of certain pre-determined financial metrics; and 30% on the achievement of certain pre-determined stakeholder metrics (Customer, Safety, and Strategic). Individual payouts are based on BSC results and a performance modifier based on the officer's individual annual performance rating. Individual performance can modify the award up to 25%.

The AIP payout is the result of taking the product of the Individual AIP target, the AIP BSC results, and the Individual Performance Modifier. The AIP payout is maxed at 150% of target. There are two payout conditions: (1) If relative Total Shareholder Return (rTSR) is less than SJI's Peer Group 25th percentile, then AIP is capped at 100% of target and (2) if SJI misses all of its AIP BSC threshold metrics, there will be a zero AIP payout.

When Pearl Meyer submitted its Executive Compensation Program Review in November 2020, it observed that "The AIP payout is capped at 100% if SJI's 1-year relative TSR does not achieve the 25th percentile versus Peers. SJI adopted this provision in response to shareholder feedback. This provision is unusual but is considered shareholder friendly by shareholders and proxy advisory firm policies. Still, SJI should keep an eye on this provision to ensure it produces results consistent with the intended purpose."

Long Term Incentive Plan. The LTIP awards stock based on financial performance relative to the benchmarking peer group's financial performance. The LTIP Plan has the following features:

- LTIP targets are expressed as a total dollar value based on a percentage of the officer's base salary. Target percentages are pre-determined by level and are based on market competitiveness.
- Restricted stock grants are awarded on an annual basis and are paid three years out.
- Restricted stock grants include both performance-based restricted stock units (PRSUs) and time-based restricted stock units (TRSUs). PRSUs are earned based on the achievement of certain financial performance measures and earned upon the completion of a three-year performance period, with vesting occurring once at

the end of the three-year period. TRSUs vest in three equal installments, subject to the officer being employed by the Company on each date.

- Weighting and metrics are based on level:
  - Executive Officer: Mix: 70% PRSUs and 30% TRSUs. Metrics and Weights: 50% three-year relative TSR (rTSR) against peer group and 50% three-year Earnings Per Share Compound Annual Growth Rate (EPS CAGR)
  - Officer: Mix: 50% PRSUs and 50% TRSUs; Metrics and Weights: EPS CAGR
- Payout condition: If three-year rTSR does not achieve threshold performance versus SJI Peers, any payout tied to EPS CAGR is capped at 50% of target

SJI modified the LTIP for 2020. The changes from the 2019 LTIP to the 2020 Program include:

A. 2020 rTSR threshold moved from 35^{th} percentile to 25^{th} percentile and payout for achievement at threshold moved from 50% of target to 40% of target.

B. In 2020, SJI added a modifier that capped total payout at 50% of target if three-year rTSR does not meet threshold. Pearl Meyer, stated that by lowering the percentile rank threshold to 25%, SJI could more easily achieve that performance level, and, by lowering the Payout (Percent of Target Performance Restricted Stock Unit (RSU) to 40%, the threshold reduction effects may be somewhat offset. SAGE notes that when Pearl Meyer submitted its Executive Compensation Program Review in November 2020, it observed that “the rTSR modifier is considered shareholder and proxy advisory firm friendly, but it is not common, and that SJI should monitor this provision to ensure it produces results consistent with the intended purpose.”

Retirement/Pension Program. SJI has three plans associated with its executive retirement/pension program:

- Qualified Pension Plan – Eligible participants must have been hired before July 1, 2003.
- Non-Qualified Supplemental Retirement Plan (SERP) – Employees who became officers prior to April 30, 2016 are covered by a supplemental retirement plan upon attaining age 50. Compensation under the SERP is considered as base salary plus annual incentives. In 2016, the SERP was closed to new participants.
- Non-Qualified Defined Contribution Retirement Plan (DCRP) – Beginning May 1, 2016, newly appointed officers may participate in the DCRP. Each year, officers in the DCRP may receive an “Employer Credit” which is a company contribution that is a percentage of annual cash compensation ranging from 8–12% of annual cash compensation (base salary and AIP payout) based on the individual’s age. DCRP account balances are not vested until age 50. Plan participants that terminate (voluntarily or involuntarily) prior to age 50 forfeit their entire account balance.

The 2020 Executive Compensation Program Review submitted in September 2020 determined that average target Total Direct Compensation (TDC) for the five Executive Officers was positioned below the market median (36th percentile), but within the competitive range (minus 13% below median). TDC includes base salary, AIP compensation, and LTIP distributions. Average base salary and target total cash for these five Executive Officers were positioned within competitive range, while the average target LTIP fell slightly below the competitive range.

With respect to the NEOs, the 2020 Executive Compensation Review made preliminary recommendations for Target Pay Levels:

- Base Salaries: SJI could consider modest merit increases of approximately three percent for all NEOs for 2021 to ensure SJI base salaries remain competitive, assuming company and individual performance meets expectations.
- Incentive Targets: No changes to NEOs' AIP targets since these are generally aligned with market practices, but SJI could consider increasing the SVP and Chief Financial Officer's 2021 LTI target from 85% to 100% of base salary to be more in line with market.
- 2022 Compensation: Assuming SJI receives a strong 2021 Say-on-Pay result and company and individual performance meet expectations, recommended the Compensation Committee consider more aggressive 2022 pay actions to bring total direct compensation to median levels for NEOs that lag the market (e.g., increases to base salaries and LTI targets).

Peer Utility Benchmarking. Pearl Meyer was asked by the Compensation Committee to review SJI's current peer group for the 2020 Executive and Non-Employee Director (NED) compensation studies; the firm submitted its 2020 Peer Group Review document in June 2020.

The current peer Group is comprised of 12 gas and other utility companies with generally comparable revenue, total assets, and market capitalization:

- Atmos Energy Corp.
- Avista Corp.
- Black Hills Corp.
- National Fuel Gas Co.
- New Jersey Resources Corp.
- Northwest Natural Gas Co.
- NorthWestern Corp.
- ONE Gas, Inc.
- PNM Resources, Inc.
- Portland General Electric Co.
- Southwest Gas Corp.
- Spire, Inc.

The median revenue of the peer group was $1.63 billion (compared to $1.56 billion for SJI) and the median market cap was $3.45 billion (compared to $2.38 billion for SJI).

The Pearl Meyer 2020 document identified discussion items for SJI's Management and Compensation Committee in the categories of company type and geography, size parameters, industry/business mix, external considerations, and number of peers. Pearl

Meyer suggested that SJI may want to remove PNM Resources and Portland General Electric Company since they are either primarily or 100% engaged in electricity and listed other potential peers that could be added.

Stock Ownership Requirements. As reported in the SJI's Proxy statement, stock ownership requirements were created in 2001 and then the Board of Directors increased the requirements for 2015:

- The CEO stock ownership guideline is five times the CEO's annual base salary.
- All other executive officers are required to own shares of Company Common Stock with a market value equal to two times their annual salary.

SJI reported in 2020 that, as of December 31, 2019, the CEO and all other executive officers had complied with the ownership guidelines. Other NEOs are required to own shares of SJI common stock with a market value equal to their annual base salary. Shares owned outright will be combined with vested restricted shares awarded under the Stock-Based Compensation Plan and vested. Shares beneficially owned through any employee benefit plan are used for purposes of determining compliance with the stock ownership requirement for officers.

In November 2019, the period of six years following their election or promotion to a new position as an officer to meet these minimum stock ownership requirements was eliminated. Instead, all officers of SJI are required to retain at least 50% of vested and/or earned shares, net of taxes, until their new stock ownership guideline has been met.

D. BOARD OF DIRECTORS GOVERNANCE

BACKGROUND

SJI Board of Directors

The Board of Directors for SJI is responsible for SJI and all of its subsidiaries. Because SJIU, SJG, and ETG are separate legal entities, they are required to have boards of directors as well, as do several non-regulated subsidiaries. However, the SJI Board of Directors provides the principal governance for SJG. The mission of the SJI Board of Directors is:

> *The Board of Directors (Board), which is elected by SJI's shareholders, is the ultimate decision-making body of the Company except with respect to those matters reserved to the shareholders. The Board selects the senior management team, which is charged with conduct of the Company's business. Having selected the senior management team, the Board acts as an advisor and counselor to senior management and ultimately monitors its performance.*

The Board of Directors for SJI is composed of 11 members at the time of this writing. However, it is normally a ten-person board. A new member was added in 2020 to replace a retiring member; however, the retiring member postponed retirement so the board has 11 members. When the extra member does retire, the Board will likely return to its normal ten members.

The only SJI executive Board member is the SJI CEO. The Board Chair is an independent director. The board has six committees:

- Executive – five members.

  The purpose of the Executive Committee is to exercise the powers and authority of the Board of Directors in the management of the business and affairs of the Company to the extent permitted by law and by the Bylaws of the Company. The Committee shall keep full and fair account of its transactions. All actions by the Committee shall be reported to the Board of Directors at its next meeting succeeding each action.

- Audit – five members.

  The purpose of the Audit Committee is to assist the Board of Directors in fulfilling its responsibility for oversight of the quality and integrity of the accounting, auditing and financial reporting practices of the Company. The Committee's purpose is to oversee the Company's accounting and financial process by reviewing: the financial reports and other financial information provided to any governmental body or the public; the Company's systems of internal controls regarding finance, accounting, legal compliance and ethical standards that management and the Board have established; and the Company's auditing, accounting and financial reporting processes generally. Consistent with this function, the Committee should encourage continuous improvement of, and should foster adherence to, the Company's policies, procedures and practices at all levels. The Audit Committee reviews the 10-K with the independent auditors and management. The Audit Committee reviews with the independent auditors and management the 10-Q's and earnings pronouncements prior to release. The Audit Committee regularly meets in executive session with the independent auditors, management and internal audit. The Audit Committee engages the independent auditors, and annually reviews their independence, work and their fees. The Audit Committee approves all permitted non-audit work of independent auditors. The Audit Committee regularly meets with the independent auditor regarding critical accounting policies and practices.

- Compensation – four members.

  The purpose of the Compensation Committee is to carry out the responsibilities delegated by the Board of Directors relating to the review and determination of executive compensation for the CEO and the Executive Officers, as well as the structure and performance of significant, long-term employee defined benefits and defined contribution plans. Consistent with this function, the Committee should encourage continuous improvement of, and adherence to the Company's policies, procedures and practices at all levels. The Compensation Committee, in conjunction with the full Board, conducts annual formal written evaluations of the CEO.

- Environmental, Social, and Governance – five members.

  The purpose of the Environmental, Social, Governance (ESG) Committee [formerly the Corporate Governance Committee] is to assist the Board of Directors *by providing oversight, monitoring, and guidance on matters related to corporate and social citizenship, public and legal policy, environmental and climate stewardship and compliance, political and regulatory affairs, sustainability, quality of work life, human capital management, diversity and the economic and social vitality of the communities and markets in which the Company operates.*

- Nominating and Governance – four members.

  The purpose of the Governance Committee is to: assist the Board of Directors (Board) in reviewing and recommending Board governance policy, organization, and practice; identify, assess and recruit candidates for Board membership; and review and recommend Director compensation.

- Strategy and Finance – five members.

  The purpose of the Strategy & Finance Committee is to assist the Board of Directors (Board) in fulfilling its oversight of the Company's strategic, financial and financing plans

Each Board member serves on two to four committees, except the SJI CEO, who only serves on the Executive Committee. As of December 31, 2019, the Board Chair was a voting member of one committee and an ex officio member of the other five committees. The Board committee assignments are rotated among the board members from time to time but with an effort to match board member backgrounds to committee assignments.

Full Board meeting are scheduled quarterly, and all members are expected to attend. During the pandemic, the Board meetings have been held virtually. Normally, they are held in person. The Board meetings normally begin with a Board-member-only dinner on Wednesday night and continue through Thursday and Friday, including a dinner with senior management on Thursday evening. All committees meet at each quarterly board meeting and some meet between full board meetings for specific purposes such as approving SEC 10-K and 10-Q filings. All of the committee meetings are "open door" and Board members not on the committee are encouraged to attend but cannot vote. Because there are two committee meetings scheduled concurrently, all members cannot attend every committee meeting.

New Board members go through an organized orientation program and the Board members have an annual continuing education requirement. At the time of this writing, there are two new board members going through the orientation program and all members were current with their continuing education requirements.

All Board committees have written charters that have been recently updated to comport with Securities and Exchange Commission (SEC) requirements, New York Stock Exchange rules, and corporate governance best practices. The SJI Board annually conducts self-evaluations including evaluations of the Board and each of the Audit, Compensation, Corporate Responsibility, Governance, and Strategy and Finance Committees.

SJI Board Member Compensation

It is the responsibility of the Governance Committee, in consultation with its independent executive compensation consultants, to review and approve the total Board compensation package annually to ensure that the compensation is competitive so that the Company may attract and maintain quality Board members.

Following is a summary of the rates of compensation for Board member service as of December 31, 2019.

SJI Board Member Compensation Rates ($)

Compensation	Amount
Cash—Annual Retainer for Board Service	65,000
Restricted Stock—awarded in January (1)	105,000
Independent Subsidiary Chairman Retainer (2)	8,000
Non-Executive Chairman—stock and cash retainer (3)	80,000
Annual Committee Chair Fees (4):	
Audit	15,000
Compensation	12,500
Corporate Responsibility (now ESG)	7,500
Governance	8,750
Risk	7,500
Strategy and Finance	7,500
Annual Committee Member Fees (4):	
Audit	15,000
Compensation	10,000
Corporate Responsibility (now ESG)	5,000
Governance	7,500
Risk	5,000
Strategy and Finance	7,500
Non-Executive Chairman	25,000

In 2020, Board Members were paid fees, were granted stock awards, and received group life and accident protection insurance. For members who served all of 2020, total compensation ranged from $188 thousand to $228 thousand with an approximate average of $204 thousand. On average, board member compensation is approximately 48% fees and 52% stock awards.

SJIU, SJG, and ETG Boards of Directors

The SJIU, SJG, and ETG boards all have the same five members. The SJI Board Chair, who has substantial electric and gas utility management experience, also serves as the Chair of the SJIU, SJG, and ETG boards. A second SJI board member who has substantial gas utility management and regulatory experience also serves on the boards. The three company executive board members are the SJI CFO, SJIU President, and the SJG President. The SJI CEO is not a SJIU, SJG, or ETG board member.

The SJIU, SJG, and ETG board meetings are held quarterly. While the principal purpose is compliance with SEC and NJ requirements for corporations, the board meetings include a performance review. The meetings take an hour to an hour and a half.

E. INDEPENDENCE AND REGULATORY COMPLIANCE

BACKGROUND

External Audit

The Audit Committee of the SJI Board of Directors (SJI BOD) has a number of different responsibilities related to auditing functions and independence. The Audit Committee Charter (available on the SJI website) states the purpose of the Audit Committee as assisting the SJI BOD in its oversight of the quality and integrity of the accounting, auditing, and financial reporting practices of the Company and reviewing (1) the financial reports and other financial information provided to any governmental body or the public; (2) the Company's systems of internal controls regarding finance, accounting, legal compliance, and ethical standards that management and the Board have established; and (3) the Company's auditing, accounting, and financial reporting processes generally. Additionally, the Committee should encourage continuous improvement of, and adherence to, the Company's policies, procedures, and practices at all levels.

The Audit Committee's primary responsibilities include:

- Serving as an independent and objective party to monitor the Company's financial reporting process and internal control system
- Serving as an independent and objective party to monitor the following risk areas: (1) financial reporting process, (2) financial disclosures, (3) financial controls, and (4) accounting/taxes
- Reviewing and appraising the audit efforts of the Company's independent accountants and internal auditing department
- Providing an open avenue of communication among the independent accountants, financial and senior management, the internal auditing department, and the Board of Directors
- Providing an open avenue of communication regarding ethical behavior

Concerning external auditors specifically, the Audit Committee function is to:

- Recommend the selection of the independent accountants, considering independence and effectiveness.
- Approve the fees and other compensation to be paid to the independent accountants.
- Set clear hiring policies for employees or former employees of the independent auditors.
- On an annual basis, the Committee should review and discuss with the accountants all significant relationships the accountants have with the Company to determine the accountants' independence and any matters required to be

discussed under the standards of the Public Company Accounting Oversight Board.

- Review the performance of the independent accountants and approve any proposed discharge of the independent accountants when circumstances warrant.
- Review any problems or difficulties submitted by the independent accountants and management's response.
- Periodically consult with the independent accountants, out of the presence of management, about internal controls and the fullness and accuracy of the organization's financial statements.
- Ensure the rotation of the lead independent accounting partner every five years or as otherwise required by law.

The external auditors, as well as the SJI internal auditing department, report directly to the Audit Committee.

Deloitte & Touche, LLP (Deloitte) was the external auditor for SJI and its affiliates, including South Jersey Gas, for the seven-year period from 2013 through 2019. Deloitte is one of the "Big Four" accounting firms (the other three are Ernst & Young, KPMG, and PricewaterhouseCoopers [PwC]) and provides auditing, consulting, financial advisor, risk advisory, tax, and legal services internationally. It is well known for its utility experience and audits a significant number of utility companies in the United States and throughout the world.

The audit arrangement is reviewed annually by the Audit Committee and the SJI BOD. In the last ten years, the Company has changed CEOs once and audit partners three times. Audit partners must change every five years and advisory partners must change every seven years. During the seven-year term covered by this management audit, there have been three different Deloitte partners responsible for the SJI audit, rotating their audit partners on the SJI audit in 2016 and in 2019.

The following table shows the audit fees charged to SJG and to SJI during the period from 2013 through 2019.

External Audit Fees ($)

Services Provided	2013	2014	2015	2016	2017	2018	2019
Audit Fees (a)	1,902,400	2,152,750	2,385,000	2,022,618	2,270,100	3,713,000	4,711,025
Audit Related Fees (b)	108,000	110,000	9,000	–	–	–	–
Tax Fees (c)	80,800	214,557	424,526	219,289	242,000	525,415	250,562
All Other Fees (d)	–	–	–	–	–	–	2,021
Total	2,091,200	2,477,307	2,818,526	2,241,907	2,512,100	4,238,415	4,963,608
SJG Portion (e)	**606,448**	**718,419**	**817,373**	**717,410**	**803,872**	**1,356,293**	**1,737,263**

(a) Fees for audit services billed or expected to be billed include audits of the Company's annual financial statements, evaluation, and reporting on the effectiveness of the Company's internal controls over financial reporting, reviews of the Company's quarterly financial statements, comfort letters, consents and other services related to Securities and Exchange Commission matters.
(b) Fees for audit-related services provided during these years consisted of employee benefit plan audits, other, compliance audits, and registrar audits.
(c) Fees for tax services consisted of tax compliance and compliance-related research. Tax compliance services are services rendered based upon facts already in existence or transactions that have already occurred to document, compute, and obtain government approval for amounts to be included in tax filings and Federal, state, and local income tax return assistance.
(d) Other fees billed by Deloitte for research tools, subscription services and registration fees for learning programs
(e) This amount is based on what is determined by Deloitte in their annual engagement letter

New York Stock Exchange (NYSE) and Sarbanes-Oxley Act Requirements

The Sarbanes-Oxley Act (SOX) became law in 2002, creating a new regulatory authority to set public accounting auditing standards, the Public Company Accounting Oversight Board (PCAOB), which replaced the American Institute of Certified Public Accountants' (AICPA) rule-setting authority, the Auditing Standards Board (ASB). Additionally, SOX specified that management is responsible for reported financial statements, established internal control attestation rules, and required written certification. The summary of these sections' rules are shown below:

- Section 302 – Corporate Responsibility for Financial Reports – requires that:
  - Chief Executive Officer (CEO) and Chief Financial Officer (CFO) must review all financial reports.
  - Financial report does not contain any misrepresentations.
  - Information in the financial report is "fairly presented."
  - CEO and CFO are responsible for the internal accounting controls.
  - CEO and CFO must report any deficiencies in internal accounting controls, or any fraud involving the management of the audit committee.
  - CEO and CFO must indicate any material changes in internal accounting controls.
- Section 404 – Management Assessment of Internal Controls – states that:
  - All annual financial reports must include an Internal Control Report stating that management is responsible for an "adequate" internal control structure.

- Management must assess the effectiveness of the control structure. Any shortcomings in these controls must also be reported. In addition, registered external auditors must attest to the accuracy of the company management's assertion that internal accounting controls are in place, operational and effective.

- Section 906 – Corporate Responsibility for Financial Reports requires that public companies include a specific written certification of the CEO and CFO in each periodic report containing financial statements stating that:
  - The periodic report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934.
  - Information contained in the report fairly presents, in all material respects, the company's financial condition and results of operations.

Affiliate Relationships – Rules and Compliance

The relationship between affiliates, compliance with affiliate relation and Federal Energy Regulatory Commission rules, and the identification of any material conflict or risk between SJI or any affiliates and the goals of SJG is covered in Chapter 8, Affiliate Relations.

F. CORPORATE GOVERNANCE

BACKGROUND

Mission and Values

The SJI and SJG mission is:

> *Provide safe, reliable, affordable energy services, ensuring the safety of our employees, customers and the communities we serve while also delivering value for our shareholders.*

The SJI values are:

- Commitment to Customers, Shareholders, Employees, and Community
- Integrity
- Highest Standards of Safety
- Innovation
- Performance
- Respect

Collective Ambition

SJI recently developed a Collective Ambition statement of its Purpose, Vision, Core Values, Priorities, and Values that applies to SJG. The contents include:

- Purpose – delivering safe, reliable, affordable, clean energy for a better today and tomorrow.
- Vision – One SJI, inspired to build a clean future and deliver carbon neutral energy by 2050.

- Strategic and Operational Priorities:
  - Drive growth through innovation, technology, and partnerships that create a market responsive and dynamic clean energy infrastructure company.
  - Operate with excellence through safe and efficient operations that lower customer costs.
  - Champion a "Can Do" culture where people are accountable, empowered, and included.
- Values:
  - Safety – make every day a safe day.
  - Service – deliver exceptional service to our customers.
  - Community – invest in the communities where we live and work.
  - Inclusion – foster a culture that values differences, creates a sense of belonging, and encourages everyone to be their best self.
- Brand promise: We promise to be your trusted partner, delivering energy solutions that fit your life.
- Behaviors as leaders:
  - Think big – contribute ideas, challenge assumptions, demonstrate creativity.
  - Lead and inspire – listen and communicate directly with respect, ensure positive and productive work environment, develop others, learn continuously.
  - Do the right thing – take personal responsibility and ownership, focus on safety, act in the spirit of our values, respond well to feedback, give back.
  - Deliver results – act with urgency, follow through, make a difference.

Functional Responsibilities

SJG is governed by three corporate organizational levels: SJI, SJIU, and SJG. Chapter 3, Organizational Structure, presents the organization structure at each level. The SJI level has executives for the following functions:

- Business Development
- External Affairs
- Finance, Accounting, and Shared Services (contracting, procurement, fleet, facilities, and security)
- Human Resources
- Information Technology
- Legal Affairs
- SJIU Utilities
- Non-regulated Subsidiaries

External Affairs, Finance and Accounting, Shared Services, Human Resources, Information Technology, and Legal Affairs are all corporate support functions serving all of SJI, including SJG.

The SJIU level has executives for the following functions:

- Rates and Regulatory
- Utility Shared Services (compliance, standards, technical training, and records management)
- Enterprise Project Management Office
- Environmental
- Gas Supply
- Innovation and Business Improvement
- Safety and Quality Assurance
- Sales and Business Development
- SJG President
- ETG President

Gas Supply is an operational utility function serving both SJG and ETG. All of the remaining functions, except for the SJG and ETG presidents, are shared support services for SJG and ETG. Enterprise Project Management Office, Innovation and Business Improvement, Safety, and Environmental also serve the rest of SJI as needed.

The SJG level has just two executives for the functional areas of:

- Customer Experience
- Operations

These individual functions are managed in a conventional, hierarchical, "subordinate-reports-to-a-superior" scheme. There are no formal matrix relationships.

There is an established organizational hierarchy for SJI, SJIU, and SJG. The current organizational levels and the approval authorities for each are:

- Supervisor – up to $35,000
- Manager – up to $75,000
- Director – up to $500,000
- Vice Presidents – up to $1,000,000
- Senior Vice Presidents – up to $5,000,000
- CEO – over $5,000,000

Committees

In addition to the functional management structure, there are multiple cross-functional committees for specific purposes at the SJI and SJIU levels. The committees at the SJI level include:

- Senior Leadership Team – weekly meetings of the CEO, CFO, CIO, CHRO, General Counsel, and the SJG President (also a SJI SVP) for overall strategy and executive direction. This group also has regular "Strategy Meetings" that sometimes include other executives relevant to the topics being discussed. The group began issuing Strategy Team Meeting agendas in 2020.

- Leadership Team – biweekly meetings of the Senior Leadership Team plus the vice presidents and selected others for communication and coordination.
- Project Management Council – selected executives for the review and approval of proposed initiative business cases and the allocation of IT capital expenditures.
- Executive Workforce Committee – bi-weekly meetings of the CHRO, CFO, SJIU President, and the SJG President / SJI SVP. The SJI CEO is not a member of this committee. The committee reviews and approves all position changes, job offers, and pay increases up to ten percent for all positions up to the vice president level. CEO approval is required for increases of more than ten percent and matters involving vice presidents and above.
- Pandemic Response and Return to Office Committees – broad based groups of executives and subject matter experts to coordinate the response to Covid 19 restrictions and to plan the return to normal operations once the restrictions are lifted.
- Trust Committee – selected executives for pension and benefit issues.
- Risk Committee – selected executives to review and manage risk.
- ESG Committee – selected executives to guide the new Environmental, Social, and Governance function and initiatives.
- Diversity and Inclusion Committee – selected executives to promote diversity and inclusion.
- Accounting Disclosure Committee for SOX issues.
- Compliance Committee.

The committees at the SJIU level include:

- Standards (Engineering, Construction, Material, and Compliance)
- Vehicle and Equipment Standards
- Executive Safety Council and multiple lower level safety groups
- Physical Security

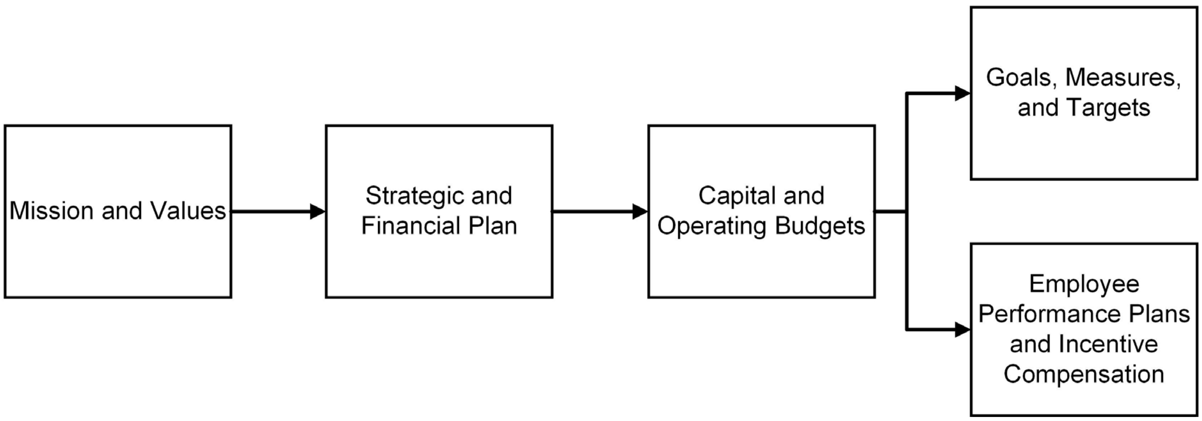
There are also several Employee Resource Groups within the SJI family of companies that are not involved in corporate governance, per se, but address specific interests. The cultural groups include:

- Women's Leadership
- Emerging Leaders
- American Association of Blacks in Energy
- Veterans

Corporate Performance Management

The SJI, SJIU, and SJG corporate performance management process is based on the mission and values and begins with the strategic mand financial plan. (See Chapter 4, Strategic Planning, for more information on strategic and financial planning.) The next step is the development of the capital and operating budgets following the adoption of the strategic and financial plan. (See Chapter 13, Finance, for more information on the budgeting process.) Following the adoption of the capital and operating budgets, the goals, measures, and targets for SJI, SJIU, SJG, and each SJG business line are set along with the performance plans and incentive compensation targets for management personnel. (See Chapter 12, Human Resources, for more information on performance planning and incentive compensation.) The Corporate Performance Management process is illustrated in the following exhibit.

Corporate Performance Management



Throughout the year, monthly financial and performance reviews against the goals and targets are held at each organizational level. Management personnel have periodic reviews of progress against their performance plans.

SJI, SJIU, and SJG have a modified "balanced scorecard" approach to corporate performance management. The 2020 SJI level goals for each of the SVPs were in four categories:

- Growth
- Operational Excellence
- Culture
- Foundation

These categories, with additional reference to the original balanced scorecard categories, were also used for goal setting for the lower levels of management:

- Operational Excellence/Process
- Growth/Customer
- Foundation/Financial
- Culture/Learning and Development

For 2020, SJI set 45 goals in five categories:

- Finance
- Process
- Customer
- Business Development
- Culture

Each goal had a target value to be achieved and a Lead Officer assigned.

SJI reports the following key performance indicators (KPI) and operating and safety metrics for SJG to the Board of Directors each quarter:

- Economic Earnings as reported in the financials
- Margin as reported in the financials
- Operations and Maintenance Expenditures as reported in the financials
- Interest expense as reported in the financials
- Capital Investments as reported in the financials
- Customer Growth (gross, conversions, and new construction) – new customer additions for residential and commercial
- OSHA recordable injuries incidence rate (see the Safety section for more information)
- DART rate (see the Safety section for more information)
- Preventable Motor Vehicle Incident Rate (see the Safety section for more information)
- Leak Count – open grade A and B leaks (for more information, see Chapter 10, Distribution and Operational Management.)
- BPU Complaints (for more information, see Chapter 7, Customer Service)
- Reportable BPU/PHIMSA Incidents (for more information, see Chapter 6, Distribution and Operational Management)
- Damage prevention – third party facility damages per 1,000 mark-out tickets (for more information, see Chapter 6, Distribution and Operational Management)

SJG has a similar performance management structure. The SJG goals include a mix of targets and initiatives in six categories: safety, shared services, finance, customer, internal process, and learning and growth. The 2020 SJG goals are shown in the following exhibit.

2020 SJG Balanced Scorecard Goals

Category	Targets	Initiatives
Safety	• 90% or more of leak response calls responded to in 60 minutes or less • Reduce actual number of OSHA recordable work injuries from 9 to 8 • Reduce the actual number of DART work injury cases from 6 to 5 • Reduce actual number of preventable motor vehicle accidents from 11 to 9 • Reduce excavation damage rate by five percent to 2.13 • Achieve a driver safety scorecard score =>93%	Implement a near miss program
Shared Services		• Advance the use of the Geographic Information System (GIS) • Create and implement a comprehensive training strategy • Standardize all compliance surveys and inspections • Standardize construction and O&M standards • Enhance emergency preparedness

Category	Targets	Initiatives
Finance	• Achieve budgeted net income • O&M expenses within five percent of budget • Meet AIRP II program year requirements (110 miles) • Meet SHARP II program year requirements (within five percent of budgeted $34 million) • Achieve 95–100% of approved off system sales (OSS) and Storage Incentive Mechanism (SIM) targets	• Successful filing of 2020 rate case • Regulatory strategy projects: Approval of LNG, AIRP III filing, and successful BPU management audit
Customer	• Improve JD Power customer satisfaction ratings • Meet 90% or more of scheduled appointments • 90% of services on main installed within 30 days • 95–105% of annual sales margin • 100% of budgeted gross customer additions • Meet budgeted EET after-tax margin/net income • 75% of calls answered in 30 seconds or less	Develop and execute a comprehensive marketing strategy
Internal Process	• Maintain a leak backlog of 180 or less • Five percent reduction in >90 day receivables	Implement three best practices from the American Gas Association (AGA) Peer to Peer
Learning and Growth		• Increase diversity spend • Attend three company diversity and inclusion events • Improve communication and employee engagement • Develop knowledge transfer plans and succession planning

In addition, 2020 SJG key performance indicators reflected the SJI KPIs and included:

- Economic earnings
- Margin
- Operations and Maintenance Expenses
- Interest Expense
- Capital Investments (base and accelerated programs)
- Customer Growth for both conversions and new construction

A target was set for each SJG KPI and progress against the KPIs is tracked monthly.

Further, SJG had a set of safety and operating metrics for 2020 that reflected the SJI metrics reported to the Board of Directors:

- OSHA Recordable Injuries
- DART Rate
- Preventable Motor Vehicle Incidence Rate
- Leak Count
- BPU Complaints
- Reportable BPU/Pipeline and Hazardous Materials Safety Administration (PHMSA) incidents
- Damage Prevention – hits per thousand tickets

SJI, SJIU, and SJG use a business intelligence software package to track progress against the goals. The top-level measures for each unit are commonly referred to as the "balanced scorecard" as are the goals for each individual employee. The presentation of the progress tracking screens is referred to as the "dashboard" for each unit.

Progress against goals, targets, and KPIs is reviewed monthly in financial and operations performance meetings of SJI, SJIU, and SJG management personnel. There are separate meetings for SJIU, SJG, and ETG. Each has a separate balanced scorecard dashboard. However, the SJIU units and the SJI Shared Services that support SJG are included in the SJG dashboard. Therefore, the performance of all of the organizational units directly affecting SJG is covered in the monthly SJG performance review meeting. Each organizational unit, referred to as a "business line," is represented on the dashboard as "tiles" (screens) that present data applicable to that unit.

The SJG performance review begins with an overview of the financial performance and is followed by an overview of the high-level balanced scorecard that presents the overall condition of results of operations for SJG. The SJG level balanced scorecard presents status against goals in five areas:

- Safety
- Shared Services
- Financials
- Customer Service
- Process and Growth (Internal Processes and Learning and Growth)

There are target values set for each goal. Progress against each goal is expressed as percentages met, which translates to the current status of each goal presented as:

- Failed to meet goals
- Partially meets goals
- Successfully met goals
- Meets and exceeds goals
- Exceeds goals

Once established, the target values are not changed during the year.

The monthly performance review meetings take place in the third or fourth week after the end of the month in question. The monthly review used to be led by the SJIU President, who oversees all of the 12 SJI and SJIU business lines (departments) included except SJI Shared Services. The reviews are now led by one of the two SJG VPs. (The SJG VPs are in charge of Customer Experience and Operations. They are the only two direct reports to the SJG President.)

The performance review meetings last approximately two and one-half hours and include subject matter experts (SMEs) and executive and operational management personnel. SMEs are normally directors in the business lines but can also be the VPs. There are approximately 15 SMEs.

After the reviewing the SJG balanced scorecard, the 13 business lines are discussed individually. The 13 business lines are:

- Safety (SJIU reports to the SJIU President)
- Rates and Regulatory (SJIU reports to SJIU President)
- Customer Experience (SJG reports to SJG President)
- Sales and Marketing (SJIU reports to SJIU President)
- Shared Services (SJI reports to SJI CFO) – these are the “SJI Managed Costs,” (e.g., Facilities, Fleet, HR).
- Operations Support (SJG reports to SJG VP Operations)
- Pipeline Operations (SJG reports to SJG Director Engineering)
- Construction Operations (SJG reports to SJG VP Operations)
- Utility and Dispatch Services (SJG reports to SJG VP Operations)
- Street Operations (SJG reports to SJG VP Operations)
- Engineering (SJG reports to SJG Director Construction Operations)
- Planning and System Integrity (SJG reports to SJG Director Engineering Services)
- Gas Supply (SJIU reports to SJIU President)

As a business line is reviewed, the SMEs for each business line, typically the vice president or director of the business line, present and explain the status of the various goals against target values for the month, quarter, and year-to-date.

G. FINDINGS

2-1 SJG total Operations and Maintenance Expenditures have increased substantially over the last six years.

As shown in the exhibit above, SJG O&M expenditures have increased in some categories from 2013 through 2019 and decreased in others. O&M expenditures in total increased at a simple average annual rate of 7% per year or more from 2013 to 2019 for Production, Transmission, Distribution, Customer Accounts and Services, and Administrative and General. O&M expenditures decreased at an average annual rate of 4.4% or less for the Conservation Program (2.3%), Sales Expenses (1.0%), and EEP(4.4%) program. The categories that decreased modestly account for only 13.3% of 2019 O&M expenditures while the categories that increased significantly account for 86.7% of the 2019 O&M expenditures.

O&M expenditure increases are recovered in increased rates to customers as approved by the BPU. (See individual function chapters such as Chapter 6. Distribution and Operational Management, and Chapter 7, Customer Service, for more information on O&M expenditures.)

2-2 SJG capital expenditures have increased substantially over the last six years.

As shown in the exhibit above, SJG capital expenditures have increased by a simple average of nine percent per year from 2013 through 2019. The exhibit is not completely consistent from year to year as Information Technology capital expenditures were reclassified in 2016. From 2016 on, expenditures for a given function were attributed to that function and Information Technology expenditures are only for IT technical purposes such as hardware and operations software.

Overall, capital expenditures have increased from $173 million in 2013 to $267 million in 2019, a 55% increase. The largest category, both in dollars and percentage is for System Operations, which increased by $114 million, or 82%, which is a simple average increase of 13.6% per year.

Net additions to the rate base caused by increasing capital expenditures cause the total return on investment dollar amount to increase, which is then recovered from increased rates to customers as approved by the BPU.

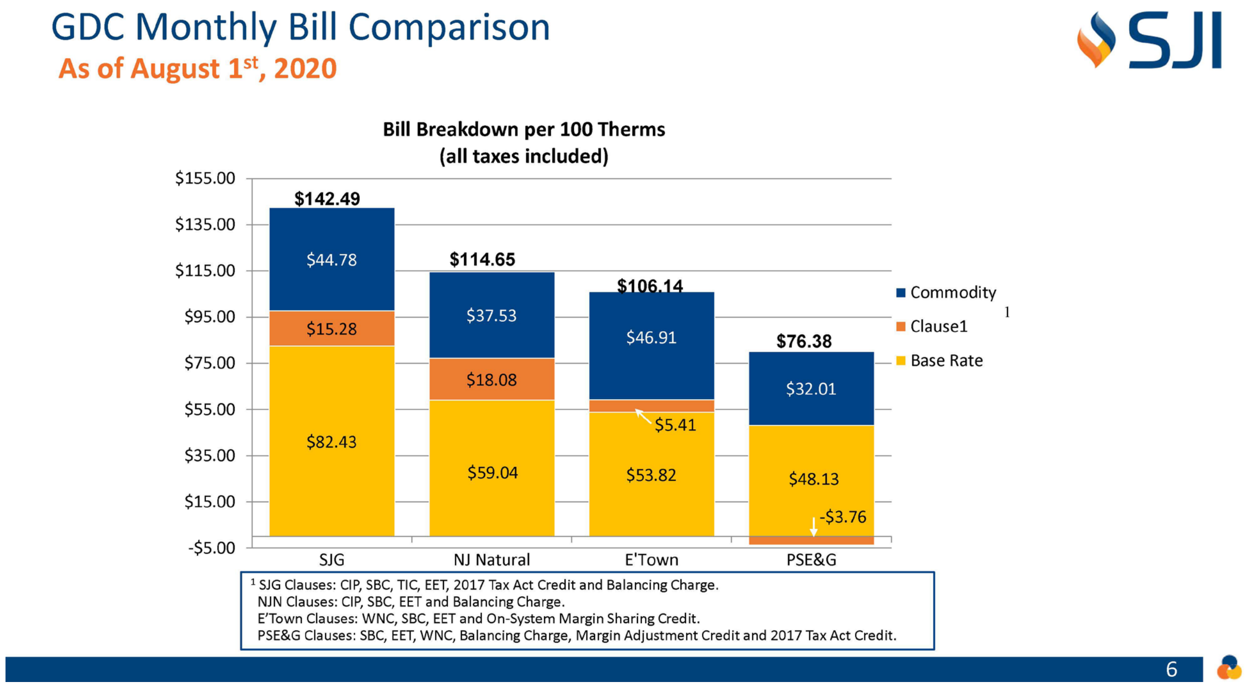
2-3 SJI and SJIU charges to SJG more than doubled from 2013 to 2019.

SJI and SJIU provide substantial management and support services to SJG and charges SJG for those services. From 2013 to 2019, the charges more than doubled from $30.1 million to $63.0 million.

2-4 SJG residential rates are higher than the other NJ natural gas local distribution companies.

The following exhibit compares SJG's typical residential bill to the other New Jersey Local Distribution Companies (LDCs) as of August 1, 2020.

New Jersey Natural Gas Local Distribution Company Bill Comparison
(Bill breakdown per 100 therms, all taxes included)



The SJG customer bills are higher than at least two of the other LDCs in all categories as shown in the following exhibit for residential customers using 100 therms.

LDC Bill Comparison by Category

Category	SJG	NJ Natural	Elizabethtown	PSE&G
Base Rate	$82.43	$59.04	$53.82	$48.13
Clauses	$15.28	$18.08	$5.41	-$3.76
Commodity	$44.78	$37.53	$46.91	$32.01
Total Bill	**$142.49**	**$114.65**	**$106.14**	**$76.38**

SJG's base rate is substantially higher than the other three NJ LDCs. It is $34.30, or 71%, higher than the lowest LDC, PSE&G.

SJG's Clauses (CIP, SBC, TIC, EET, 2017 Tax Act Credit and BSC) charge is significantly higher than Elizabethtown and PSE&G, but lower than NJ Natural.

SJG's Commodity charge is higher than NJ Natural and PSE&G, but lower than Elizabethtown. Comparing SJG to the lowest commodity cost company, SJG is $12.77, or 40%, higher than PSE&G.

In total, SJG's bills are higher than the other three LDCs. SJG is $66.11, or 87%, higher than PSE&G.

2-5 Some SJG rate components have increased substantially from 2013 through 2019 but were offset by a decrease in natural gas prices.

The following exhibit shows the change in SJG rate components from 2013 through 2019.

Change in SJG Rate Components from 2013 through 2019 ($)

Rate Component	1/1/2013	1/1/2014	12/31/2014	12/31/2015	1/1/2017	1/1/2018	11/1/2018	10/1/2019	Percent Change 2013 to 2019
Customer Charge:	8.923800	8.923800	9.630000	9.630000	9.618800	10.662500	10.129375	10.129375	13.5%
BGSS:	0.532500	0.532500	0.650270	0.529214	0.354288	0.340013	0.564695	0.447769	-15.9%
Delivery Charge:									
Cost of Service	0.442200	0.462500	0.533542	0.544643	0.584945	0.743838	0.694483	0.722972	63.5%
TIC	0.000600	0.001800	0.002400	0.001025	-0.001009	-0.000411	0.001574	0.002066	244.3%
SBC:									
CLEP	0.024300	0.043500	0.047400	0.026441	0.012723	0.020063	0.030150	0.025203	3.7%
RAC	0.037800	0.027200	0.011900	0.000491	0.010477	0.029098	0.034639	0.035278	-6.7%
USF/Lifeline	0.018400	0.012600	0.016900	0.010800	0.012700	0.008700	0.010300	0.012100	-34.2%
BSC	0.050500	0.050500	0.050500	0.050500	0.050400	0.050300	0.033851	0.087115	72.5%
CIP	0.102400	0.039200	-0.027283	-0.058946	0.072927	0.078172	0.005717	-0.012422	-112.1%
CIRT	0.004400	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-100.0%
EET	0.009600	0.013200	0.016900	0.021394	0.004571	0.009144	0.017261	0.014405	50.1%
2017 Tax Act	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.013043	-0.013043	
Total Per Therm Rate	**1.222700**	**1.183000**	**1.302529**	**1.125562**	**1.102022**	**1.278917**	**1.379627**	**1.321443**	**8.1%**
Total for 100 Therms	122.270000	118.300000	130.252900	112.556200	110.202200	127.891700	137.962700	132.144300	8.1%
Total Including the Customer Charge:	**131.1938**	**127.2238**	**139.8829**	**122.1862**	**119.8210**	**138.5542**	**148.0921**	**142.2737**	**8.4%**

Rate components changed as follows over the 2013 to 2019 period:

- The total bill for residential customers using 100 therms went up modestly by 8.4%.
- The Customer Charge went up by 13.5% in total and from 6.8% to 7.1% of the total bill for residential customers using 100 therms.
- The BGSS charge, which made up 31.5% of a residential customer's bill in 2019 and 33.9% of the per therm rate, actually decreased by 15.9%.
- The Delivery Charge that includes the base rate to recover SJG O&M expenses, the rate of return on investments, and various clauses increased 63.5%, or a simple average of 10.6% per year. It is 54.7% of the per therm rate in 2019.
- The TIC increased 244.3% but is only 0.16% of the total per therm rate.
- The total SBC decreased from $.247400 per therm in 2013 to $0161679 per therm in 2019, a decrease of 34.6%.
- The 2017 Tax Act Credit resulted in a $.013043 credit per therm in 2019.

The substantial increase in the Delivery Charge was offset by decreases in the BGSS rate, the SBC rates, and by the 2017 Tax Act Credit.

2-6 SJI has limited its peer selection to only financial criteria: comparable revenue, total assets, and market capitalization.

Using only financial criteria is shareholder friendly and is consistent with the company's large (70 percent) financial weighting for its annual and long-term incentive plans. However, the lack of other stakeholder criteria is a disincentive for the company to look for and focus on opportunities to improve operational performance related to customer service and gas operations effectiveness, efficiency, productivity, and safety.

2-7 The AIP has four cash incentive category components, but the financial component is unreasonably weighted at a relatively high 70%.

The below table shows the four AIP components as a percent of target. The other three components (customer, safety, and strategy) are weighted at a relatively low ten percent each. The weighting factors reflect an inherent bias toward shareholder value and reflect minimal value placed on customer experience and operations performance.

Annual Incentive Plan as a Percent of Target

Measure	Weight
Financial	**70%**
Economic Earnings - SJI Consolidated	60%
Return on Invested Capital (ROIC)	10%
Customer	**10%**
Gross Additions (SJG & ETG)	3.33%
Customer Satisfaction: Active top tier ranking by JD Power CSI, combined average score for SJG & ETG	3.33%
Miles of BS/CI (bare steel and cast iron) pipe replaced	3.33%
Safety	**10%**
Days Away, Restrictions & Transfers (DART) Injury Rate, combined total SJG & ETG	3.33%
PMVAs (Prevention and Management of Violence or Aggression) – combined total SJG & ETG	3.33%
Leak Response - combined total SJG & ETG	3.33%
Strategy	**10%**
Improve ROE	
Launch Comprehensive Response to NJ Energy Master Plan	
Accomplish Regulatory Initiative Milestones	
Promote Culture of Innovation and Operational Excellence	
Improve key financial metrics and liquidity	

2-8 Employees at the Director-title level participate in the Long-Term Incentive Plan (LTIP), but they generally do not have meaningful visible influence over the SJI stock performance relative to the peer group's performance, unlike Executive Officers and other senior officers.

LTIP compensation payouts are based solely on financial performance that is relative to the peer group and to SJI stock earnings performance. The weightings and metrics are 50% SJI's three-year Total Shareholder Return relative to the Peer Group and 50% SJI's three-year EPS CAGR. Vice presidents and above tend to have the most managerial control over company policies, practices, and performance and their LTIP values and payouts will reflect that managerial influence. The employee director-level positions are less likely to have managerial influence over longer term financial performance. A number of directors have few direct reports, and some have only one direct report, which significantly reduces their ability to influence the longer-term financial performance metrics.

2-9 SJI stock ownership requirements for the CEO and NEOs are not as robust as they could be.

The stock ownership requirements are currently set at five times base salary for the CEO and two times for the NEOs. The Institutional Shareholder Services (ISS) defines "robust" as five-times the cash portion of the base salary. However, some researchers find that there is a growing trend toward increasing the multiple for CEOs from five-times to six-times. When Pearl Meyer submitted its Executive Compensation Program Review in November 2020, it observed that "SJI's stock ownership requirements are generally in line with the market except: (1) SOGs (stock ownership guidelines [requirements]) are less robust for officers below CEO versus Peers and (2) holding requirements for all SJI NEOs are also less robust versus Peers."

2-10 Executive Officers and Non-Executive Officers are not required to buy company stock shares upon appointment to their positions to satisfy the corporate ownership requirements.

These officers are awarded shares as appropriate as part of their compensation program. This program modification in 2019 reduced both the risk and benefits of stock ownership but, in any event, the incentive (dollars at risk) for meeting corporate goals has been significantly reduced.

2-11 The SJI Board membership is well-balanced in terms of education and experience relevant to SJI and SJG.

Eight of the Board members have four to 20 years of SJI Board membership experience. Three members are new to the Board. The members range in age from 47 to 69 with three in their fifties and six in their sixties. Some highlights of the SJI Board membership:

- ➢ Two of the members are engineers with significant natural gas LDC or related executive management experience.
- ➢ One member is an accountant, and four others have substantial public company financial experience.

- Four members are attorneys and two of the attorneys have substantial utility executive management experience.
- Other member experience includes human resources, cybersecurity, government and regulatory, risk management, and strategy.

2-12 The SJI Board has a complete set of governance documents posted for public review.

The SJI website has extensive documentation of the board, committee, and company governance processes for SJI and its subsidiaries, including the SJI Board of Directors. The information posted includes:

- Governance profile
- Governance guidelines
- Committee charters
- Audit Committee complaint handling procedure
- Code of Ethics
- Board education program

2-13 The Board is diligent about following its governance program and in overseeing SJI and its subsidiaries, including SJG.

The Board members interviewed exhibited a thorough understanding of their roles and responsibilities and the SJI governance documents. Additionally, the members detailed how they gain insight into SJI, SJIU, and SJG operations and performance through regular reporting and periodic presentations from and meetings with SJI, SJIU, and SJG executives and managers. There is unobstructed access to company personnel for the Board members.

2-14 There are no material lawsuits that relate to Board of Directors or executive management governance.

SJI, SJIU, and SJG have utility-typical lawsuits filed against them regarding employment issues, customer issues, personal injury, contract disputes, property damage, and environmental concerns. However, since 2013 there have been no lawsuits regarding Board of Directors or executive management governance.

2-15 SJI does not have a formal, written Executive Succession Plan.

The SJI CEO does meet with the Board on a quarterly basis to discuss succession planning. These discussions are standing agenda items in the Executive Session of each Board meeting. The CEO discusses the current state of executive management and its leadership talent pipeline. He also addresses the strengths, weaknesses, and risks associated with succession planning and the key attributes that are necessary to ensure consistent performance in the event of a succession planning event. As part of the discussion, the CEO and Board also address both short-term and long-term succession strategies in the event there is an emergency situation. In addition, the CEO and Board annually conduct a formal executive succession discussion focused on succession planning for the near, intermediate, and long term for the CEO and senior level positions, identifying potential successors for each position.

While the ongoing discussions with the Board are a good management practice, it would be better to have a formal, written succession plan. A formal plan with updates highlighted could be sent to the Board members before each meeting for their consideration and might inspire questions that otherwise might not be asked. It would also assure that all positions are covered adequately, and it would be a ready reference should a portion of the plan need to be implemented. The listed strengths and weaknesses for each covered executive would also inform their performance planning and possibly accelerate their readiness to succeed to higher level positions.

2-16 There have been no Board of Directors Executive Committee meetings since 2013.

The Executive Committee acts as directed by, or on behalf of, the Board of Directors during intervals between the meetings of the Board of Directors in the event a quorum of the Board is not available and, if at the discretion of the Chairman of the Board, immediate action is needed. However, there have been no Executive Committee meetings since 2013. This appears to be for two reasons. First, it is often possible to convene the full board telephonically if necessary. Second, the Strategy and Finance Committee seems to be fulfilling the intended role of the Executive Committee. It has multiple *ad hoc* meetings each year. The types of issues that might go to the Executive Committee also fall within the scope of the Strategy and Finance Committee, such as financings, acquisition and divestiture opportunities, or strategic issue developments.

2-17 The SJI CEO does not serve on the SJI Strategy and Finance Committee or on the SJIU, SJG, and ETG boards of directors.

The only SJI Board of Directors committee assignment for the SJI CEO is the Executive Committee, which has not met since 2013. Further, while he does serve as the Chair of the SJI non-regulated subsidiaries' boards, he does not sit on the SJIU, SJG, or ETG boards. The SJI Board of Directors Strategy and Finance Committee deals with situations and issues critical to SJI and SJG, including strategic and financial planning, acquisitions and divestitures, and strategic developments such as the new NJ Energy Plan. The SJI CEO should be a strong voice and vote on the committee.

SJIU, SJG, and ETG are SJI's principal businesses and its most important assets. While the SJIU, SJG, and ETG boards are focused on compliance with corporate governance requirements, they also contain an important element of performance review. The SJI CEO should be a strong presence on the SJIU, SJG, and ETG boards as a symbol of the importance of the businesses.

2-18 Excluding the Executive Committee, there are only 23 committee memberships, and the Board could staff the committees with fewer members.

The five Board committees that were active as of December 31, 2019, had a total of 23 membership positions (Audit – five, Compensation – four, ESG – five, Nominating – four, and Strategy – five). If each independent Board member averaged three committee memberships, the Board could operate with eight members (eight times three committee memberships equals 24) plus the SJI CEO (who does not serve on the active committees) for a total of nine members.

2-19 The SJI Board members can meet their stock SJI stock ownership requirements without personal investment.

The SJI Board of Directors governance program includes a requirement for SJI stock ownership for members:

> *The Board of Directors supports the belief that significant ownership of SJI common stock better aligns the interest of the Board of Directors with that of SJI shareholders.*
>
> *Members of the Board of Directors are required, within six years of becoming a director of the Company or any of its principal subsidiaries, or within six years of an increase in the share ownership guidelines, to own shares of Company Common Stock with a market value equal to a minimum of five times the current value of a Director's annual cash retainer for board service. Shares owned outright will be combined with restricted shares awarded as part of the annual stock retainer for the purpose of meeting these requirements.*

However, Board of Directors members receive time based restricted stock valued at $105,000 annually and will accumulate $630,000 of SJI stock over six years without additional purchases. This amount exceeds the five years times the annual cash retainer of $65,000, or $325,000. Therefore, meeting the stock ownership requirements should not require a director to purchase SJI stock in the open market.

2-20 South Jersey Gas is audited by an independent, experienced, creditable outside audit firm.

Deloitte, one of the Big Four accounting firms, audited SJG, its parent organization, and its affiliates for the seven-year period from 2013 through 2019. Deloitte conducted its audit in accordance with the standards of the PCAOB. As a public accounting firm registered with the PCAOB, Deloitte is required to be independent with respect to SJI and its affiliates in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. Deloitte is well-respected in its field and experienced in auditing utility companies.

2-21 SJG is in compliance with the NYSE requirements and the Sarbanes-Oxley Act.

SJI's reported financial statements, which include the financial statements of SJG, include certifications signed by the CEO and CFO that attest that the requirements of the New York Stock Exchange and the SOX concerning the financial statements and internal controls have been complied with. The registered external auditors evaluated the accounting principles and estimates made by management and the overall presentation of the financial statements and rendered an unqualified opinion on the Company's internal controls and the fairness of the financial statements' presentation.

2-22 SJI, SJIU, and SJG have a well-developed, modern corporate performance management system.

The corporate performance management flows in a well-coordinated fashion from the mission and values to the strategic and financial plan to the capital and operating budgets to the annual goals for each company level and each manager. In general, the goals cascade consistently and logically from level to level.

2-23 SJI, SJIU, and SJG have an active benchmarking program.

SJG participates in the annual AGA Best Practices program. Best practices topics for the last three years have included:

- System Reliability
- Contractor Oversight and Quality Assurance
- Rights of Way, Encroachment, and permitting
- Transmission Integrity
- Collection and Maintenance of As-built Documentation
- Training and Operator Qualifications
- Distribution Integrity Management Program and Asset Management
- Emergency Response and Preparedness
- Mains and Services Replacements
- Mains and Services New Business
- System Regulation and Overpressure Protection

The SJI Human Resources function participates in typical compensation and benefits benchmarking and participates in industry and human resources association best practices studies.

The SJI Information Technology group recently participated in the 2020 IT Key Metrics study for utilities.

SJI has subscribed to General and Administrative benchmarks for the Energy and Utilities sector in general and SJI in particular.

Additionally, SJI, SJIU, and SJG personnel are active participants in industry associations, such as, the American Gas Association, Northeast Gas Distribution Council, New Jersey Local Distribution Company Committee, national GIS and records management groups, national and regional technical training groups, national compressed natural gas (CNG) vehicle groups, information technology and cyber security groups, and national safety groups.

2-24 The mission language of affordability is not fully reflected in the SJG goals, targets, and KPIs.

The SJI and SJG mission is:

> *Provide safe, reliable, affordable energy services, ensuring the safety of our employees, customers and the communities we serve while also delivering value for our shareholders.*

While the safety of employees, customers, and communities; the reliability of service; and the value for shareholders are all well-represented in the SJG goals, targets, and KPIs, there is little that addresses affordability for customers. As discussed in the Costs and Rates section of Chapter 2, Executive Management and Corporate Governance, SJG costs to ratepayers are higher than the other NJ LDCs. While recent years have had goals on containing and reducing O&M expense, there are no goals on reducing capital expenditures (that add to the rate base and increase rates) or on reducing the BGGS costs.

2-25 The new Collective Ambition statement complicates the corporate performance management system.

It is not clear if the more complex new Corporate Ambition statement is intended to supplant the simple and straightforward existing mission and values statement. The Corporate Ambition statement does not have a new mission statement, but it adds sections on Purpose, Vision, Priorities, Brand Promise, and Leadership Behaviors. However, it does present a set of values that are different than the mission statement. The values associated with the mission statement are:

- Commitment to Customers, Shareholders, Employees, and Community
- Integrity
- Highest Standards of Safety
- Innovation
- Performance
- Respect

The core values associated with the Collective Ambition statement are:

- Safety
- Service
- Community
- Inclusion

While somewhat similar, the current values and the new core values are different.

As a foundation for corporate performance management, the focus and clarity of an organization's mission and values are important. Managers should be able to develop plans and goals with a clear line of sight from the organization's mission. Adding multiple additional elements, even if each is worthy, could confuse the corporate performance management process.

2-26 The current practice of having separate monthly performance reviews for SJG and ETG can be streamlined.

All utility functions except Operations and Customer Experience are centralized for SJG and ETG. In the future, Customer Experience and Operations could be centralized as well. Currently, the centralized function managers at SJIU and the SJI Shared Services managers have to attend two performance review meetings (SJG and ETG) covering very similar material. There could be a single SJIU performance review meeting with attention to SJG and ETG results for each participating business line led by the SJIU President.

H. RECOMMENDATIONS

2-1 SJG should increase scrutiny of operations and maintenance costs and capital expenditures with an emphasis on containing costs that increase SJG's rates to bring them more into alignment with the other New Jersey LDCs. (See Findings 2-1, 2-2, 2-3, 2-4, and 2-5)

SJG's costs and rates are higher than the other NJ LDCs. Further, the trends of increasing O&M costs and capital expenditures will cause rates to increase even more. To some extent, the increases in SJG costs have been masked by lower natural gas commodity costs (BGSS) and lower SBC charges. However, increasing total costs to SJG customers creates an affordability problem, particularly for low-income customers. SJI's mission statement includes a commitment to "affordable energy services." However, as observed in the Corporate Performance Management section of this chapter, SJG's goals and initiatives do not include significant components for achieving affordability for customers.

SJG should revise its planning and budgeting process to identify ways to contain or reduce O&M costs and capital expenditures and bring its costs and rates into closer alignment with its NJ LDC peers.

2-2 Expand the types of criteria for selection of a peer group to include operational criteria for a more robust market analysis. (See Finding 2-6)

The company should consider the following: the number of customers, number of employees, gas sales in dollars and volumes, square miles of service territory, customer density, and miles of main.

2-3 Revise the AIP weightings to reduce the financial measure to less than 70% and increase the other three measures of customer, safety, and strategy to more than 30%. (See Finding 2-7)

The new weightings should reflect the growing importance of operational performance to customers, regulators, and other non-shareholder stakeholders. The company should consider at least a ten percent weighting adjustment.

2-4 Consider modifying the LTIP compensation program for employee Directors to provide more managerial influence over performance targets. (See Finding 2-8)

The company should consider reducing or eliminating financial targets tied to stock and earnings performance and establishing long-term performance targets relating to the employee directors' organizational responsibilities and functions.

2-5 Consider raising stock share ownership requirements from five times to six times base salary for the CEO and from two times to three times base salary for the NEOs. (See Finding 2-9)

Higher ratios of stock ownership to base salary are more in line with industry standards and are consistent with the company's executive compensation consultant recommendation.

2.-6 Consider modifying the stock share ownership requirements for Executives and NEOs to provide added incentives that require increased dollars at risk. (See Finding 2-10)

Increasing dollars at risk for stock ownership will provide added incentives for employees to focus on and to achieve company goals. One approach is to increase cash compensation and concurrently require out-of-pocket stock market purchase of company shares.

2-7 Develop a formal, written executive succession plan and share it with the Board. (See Finding 2-15)

The ongoing discussions between the Board and the CEO on succession planning should be memorialized in a formal written plan covering all SJI and subsidiary vice president and above positions. The plan should be reviewed and updated quarterly. The practice of reviewing updates with the Board on a quarterly basis should continue.

2-8 Disband the Executive Committee and formally assign its duties to the Strategy and Finance Committee. (See Finding 2-16)

The SJI Board of Directors Executive Committee is an archaic structure that has not met since 2013. While there are no direct costs for the committee (no member payments in 2020), it is carried on the books as a formal Board committee. The Committee can be disbanded, and the Strategy and Finance Committee charter can be updated to formally recognize its role as the Committee to address timely issues between scheduled Board meetings.

2-9 Put the SJI CEO on the SJI Board Strategy and Finance Committee and the SJIU, ETG, and SJG boards of directors. (See Finding 2-17)

In lieu of the SJI CEO's membership on the Executive Committee, assign the CEO to the Strategy and Finance Committee which, in effect, is performing the role of the Executive Committee. In addition, to recognize the importance of SJIU, SJG, and ETG to SJI, the CEO should be made a member of their boards.

2-10 Consider reducing the number of board members to eight independent directors and the SJI CEO. (See Finding 2-18)

With a reduction to five active committees, eight independent directors are adequate to fill the 23 committee membership positions. Eight independent directors are also adequate to meet the education and experience backgrounds good practice requires for the Board. The average compensation for a Board of Directors member in 2020 was $204 thousand, which would be the approximate annual savings if one position were eliminated.

2-11 Consider adjusting the Board member compensation package to require personal purchases of SJI stock. (See Finding 2-19)

The annual grant of restricted stock could be reduced or eliminated in favor of more cash compensation such that Directors will have to buy SJI stock out of pocket. Then the Board of Directors members would have to purchase SJI stock directly. While the total compensation would not change materially, the symbolism of members purchasing SJI stock for their own account would improve and the purpose of SJI stock ownership by Board of Directors members would be better met.

2-12 Ensure that the SJG goals and KPIs fully reflect the mission. (See Finding 2-24)

Affordability should be a focus of the SJG plans, goals, and metrics. While O&M cost control through budget discipline is included, there is not a clear focus on goals and initiatives to make SJG service more affordable. SJI, SJIU, and SJG should address affordability going forward.

2-13 Clarify and simplify the current mission and values statement and the new Collective Ambitions statement. (See Finding 2-25)

The two documents should be reconciled, and one clear and concise version should be communicated among the SJI, SJIU, and SJG personnel. It would be best to have a brief, highly focused set of foundation statements about the business to guide the corporate performance management program.

2-14 Consolidate the two monthly performance review meetings for SJG and ETG into one run by the SJIU President. (See Finding 2-26)

While the single meeting may run longer than the two two-and-one-half-hour meetings for the two separate operating companies now, the total time spent would likely be less. Also, the interests of SJG and ETG are so similar and intertwined that covering their performance in the same meeting would be beneficial.

3. ORGANIZATIONAL STRUCTURE

This Chapter is presented in nine sections:

A. Organization
B. Workforce
C. Affiliated Interest Contracts
D. Affiliated Gas Sales
E. Internal Controls
F. Risk Management Policies
G. Information Security Policies
H. Findings
I. Recommendations

A. ORGANIZATION

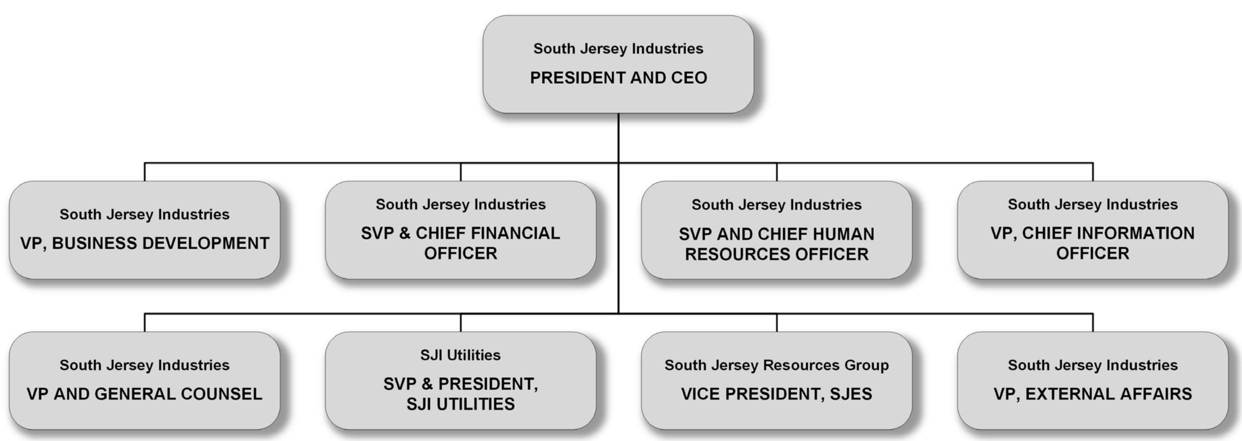
BACKGROUND

This section covers the organization structures of South Jersey Industries (SJI), South Jersey Industries Utilities (SJIU), and South Jersey Gas (SJG).

SJI Organization Structure

SJG is a subsidiary of SJIU, which, in turn, is a subsidiary of SJI. SJG receives substantial corporate shared services from SJI employees. SJI level employees serve both regulated and non-regulated subsidiaries. The SJI top level organization structure is shown in the following exhibit.

South Jersey Industries Top Level Organization



The SJI top level organization includes:

- The SJI President and Chief Officer (CEO) is responsible for the executive management of SJI and all of its subsidiaries. The CEO reports directly to the Board of Directors and is also a SJI Board of Directors member.

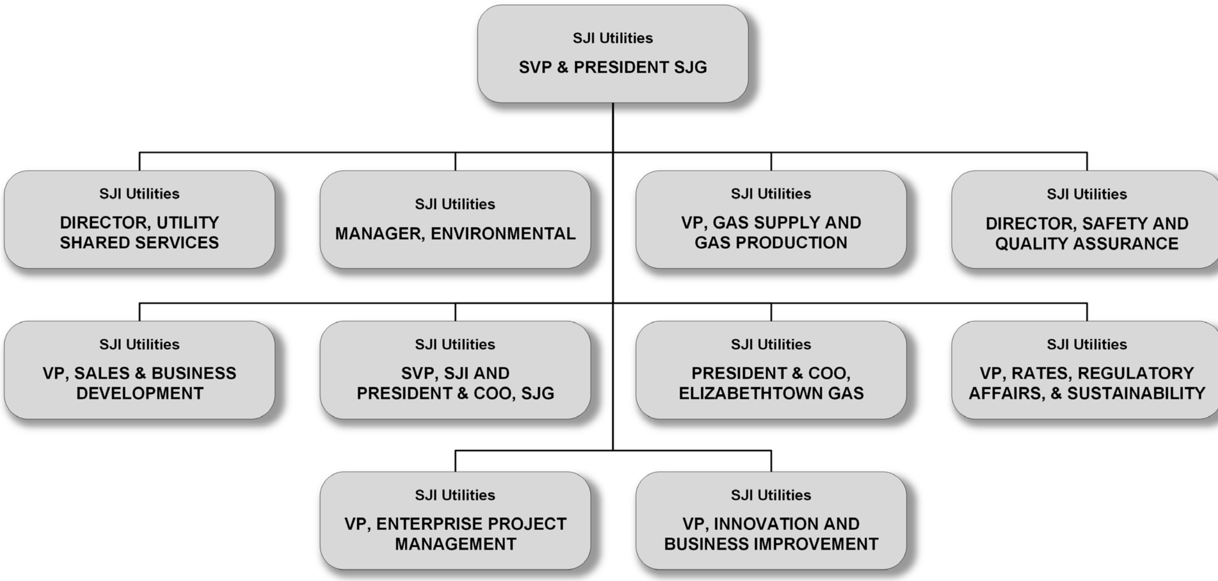
- The Vice President, Business Development is responsible for non-regulated new business development not directly related to SJG and ETG.
- The Senior Vice President and Chief Financial Officer (CFO) is responsible for Accounting, Treasury, Risk and Assurance, SJI Shared Services (Supply Chain, Facilities, Fleet, and Security), and Financial Planning and Analysis. The organization structure for the CFO is covered in Chapter 13, Finance and Chapter 15, Accounting and Property Records.
- The Senior Vice President and Chief Human Resources Officer (CHRO) is responsible for Compensation and Benefits, Employee Relations, Labor Relations, Talent Acquisition and Management, and Internal Communications. The organization structure for Human Resources is covered in Chapter 12, Human Resources.
- The Vice President and Chief Information Officer (CIO) is responsible for five information technology functions: Plan, Build, Run, Protect, and Report. This includes all information technology hardware, software, and telecommunications. The organization structure for Information Technology is covered in Chapter 19, Support Services.
- The Vice President and General Counsel is responsible for the General Counsel's office attorneys and paralegals, the Corporate Secretary, the new-in-2020 Environmental, Social, and Governance (ESG) function, and the new-in-2021 Corporate Compliance function that will ensure enterprise-wide compliance with SJI policies (e.g., Human Resources, Information Technology, Supply Chain, Financial, Security, and Legal). He is not responsible for the Rates and Regulatory attorneys or the External Relations attorneys. The organization structure for the General Counsel is covered in Chapter 19, Support Services.
- The Senior Vice President and President, SJIU, heads the SJI Utilities group which is the parent of SJG and ETG. His direct reports include the presidents of SJG and ETG and a number of SJIU utility operational and shared services functions: Gas Supply, Compliance, Environmental, Safety, Sales, and Rates and Regulatory Affairs. He also supervises the SJI Enterprise Project Management Office and the SJI Innovation and Business Improvement function. The organization structure of SJIU is covered below.
- The Vice President, South Jersey Energy Services, is responsible for SJI's non-regulated subsidiaries.
- The Vice President, External Affairs supervises Government Relations, Social Investment, and External Communications functions. The organization structure for External Affairs is covered below.

The current President of SJG is the former SJI General Counsel but retains her SJI Senior Vice President title. She continues to be a member of the SJI Senior Leadership Team but is not shown as a direct report to the SJI CEO. She reports directly to the President of SJIU.

SJIU Organization Structure

SJIU was originally conceived as an entity serving just the regulated utilities, SJG and ETG. However, the organization structure of SJIU has evolved and some functions now serve all of SJI. The organization structure for SJIU is shown in the following exhibit.

South Jersey Utilities Group Organization Structure



The SJIU top level organization consists of:

- The President of SJIU is responsible for the executive management of ETG and SJG. He is also a SJI SVP serving on the SJI Senior Leadership Team.
- The Director, Utility Shared Services, is responsible for utility compliance (e.g., leak survey, valve inspection, and meter sampling programs), standards (the Construction Manual and Operations and Maintenance Manual), emergency preparedness, geographic information system (GIS) and asset records management, and technical training. This is a centralized function that serves both SJG and ETG. The organization structure of the Utility Shared Services group is covered in Chapter 6, Distribution and Operational Management.
- The Manager, Environmental is responsible for the remediation of manufactured gas plant sites and compliance with all environmental regulations. This function is centralized for all SJI, including both SJG and ETG. This function is covered in the Environmental section of Chapter 19, Support Services.
- The Vice President, Gas Supply and Production is responsible for gas supply, gas transportation, gas control, and the LNG peaking facility. This is a centralized function that serves both SJG and ETG. This function is covered in Chapter 10, Procurement and Purchasing.
- The Director, Safety and Quality Assurance is responsible for SJI-wide safety and quality assurance for SJG and ETG system operations. This is a centralized function for all of SJI, including both SJG and ETG. The organization structure of this function is covered in Chapter 6, Distribution and Operational Management.

- The Vice President, Sales and Business Development is responsible for conversions and new customers. This is a centralized function that serves both SJG and ETG. The organization structure of this function is covered in Chapter 7, Customer Service.
- The President of SJG has two direct reports, the Vice President of Operations and the Vice President of Customer Experience. The Vice President of Operations is responsible for gas system planning, engineering, construction, operations, and field service. The organization structure for Operations is covered in Chapter 6, Distribution and Operational Management. The Vice President of Customer Experience is responsible for the call center, billing, and customer walk-in centers. Operations and Customer Experience are the only two functions that are not centralized between SJG and ETG. The organization structure for Customer Experience is covered in Chapter 7, Customer Service.
- The President and Chief Operating Officer of ETG is responsible for the operations and customer service of ETG. ETG is not within the scope of this audit.
- The Vice President, Rates, Regulatory Affairs, and Sustainability is responsible for rates, regulatory affairs, and the Clean Energy program for both SJG and ETG. This is a centralized function serving both SJG and ETG. This function is covered in Chapter 15, Accounting and Property Records.
- The Vice President, Enterprise Project Management Office is a new position in 2020. This function screens and manages SJI-wide projects other than system operations projects. This is a centralized function serving all SJI, including SJG and ETG. This function is addressed in Chapter 15, Accounting and Property Records.
- The Vice President, Innovation and Business Improvement is responsible for developing and administering the SJI-wide performance management dashboards and analytics and developing new initiatives, such as renewable gas and smart meters prior to them becoming chartered projects. This is a centralized function serving all of SJI, including SJG and ETG. This function is addressed in Chapter 15, Accounting and Property Records.

B. WORKFORCE

BACKGROUND

The SJG workforce is composed of employees and contractors from SJI, SJIU, and SJG. The SJI workforce provides multiple corporate services including Finance and Accounting, Information Technology, Human Resources, Legal, and External Affairs. The SJIU workforce provides multiple utility services including Rates and Regulatory, Compliance, Environmental, Gas Supply, Safety and Quality Assurance, and Sales. The SJG workforce is focused on direct customer service and geographic specific Engineering, Construction, Operations, and Utility (field) Services.

SJI, SJIU, and SJG all employ multiple contractors to assist their employees in doing the SJG work. As examples, SJI contracts most information systems development and implementation work and SJIU contracts most environmental remediation work. The SJG employee workforce is heavily augmented with contractors for engineering, construction, compliance, and field services work.

Employees

SJI and its subsidiaries had a total of 1,104 employees as of January 1, 2020, 457 of which were SJG employees. The following exhibit shows the evolution of the SJI employee workforce since 2013.

SJI Employee Count on January 1 of 2013–2020

Company	2013	2014	2015	2016	2017	2018	2019	2020	2013-2020 Change
SJG	420	457	484	488	509	531	549	457	+37
ETG	288	297	312	324	328	338	346	368	+80
SJIU	0	0	0	0	0	0	0	52	+52
SJI	80	89	94	111	136	186	157	195	+115
SJES LLC	88	97	101	100	90	88	44	31	-53
Elkton	8	8	8	8	8	7	8	8	0
SJES Plus Inc.	22	23	30	32	26	0	0	0	-22
Total	906	971	1,029	1,063	1,097	1,150	1,104	1,111	+205
SJG, ETG, and SJIU Subtotal	708	754	796	812	837	869	895	877	+169

Overall, the SJI workforce increased by 205 employees from January 1, 2013, to January 1, 2020. 169 of the employee increases were in the ongoing utility related entities, SJG, ETG, Elkton, and SJIU (Elkton was divested in 2020 and its eight employees are no longer part of SJI). The percentage of utility related employees (excluding Elkton) of the SJI employees stayed steady from 78.8% in 2013 to 78.9% in 2020. However, the combined total of SJIU, SJG, and ETG utility related employees decreased by 18, or 2.0%, from a high of 895 on January 1, 2019, to 877 on January 1, 2020. This reduction in utility related employees continued in 2020, with an additional 18 employee reduction in the first eight months.

While SJES LLC and SJES Plus Inc. employees decreased by 53 and 22 respectively, SJI employees increased from 80 to 195. The 115 SJI employee increase was 144%, or a 20% simple average annual increase.

An Early Retirement Incentive Program in 2018 and 2019 attracted 40 employees spread among the companies:

- SJG – 24
- SJI – 9
- SJES – 1
- SJI Officers – 4
- SJES Officers – 2

Following its creation in 2019, SJIU had 52 employees, of which most were simply transfers from SJG, ETG, and other entities to SJIU.

The following exhibit shows the changing mix of SJI employees by level since 2013.

SJI Employee Mix by Type on January 1 of 2013–2020

Category	2013	2014	2015	2016	2017	2018	2019	2020	2013-2020 Change
Individual Contributor	702	757	803	837	864	897	860	895	+193
Manager	85	87	92	92	94	101	93	85	0
Supervisor	75	80	86	86	85	96	88	68	-7
Director	23	24	24	24	31	33	35	44	+21
Officer	12	13	14	15	14	16	20	13	+1
Executive	7	8	8	8	8	7	7	5	-2
CEO	2	2	2	1	1	1	1	1	-1
Totals	**906**	**971**	**1,029**	**1,063**	**1,097**	**1,151**	**1,104**	**1,111**	**+205**
Percentage of Individual Contributors	**77.5%**	**78.0%**	**78.0%**	**78.7%**	**78.8%**	**77.9%**	**77.9%**	**80.6%**	

The percentage of individual contributors of the total employees increased from 77.5% to 80.6% over the 2013 to 2020 period, suggesting a slight flattening of the SJI organization. For SJG alone, the percentage of individual contributors increased from 78.9% in 2015 to 85.6% in 2020, a period in which SJIU was inaugurated and some SJG employees were transferred to SJIU. SJIU is generally staffed with higher level employees so the increase in SJG individual contributors may be misleading.

Union Employees

Of the total employees, 495 of SJI's employees are unionized and 319 SJG employees are unionized (all of SJI's unionized employees are with SJG or ETG). SJI has collective bargaining agreements with unions that represent these employees: The International Brotherhood of Electrical Workers (IBEW) Local 1293; the International Association of Machinists and Aerospace Workers (IAM) Local 76; and the Utility Workers Union of America (UWUA) Local 424. SJG employees represented by the IBEW operate under a collective bargaining agreement that runs through February 2022. SJG's remaining unionized employees are represented by the International Association of Machinists (IAM) and operate under a collective bargaining agreement that ran through August 2021.

Contractors

SJI, SJIU, and SJG are heavily reliant on contractors. SJI contracts most work on:

- IT development and implementation
- IT help desk
- Facilities
- Security
- Fleet

In addition, SJI relies on an array of professional services support for lobbying, risk management, finance, compensation and benefits, and outside counsel.

SJIU contracts most work on:

- Clean Energy program implementation
- Leak surveys
- Damage prevention (line locates)
- Environmental site remediation
- Materials

SJG contracts most work on:

- Design engineering
- Construction
- Shutoffs for non-payment (contracted by customer care)

In addition, SJG contracts for some of the Rockford Eclipse valve replacements, customer request turn-offs, light-ups, and meter replacements.

The following exhibit shows the trend in contractor expenditures from 2013 through 2019.

Trends in SJG Contractor Expenditures ($ million)

Category	2013	2014	2015	2016	2017	2018	2019	2013-2019 Change
Construction Work	69.2	159.1	98.6	104.7	156.7	148.0	172.9	+103.7
All Other Contractors	45.0	38.3	51.0	54.0	29.2	58.4	40.6	-4.4
Total	114.2	197.4	158.7	158.1	185.9	206.4	213.5	+99.3
Percentage of Construction Work	**60.6%**	**80.6%**	**62.1%**	**66.2%**	**84.3%**	**71.7%**	**81.0%**	**+33.7%**

SJG's spending on contractors in 2019 was $213.5 million, which is a mix of O&M and capital expenditures. The bulk of contractor expenditures are for construction work, but most major SJI, SJIU, and SJG functions rely on contractors. The percentage of contractor expenditures for construction work increased from 60.6% in 2013 to 81.0% in 2019. However, the expenditures for contractors other than construction decreased from $45 million in 2013 to $40.6 million in 2019. This is likely because some of the SJG non-construction contract work was transferred to SJIU during 2019.

By way of comparison, SJG's total O&M expenditures in 2019 were $139.6 million and its total capital expenditures were $266.9 million, for a total of $406.5 million in expenditures. Expenditures on contractors were 52.5% of the total SJG expenditures. This is up from 42.2% of $97.9 million O&M and $172.8 million of capital expenditures for a total of $270.7 million in 2013 A direct comparison of contractor costs to employee costs is not possible because many contractor payments include materials and equipment charges. Also, much of SJG's employee costs are allocations of labor costs from SJI and SJIU, not direct payroll and benefit expenses.

C. AFFILIATED INTEREST CONTRACTS

Contracts between South Jersey Gas (SJG) and its affiliates consist of a Master Services Agreement, governing the provision of professional services provided by South Jersey Industries (SJI) to SJG, a Shared Services Agreement for the professional services provided by SJI Utilities, Inc. (SJIU) to SJG, a Joint Meter Reading Services Agreement with Millennium Account Services, LLC (Millennium), and an Asset Management Agreement with South Jersey Resources Group (SJRG).

MASTER SERVICES AGREEMENT

Services provided by SJI to SJG include:

- Administrative
- Corporate Communications
- Government and Community Relations
- Human Resources
- Insurance
- Information Technology

SHARED SERVICES AGREEMENT

Services provided by SJIU include:

- Sales and Marketing
- Rates and Regulatory
- Safety
- Utility Shared Services
    - Geographic Information System (GIS) and Records Management
    - Technical Training
    - Compliance and Standards
- Organizational Effectiveness
- Customer Experience
- Gas Supply, Allocations, and Liquid Natural Gas (LNG) Operations

JOINT METER READING SERVICES AGREEMENT

Services provided by Millennium to SJG are meter reading services.

ASSET MANAGEMENT AGREEMENT (AMA)

The AMA gives SJG the right to purchase gas on a firm basis from SJRG.

See Chapter 8, Affiliate Relationships, for a review and discussion of these affiliated interest contracts.

D. AFFILIATED GAS SALES

SALES TO SJG

SJG purchased its base load and its storage injection gas volumes in the monthly and daily markets. Approximately 32% of those volumes were purchased from SJRG and SJ Energy. SJG purchased from many other suppliers over this audit period but was in no way dependent on their affiliates. Purchases were priced at the appropriate index with a plus or minus to the index if appropriate. The same method of pricing was applicable to all other suppliers. The affiliates of SJG do not own gas in the ground; therefore, the affiliates are not exceptional or unique in any way other than the fact that they are an affiliate.

SALES TO SJRG

SJG acted as a merchant in addition to being a Local Distribution Company (LDC). Therefore, SJG was in competition with SJRG. SJG made substantial Off-System Sales (OSS) as demonstrated in the exhibit below. SJG sold less than one percent to its affiliate on an annual basis and some years sales to its affiliate were less than one half of one percent. It was noted that the unit price to its affiliate is less than the unit price to other external parties; however, it was determined that the point-of-sales to SJRG originates in the most southern supply areas in comparison to other external sales which were at city gate delivered prices. SJG is not dependent on SJRG to accomplish its Off-System-Sales Program and based on the level of volumes involved with SJRG purchases from SJG, SJRG is not dependent on SJG.

Off System Sales to Affiliate SJRG

Year	Gross Annual Off System Sales		SJG Sales to Affiliate SJRG			
	Volume (Dths)	Revenue	SJRG Annual Volume from SJG (Dths)	SJRG Annual Sales to SJG	SJRG Average Unit Price	SJRG Percent of Gross OSS Sales
2013	9,684,601	$37,016,220	65,900	$256,068	$3.89	0.68%
2014	9,410,579	$47,601,660	62,249	$175,185	$2.81	0.66%
2015	14,602,862	$47,966,725	923,200	$3,360,764	$3.64	6.32%
2016	16,525,714	$44,302,980	1,114,320	$3,912,228	$3.51	6.74%
2017	25,560,075	$87,204,169	34,238	$87,245	$2.55	0.13%
2018	13,582,135	$55,675,590	1,024,691	$2,983,035	$2.91	7.54%
2019	14,730,625	$49,386,245	416,800	$1,038,222	$2.49	2.83%
Totals	**104,096,591**	**$369,153,590**	**3,641,398**	**$11,812,746**		3.50%

CAPACITY RELEASE

SJG does not release all of its firm capacity that is in excess of the capacity necessary to supply its function as an LDC. SJG is active in the merchant function and uses a substantial portion of its excess capacity to participate in Off-System-Sales.

SJG sought the highest market price for its excess capacity. SJG, using email and chats, forwards an RFP to all current suppliers from whom SJG buys gas. The RFP provides the usual information (i.e., daily volume, rate schedule, points of receipt, and delivery on the contract and term). When the RFP response deadline has expired, all proposals are analyzed, and a bidder is awarded the capacity based on the best value offer. FERC requires that awards of capacity that are less than maximum rates be posted on the appropriate intrastate pipeline bulletin board to solicit all parties that may be interested. SJG posts the notice of their award on the appropriate pipeline bulletin board to solicit interested parties to bid a higher price. SJRG did acquire capacity through this mechanism. Offers for the release of capacity at maximum rates must be posted as informational to the public but do not solicit bids. SJRG did acquire transportation capacity from SJG at maximum rates.

ASSET MANAGEMENT AGREEMENT (AMA)

SJG entered into an AMA with SJRG effective November 2015 through October 2016. The particulars are a capacity release of 10,000 Dths per day from Milford, a receipt point in Pennsylvania to SJG. The AMA provides that SJRG would supply SJG 10,000 Dths daily for city gate delivery, if called upon, between November 2015 and March 2016. SJG entered into many AMA Agreements over the audit period. SJG is not dependent in any way on SJRG for its AMA activity.

See Chapter 10, Procurement and Purchasing, for a detailed review and discussion of gas sales involving SJG and its affiliates.

E. INTERNAL CONTROLS

The internal controls over SJG's affiliated transactions and operations are safeguarded by policies and procedures set forth in SJI's and SJIU's Cost Allocation Manual (CAM), as well as the Procedure for the Allocation, Recording, and Invoicing of Affiliated Company Transactions – Cost Allocation Manual. Individual controls have been established within the SJG department functions in accordance with the Sarbanes-Oxley Act (SOX), tested by SJI's Internal Audit Department, and verified by SJG's external auditors.

See Chapter 8, Affiliate Relationships, for a review and discussion of the CAM, the Procedure for the Allocation, Recording, and Invoicing of Affiliated Company Transactions – Cost Allocation Manual, the establishment and testing of SOX controls, and the external audit attestation function concerning internal controls.

F. RISK MANAGEMENT POLICIES

Risk management for SJG is the responsibility of the Risk Management Department under the VP, Risk and Assurance. Risk areas covered included Credit Risk, Market Risk, and Enterprise Risk Management. The Financial and Physical Natural Gas Transactions Risk Management Policy and Procedures governs the practices and protocols of gas transactions of both SJG and Elizabethtown Gas. A Risk Register identifies and highlights the most serious risks as determined by a Risk Committee.

See Chapter 10, Procurement and Purchasing, and Chapter 13, Finance, for a review and discussion of the Risk Management Department, risk management policies, the Risk Register, and the Risk Committee.

G. INFORMATION SECURITY POLICIES

Information security policies are controlled by the Information Technology Department, headed by the VP, Chief Information Officer and, more specifically, by the Security and Technology Architecture work group. A significant number of information technology policies and procedures have been developed to mitigate cyber security risk. SJI's information security strategy is defined by policies designed to manage risk to levels acceptable to management and which describe the framework required to protect information assets; ensure accountability for actions; and ensure adherence to the three pillars of information security: confidentiality, integrity, and availability.

See Chapter 19, Support Services, for a review and discussion of the Information Security Policies.

H. FINDINGS

3-1 SJI is primarily in the natural gas local distribution company business.

As reported in the Overview section of Chapter 2, Executive Management and Corporate Governance, SJI has evolved its non-regulated businesses since 2013 with a series of acquisitions and divestitures. Through 2019, SJI was focused on the regulated utility business with intent to make it 90% of the company.

The acquisition of ETG placed a strain on SJI's balance sheet. SJI used the proceeds of divestitures from 2018 through 2020 to strengthen its balance sheet, including the sale of solar assets, the sale of the Retail Gas Marketing business, the sale of the combined heat and power (CHP) assets, and the sale of the remaining non-core assets.

Further, there are now few non-regulated entity employees. The following table shows SJI employment as of September 2, 2020:

SJI Employment as of September 2, 2020

Component	Employees	Percent of Total
Utilities – SJIU, SJG, and ETG	851	77.8%
SJI Corporate	208	19.0%
All Other – Non-regulated	35	3.2%
Total Employees	1,111	100.0%

There were only 35 employees in the non-regulated portions of SJI, or 3.2% of the total SJI employees. While the Wholesale Energy Operations unit produces high revenue—$607 million in 2019—it did so with few employees and at low profit margins of $439 thousand, or less than one-tenth of one percent of the SJI total profit. By contrast, in 2019, SJI's two regulated LDCs and SJIU accounted for 78% of SJI's employees and over 100% of SJI's operating income.

3-2 Although SJI's principal business is regulated local distribution operating companies, the utility operating functions are located several levels down in the organization structure.

The three LDC operating functions are Gas Supply, Operations, and Customer Experience. Gas Supply serves both SJG and ETG and reports to the SJIU president, at the third organizational level (SJI CEO, SJIU President, Gas Supply Vice President) in the organization structure. Unlike all other corporate support and LDC functions, as of December 31, 2019, the Operations and Customer Experience functions had not been centralized between SJG and ETG and report at the fourth organizational level (SJI CEO, SJIU President, SJG President, Vice Presidents of Operations and Customer Experience). These lower level organizational placements insulate the LDC operating functions from senior management attention and reduce senior management's attention on its principal businesses, SJG and ETG.

3-3 The SJI staff functions' principal clients are the SJG and ETG utilities.

While SJI has non-regulated operations, these enterprises are small in comparison to the SJG and ETG regulated operating utilities. The non-regulated portion of SJI has only 35 employees. While the SJI staff functions (e.g., Finance, Accounting, Information Technology, External Affairs, Human Resources, and General Counsel) serve both regulated and non-regulated SJI subsidiaries, their principal focus is on SJG and ETG, as these SJI subsidiaries have the bulk of SJI's employees and profits.

3-4 The SJIU entity and intermediate staff level is unnecessary.

SJIU was originally formed to focus on the management of the LDCs and its formation was approved by the BPU. However, this focus has been eroded and now SJIU insulates the SJI leadership from its principal businesses, SJG and ETG. Several SJIU functions now serve all of SJI, including, Safety, Enterprise Project Management Office, Environmental, and Innovation and Business Improvement. The existence of the SJIU legal entity and organizational level causes extra costs (e.g., separate board of directors and financial reporting) and unnecessary organizational complexity. The SJI and SJIU staff levels could be consolidated to reduce cost and complexity.

3-5 There is no need for a separate SJG President position or separate SJG and ETG Operations and Customer Experience functions.

The SJG President has only two direct reports (Operations and Customer Experience) and the position is currently held by the former SJI General Counsel who had no prior utility management experience. The SJI CEO can serve as the President of SJG and ETG. The management of the SJG Operations and Customer Experience functions can be centralized with ETG and report directly to the SJI CEO. The SJG President position can be eliminated.

3-6 The personnel in the top level SJI organization structure have diverse backgrounds but have no engineering background and limited regulated utility operating experience.

The backgrounds of the current SJI CEO and his direct reports are:

- CEO – Has a finance and marketing background and, after joining SJI in 1997, worked on the non-regulated side until 2014. He has been COO or CEO of SJI since 2014. He has not held an operating management position in a regulated utility.
- SVP, CFO – is an attorney with a background in private legal practice. Started in the SJI Legal department in 2009. Served as the Director or Vice President of

Rates and Regulatory Affairs with responsibility for SJG from 2011 to 2017. He then was a Vice President or Senior Vice President responsible for Strategy and Growth and the COO or President of the non-regulated subsidiaries from 2017 through 2020. In addition, he served as the Interim General Counsel for six months in 2017 and 2018. He transferred to the CFO position in 2020.

- SVP, CHRO – is a CPA with an MBA and a background in public accounting. Has been in human resources with companies with large employee workforces for 25 years but had no utility experience until joining SJI in 2020.
- VP, CIO – is a career IT professional. Has been with SJI since 2017. Prior to joining SJI, he was employed by Williams Co. which owns several regulated interstate pipelines and had IT consulting experience with a publicly owned electric authority. However, he had no prior experience with natural gas local distribution companies.
- VP, General Counsel – is an attorney with a background in private practice focusing on public company governance. Joined SJI as the Assistant Corporate Secretary in 2016. Later became the Deputy General Counsel, Interim General Counsel, and then General Counsel in 2020. He had no prior utility experience.
- SVP, SJIU – is an accountant with a background in public accounting. Also served as a controller for a private company. Joined SJI in 1996 as a staff accountant. Worked in SJI finance for 19 years and two years in strategic planning. Was promoted to President of SJG in 2017 and President of SJIU when it was formed in 2018. He also served as President and COO of South Jersey Energy Services from 2014 to 2017. Prior to the SJG presidency, he had no prior utility operating experience.
- VP, External Affairs – is an attorney with a background in state government. He has been with SJI since 2018 and had no prior regulated utility experience. He did serve as the SJIU VP of Rates and Regulatory for one year.

In addition, the SJG President and SJI SVP who reports to the SJIU President but is on the SJI Senior Leadership team is not an engineer and had no prior utility operating experience. She is an attorney with a background in state government. She joined SJI as the SVP and General Counsel in 2017 with no prior utility experience. She transferred to the President of SJG in 2020.

The direct reports to the SJI CEO have diverse experience but there are no members with an engineering background or significant utility operating experience. Seven of the eight are attorneys or have a finance and accounting background. One also has a marketing background. Three have a finance and accounting background (CEO, CHRO, and SJIU President), four are attorneys (CFO, General Counsel, External Affairs VP, and the SJG President), and one is a career IT professional.

3-7 The SJI Senior Vice President, Vice President, and Director position titles appear to be applied inconsistently.

The SJI Job Architecture and Career Pathing Process has a defined job structure. The structure covers job titles from entry level to Non-Officer Vice President for SJI, SJIU, and SJG. There are extensive Level Progression Guidelines for the M4 Director, M5 Director/Non-Officer Vice President, and M6 Non-Officer Vice President levels. However, there is much overlap among the job characteristics for those three positions and there is substantial room for subjective interpretation and judgement in assigning a level to each position. Further, the SJI Job Architecture and Career Pathing Process does not cover Officer Vice President or Senior Vice President position titles so there are no criteria for distinguishing between those positions and between those positions and the Non-Officer Vice President and the Director positions.

There are multiple instances of what appear to be inconsistencies among position titles, such as:

- The SJI CHRO is a SVP position but the SJI CIO position is a VP position. They both report to the SJI CEO. While the head of Human Resources is an important position, so is the head of Information Technology. The CIO oversees a large workforce of employees and contractors and millions of dollars of capital investment. He is responsible for mission critical information systems.
- The head of SJI Shared Services position is a Vice President, but the head of SJIU Shared Services position is a Director. Both are responsible for multiple, mission critical functions.
- The heads of Enterprise Project Management and Innovation and Business Improvement are both Vice Presidents positions and report to the SJIU President, but each have small staffs and budgets. However, the head of Environmental also reports to the SJIU President and oversees the critical environmental remediation programs and multiple specialized contractors, but is only designated as a Manager, not even a Director.
- The head of Sales and Business Development reports to the SJIU President and is a Vice President position. However, the head of the equally important Safety and Quality Assurance functions is only designated as a Director.
- Within SJG, SJI’s most important asset, there are only two Vice President positions, for Operations and Customer Experience.

Inconsistencies in assigning position titles can lead to a perception of unfairness among leadership employees and have an effect on the functions they supervise.

3-8 The number of utility employees has recently decreased, which jeopardizes utility core competencies.

As noted above, the number of utility related employees (SJG, ETG, and SJIU) has decreased from a high of 895 at the beginning of 2019, to 877 at the beginning of 2020, to 851 on September 2, 2020, a reduction of 44 positions, or five percent.

For SJG alone, employees have decreased from a high of 549 at the beginning of 2019 to 457 on January 1, 2020, and further to 438 on September 2, 2020. While some of the SJG employees simply transferred to the newly established SJIU, the field personnel did not. The number of SJG Construction, Field Operations, Utility Services, Compliance, and Damage Prevention field employees decreased from 143 in 2015 (data for 2013 and 2014 is not available) to 133 in 2020, a decrease of ten employees, or seven percent. The number of engineering, design, and permitting employees decreased from 23 in 2015 to 15 in 2020, a reduction of eight employees, or 35%. Division office staff decreased from

32 in 2015 to 27 in 2020, a reduction of five employees, or 16%. These employees represent core competencies for SJG. SJG has seen significant reductions in field employees since 2015.

Utility employees are vitally important for the core competencies needed to operate a utility effectively and efficiently. Core competencies are essential in the utility operating functions of Customer Service, Gas Supply, and Field Operations. Core competencies are gained through a combination of training and experience. A utility must employ enough personnel to achieve and maintain core competency in the utility functions over time.

It is also important to have adequate numbers of employees at the beginning of each career path so that well-prepared employees can be promoted to higher levels of responsibility as needed. For example, Field Operations technicians are the feeder for Construction Operations contractor inspectors. There must be an adequate number of Field Operations technicians to do the Field Operations work and supply future Construction Operations inspectors.

Additionally, utility employees are important for emergency response. While some contractors can be relied upon for assistance during emergencies, their loyalties may be divided among several utility clients with simultaneous needs. Actual utility employees can be trained and provisioned for rapid, expert emergency response.

3-9 While the use of contractors is common in utilities for non-core functions and workload peak shaving, SJI, SJIU, and SJG are utilizing contractors for core functions and base load utility work, which also jeopardizes utility core competencies.

SJG and its affiliates contract for virtually all non-core utility work such as, materials, facilities, fleet, security, and site remediation. However, SJG and its affiliates also contract for the lion’s share of much of the core competency utility work, including design engineering, construction, leak surveys, emergency preparedness, and damage prevention (line locates). It also contracts a significant portion of utility (field) services. This contracting in lieu of employees is another facet of the concern about utility core competencies for long-term system safety, effectiveness, and efficiency as well as the ability to respond to emergencies.

3-10 Because most SJG design engineering work is contracted, there are fewer degreed engineer employee positions which causes additional core competency concerns and a lack of internal candidates for promotions.

SJIU has ten degreed engineer employees and SJG has 19 degreed engineer employees. The SJIU engineers are predominately managers of technical functions like Gas Control and individual contributors working on technical issues like compliance and standards. SJIU engineers do little design engineering work.

The SJG engineers are primarily focused on managing engineering and construction contractors. SJG engineers also do little design engineering work.

Because there is little in-house design engineering work, the principal positions for engineers are either managing technical functions or managing engineering and construction contractors. This causes a core competency concern and a career path problem.

Normally, design engineer employees would move into technical function management or engineering and construction contract management as career paths. Without this stream of future candidates, SJIU and SJG must hire engineers from the outside and train them in SJG standards, systems, and processes. For example, the SJG engineers who supervise the contract design engineers for main and service replacements are hired from the outside and taught the SJG systems. They do not learn by actually doing engineering designs themselves.

Because system integrity (lack of system safety incidents such as leaks and pressure drops) is so important, engineering core competency is also vitally important. The more employees there are who understand the gas system and the SJG standards and procedures, the better.

I. RECOMMENDATIONS

3-1 Eliminate the SJIU organization level, elevate the consolidated SJG and ETG operating functions in the SJI organization structure and restructure the SJI CEO direct reports. (See Findings 3-1, 3-2, 3-3, 3-4, 3-5, and 3-6)

The separate SJI and SJIU staff levels distract senior management attention from SJG and the SJIU level insulates senior management from SJG. As discussed in the System Operations and Customer Service chapters, the utility Operations and Customer Experience functions can be centralized between SJG and ETG just like all other utility and support functions already have been.

The principal utility operating functions, Gas Control, Operations, and Customer Experience should report directly to the CEO. These functions provide the direct customer contact and are responsible for the gas system integrity and safety as well as the lion's share of utility O&M costs and capital expenditures. This will provide an opportunity to add engineering and utility operating backgrounds to the top level of the organization.

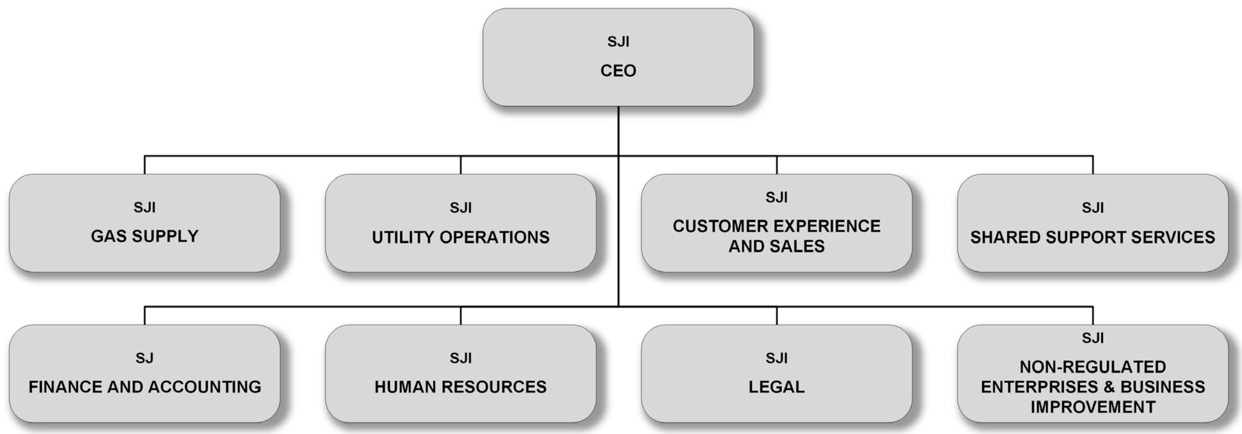
The consolidated SJI and SJIU staff functions can be restructured to leave a reasonable span of control for the CEO. For example, the following functions could report to the CEO:

- Gas Supply
- Utility Operations
- Customer Experience and Sales
- Shared Support Services (e.g., Information Technology, Rates and Regulatory, Supply Chain, Fleet Management, Facilities Management, External Relations, Compliance, Environmental, Safety, Enterprise Project Management Office, and Innovation and Business Improvement)
- Finance and Accounting - Chief Financial Officer
- Human Resources - Chief Human Resources Officer
- Legal - General Counsel
- Non-regulated Enterprises and Business Development

This would give the CEO the same number of direct reports as he has now – eight. Alternatively, the CIO could report to the CEO instead of the CHRO to stay at eight direct reports or they both could, increasing the CEO direct reports to nine.

The following exhibit illustrates the recommended organization structure.

Recommended Organization Structure



3-2 Dissolve the SJIU legal entity. (See Findings 3-1, 3-2, 3-3, 3-4, 3-5, and 3-6)

This will save the expense of a subsidiary with a separate board and reporting. SJIU employees would become SJI employees.

3-3 Delete the SJG President as a separate position and name the SJI CEO as the SJG President. (See Findings 3-1, 3-2, 3-3, 3-4, 3-5, and 3-6)

This will eliminate one executive position that may be needed for the heads of the consolidated Operations and Customer Experience functions. The ETG President position could also be made available for redeployment.

3-4 Rationalize the Senior Vice President, Vice President, and Director position titles within SJI, SJIU, and SJG. (See Finding 3-7)

As the SJI, SJIU, and SJG organization is restructured, reevaluate the position titles for each executive and management position and rationalize them to achieve consistency and perceived fairness among the employees.

3-5 Find ways to economically increase the number of employees in core utility functions and decrease the reliance on contractors. (See Findings 3-8, 3-9, and 3-10)

Contracting for non-utility core functions and workload peak shaving for utility functions is a common practice. However, overreliance on contractors for core utility functions threatens core competencies and emergency response.

It would be imprudent to staff for employees to do all utility core function work. There are peaks and valleys of workloads. Staffing for the peaks would result in idle workers during the valleys. However, there is a baseload of work for each function that can be reasonably predicted. SJG should find economic ways to have employees do more of the baseload work and leave the contracting for peak shaving. This applies to all utility core functions including design engineering, construction, and field service. This in-house work creates a larger pool of candidates for promotion to technical management positions and technical contractor management positions. It also increases the level of utility core competency in the organization and the ability to respond to emergencies.

4. STRATEGIC PLANNING

A. BACKGROUND

SJI AND SJG GOALS AND BUSINESS MODEL

Following are South Jersey Industries, Inc.' (SJI's) and South Jersey Gas Company's (SJG's) goals and business model as presented in the SJI 2019 SEC Form 10-K.

SJI's current long-term goals are to grow Economic Earnings per Share six to eight percent annually driven by high quality earnings, a strong balance sheet and a low-to-moderate risk profile. Management established those goals in conjunction with SJI's Board of Directors based upon a number of different internal and external factors that characterize and influence SJI's current and expected future activities.

The following is a summary of the primary factors we expect to have the greatest impact on SJI's performance and ability to achieve the long-term goals going forward:

<u>*Business Model*</u> *- In developing SJI's current business model, our focus has been on our core Utilities and natural extensions of those businesses. That focus enables us to concentrate on business activities that match our core competencies. Going forward we expect to pursue business opportunities that fit this model.*

<u>*Customer Growth*</u> *- Southern New Jersey, SJG's primary area of operations, has not been immune to the issues impacting the new housing market nationally. Residential new construction activity remains steady, supported by growth in higher density and multi-family units. Customers for SJG grew 1.5% for 2019 as SJG continues its focus on customer conversions. In 2019, consumers converting their homes and businesses from other heating fuels, such as electric, propane or oil, represented approximately 71% of the total new customer acquisitions for the year.*

STRATEGIC PLANNING

Strategic planning is done at the SJI level for the entire enterprise, including SJG. It proceeds in parallel with the financial planning process and is done annually and updated continuously. The planning horizon is five years (2020 through 2024). The annual strategic plan is documented in a bullet and dash format.

The planning process starts with a review of performance and progress against milestones in the prior year's plan and scans of external factors such as new regulations, market conditions, and industry trends. A draft bullet and dash plan is then developed with input from SJI and South Jersey Industry Utilities (SJIU) executives. The draft plan is then processed through the financial plan to anticipate its effects.

The SJI strategic planning effort is led by the Chief Financial Officer (CFO) and is supported with data and analytics from the Financial Planning and Analysis group that reports to the CFO. The Senior Management Team, consisting of the Chief Executive Officer (CEO), Chief Human Resources Officer (CHRO), Chief Information Officer (CIO), General Counsel, the President of SJIU, and the President of SJG, reviews the strategic planning material and develops the strategic plan that is compiled by the CFO. Matters of strategic interest are also discussed periodically with a Strategy Council that includes additional SJI and SJIU executives beyond the Senior Management Team.

The draft annual strategic plan is summarized in a slide deck that is reviewed with the Board of Directors Strategy and Finance Committee. After incorporating the Committee's input, the strategic plan is presented to and discussed with the SJI Board of Directors at a summer two-day strategic planning retreat. In addition to the review of the strategic plan, the retreat normally includes outside speakers on topics of strategic interest, such as financial markets or technological developments. While the annual strategic plan is presented at the summer Board of Directors strategic planning retreat, it is regularly updated at the other quarterly SJI Board of Directors meetings.

The companion budget process begins in late July, typically just after the Board Strategic Planning Retreat and continues through January or February of the following year.

STRATEGIC PLAN

The strategic plan includes:

- Executive Summary
- A review of the New Jersey Energy Master Plan and its impact on SJI's growth strategy
- A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis
- General goals and targets for SJI including the utility/non-utility balance, earnings per share (EPS) growth, utility capital expenditure focus, credit rating, and dividends
- A vision of SJI of the Future including utility rate base growth, clean energy and decarbonization investments, and utilizing the gas distribution system for renewable natural gas and hydrogen
- Long-term business opportunities including acquisition of additional regulated utilities, and non-utility businesses such as wholesale marketing, midstream pipelines, energy consulting, and renewables
- A summary of the financial plan which includes:
  - Financial plan assumptions
  - SJIU (SJG and ETG but also including South Jersey Energy Services and South Jersey Energy Group) 2020–2024 capital and regulatory assumptions
  - The 2020–2024 Financial Plan
  - The financing strategy
  - An appendix covering:
    - The SJG and ETG Capital Expenditure Plan for 2020 through 2024
    - The Non-Utility Capital Expenditure Plan for 2020 through 2024
    - The SJIU Financial Plan for 2020 through 2024
    - The SJI Energy Solutions Financial Plan for 2020 through 2024[1]

[1] DN 36-39

B. FINDINGS

4-1 The strategic planning process is typical for a small, investor-owned utility.

While there is a separate strategic plan, it is closely linked to the financial plan. The strategic plan and financial plan are developed concurrently and interactively. The CFO leads the strategic planning process and the Senior Management Team, with input from a broader Strategy Council, develops the bullet and dash strategic plan. The strategic plan is then reviewed with the full SJI Board of Directors and is periodically updated throughout the year. This is a typical process for a small, investor-owned utility.

4-2 The strategic plan is simple and straightforward, easy to understand, and is appropriate for a small, investor-owned utility.

SJI, SJIU, and SJG are overseen by a relatively small governance group consisting of members of the Board of Directors and an executive team. Communication among the governance group members is frequent and focused. The bullet and dash strategic plan is appropriate for communication among this group and to the rest of the SJI and SJG organization.

The strategic plan has a simple structure with a SWOT analysis and an exposition of the initiatives SJI and its subsidiaries will take to exploit the opportunities and mitigate the threats. While the focus of the plan is on improving shareholder value, it includes multiple operational initiatives designed to accomplish financial objectives. It includes an articulated vision of the SJI of the future. The strategic plan has a companion five-year financial plan that shows the anticipated financial impacts of implementing the strategic plan.

4-3 [Redacted]

[Redacted]

4-4 [Redacted]

[Redacted]

4-5 The strategic plan sets capital expenditure targets; that is, capital expenditure targets are set from the top-down rather accumulated from the bottom up.

The strategic and financial planning process precedes the capital budgeting process.[2] The result is that SJG and the other business units develop capital expenditure budgets to achieve the targets set by the strategic and financial plan. While top-down capital expenditure target setting is common among utilities, it is usually informed by bottom-up capital expenditure planning from the business units. There is no separate capital expenditure plan from SJG developed from the bottom up. Rather, the SJG capital expenditure budget is developed to achieve the SJI targets for SJG capital spending each year.

[2] DN 36; DN 37; DN 38; DN 39; DN 59; DN 60; DN 61

C. RECOMMENDATIONS

4-1 Revise the strategic planning process to include annual rolling five-year, bottom-up SJG capital expenditure plans designed to accommodate customer growth and ensure system integrity. (See Finding 4-5)

It is a better practice to balance top-down capital expenditure planning with bottom-up capital expenditure planning. SJG should have an organic, capital expenditure five-year plan based on its projected customer growth and system integrity needs. This plan should then inform the SJI strategic planning for capital expenditures. Without the SJG bottom-up plan, unnecessary capital projects may be authorized to meet the SJI targets.

The current process of having SJG develop capital expenditure plans to meet SJI-set capital expenditure targets can result in unnecessary capital expenditure projects, over-designed capital expenditure projects, or premature capital expenditure projects. The SJG capital expenditures should be structured as the minimum amounts necessary to accommodate customer growth and achieve system integrity targets. SJG should develop an annual rolling five-year bottom-up capital expenditure plan separate from the annual strategic and financial planning process.

5. MERGER

A. BACKGROUND

The SJI acquisition of Elizabethtown Gas Company (ETG) and Elkton Gas Company (ELK) was approved by the NJ BPU on June 22, 2018, with an effective date of July 1, 2018. The approved acquisition included a number of stipulated provisions covering multiple topics, such as the planned sale of ELK, an ETG credit to customers, the treatment of synergy savings, affiliate relationships and charges, ring fencing, the asset management agreement, infrastructure investment, and commitments to maintain current employment levels and community support contributions.

The SJI acquisition of ETG and ELK was explained in the SJI 2019 SEC Form 10-K:

> *On July 1, 2018, the Company completed the Acquisition of ETG and ELK. The Company completed the Acquisition for total consideration of $1.72 billion in cash, inclusive of $24.7 million of certain net working capital adjustments. Of the total, $1.71 billion relates to the acquisition of ETG, while $10.9 million relates to the acquisition of the ELK. The Acquisition supports the Company's strategy of earnings growth derived from high-quality, regulated utilities. Further, the Acquisition expands the Company's customer base in the natural gas industry, which drives efficiencies by providing a greater operating scale.*

ELK is a small natural gas local distribution company serving a territory in Maryland. As planned, SJI divested ELK in 2020. No attempt was made to integrate it into SJI.

ETG is slightly smaller than SJG as shown in the following exhibit.

Comparisons of SJG and ETG Scale

Customer Count and Operating Revenues	SJG	ETG
Residential	370,693	275,922
Commercial	25,985	23,445
Industrial	412	98
Total Count	397,090	299,465
Operating Revenues (million)	$564	$325
Territory Specifications	**SJG**	**ETG**
Square Miles of Territory	2,500	1,431
Distribution Miles	6,684	3,234
Transmission Miles	146	14
Municipalities Served	113	90
Counties Served	7	7

ETG has 25% fewer customers, 42% less revenue, a 43% smaller service territory, and 90% fewer miles of transmission pipe. While SJG has five geographic divisions, ETG has just two: a fairly dense, more suburban Union division and a less dense, more rural Northwest division.

The current ETG President is not a legacy employee. She was hired from another utility operating company. No executives with ETG at the time of the acquisition remain with SJI, SJIU, or ETG today. Southern Company Services provided all other support.

ETG used to be owned by National Utilities Industries Corporation (NUI). It was sold to Atlanta Gas Light (AGL) in 2004. Southern Company bought AGL in 2016. Southern Company sold ETG and ELK to SJI in 2018 (raising money to reduce debt).

B. FINDINGS

5-1 There was no formal ETG merger plan, just an SJI and SJIU reorganization and a Transition Services Agreement to allow an ETG information systems transition.

SJI did not produce a formal merger plan for the ETG acquisition. Rather, it focused on creating an organizational structure to house ETG, establishing the new SJIU utility holding company, and implementing the systems necessary to replace the centralized services ETG received from its prior owner's service company. All existing ETG employees continued to fulfill their work functions as before.

SJI formed SJIU to hold both ETG and SJG. Along with the presidents of ETG and SJG reporting to the SJIU president, SJIU created multiple shared utility functions to serve both ETG and SJG. (See Finding 2.) The shared utility functions facilitated the integration of ETG and SJG information systems.

SJI signed a Transition Services Agreement (TSA) with ETG's former service company, Southern Company Gas Services, to provide its information systems and related support for a period of time while SJIU developed the systems and related support to accommodate ETG on a stand-alone basis. It was determined that some of the SJI/SJG legacy systems would not accommodate ETG and, further, some ETG systems were superior to the SJG systems. Therefore, the TSA provided time for SJIU to acquire and implement new systems for ETG or to integrate ETG into existing SJI/SJG systems.

ETG was integrated into many existing SJI/SJG systems including:

- Office systems like telephony, network, desktop applications, and cell phones
- Capital project tracking
- Gas supply
- Customer service
- Human resources
- Work and asset management
- Sales management

However, for the existing ETG systems that were superior to SJG systems, like GIS, asset records, and mobile work management, SJI acquired stand-alone versions for ETG with the intention of future implementation at SJG beyond the period of this audit. The transition of ETG systems began after the closing in 2018 and was completed in the first quarter of 2020. The TSA was terminated in 2020.

5-2 SJI consolidated most ETG functions with SJG functions under the SJI and SJIU organization structures which achieves concentration of expertise and potential economies of scale.

As part of the acquisition implementation, SJI formed SJIU to own ETG and SJG. While Operations and Customer Experience report to the respective Presidents of ETG and SJG, multiple functions are centralized to serve both ETG and SJG from both the SJI and SJIU levels. SJI functions that serve both ETG and SJG, as well as the SJI non-regulated subsidiaries, include: External Affairs, Finance and Accounting, Human Resources, Information Technology, Shared Services (including Procurement), and Legal. SJIU centralized utility functions that serve both ETG and SJG include Rates and Regulatory (which includes Clean Energy), Utility Shared Services, Enterprise Project Management Office, Environmental, Gas Supply, Innovation and Business Improvement, Safety and Quality Assurance, and Sales. Only Operations (gas system construction, operations, and maintenance and field service) and Customer Experience remain unconsolidated at the SJI or SJIU level.

It is common for holding companies with two or more operating utility companies to centralize management of each function. The centralization of management across utility functions provides for the concentration of expertise that often facilitates improvements across the operating companies by identifying the best practices and implementing them across all companies. Further, centralization of utility management functions provides the opportunity for economies of scale. For example, the combined purchasing power of ETG and SJG can lead to lower costs for both.

5-3 No synergies were forecast from the merger.

The petition for approval of the merger did not identify any potential synergies from the merger. ETG was already a part of a larger holding company with multiple shared services that provided economies of scale and no additional economies of scale were forecast from the SJI acquisition. Further, SJI's latest bi-annual report on Acquisition Costs Incurred and Savings Realized for ETG stated that, "There are no identified savings related to the acquisition of ETG as of December 31, 2020." The report also stated that the ETG costs were recorded at the SJI entity level and none were allocated to ETG. SJIU continues to track compliance with all conditions and commitments of the BPU's approval order for the ETG acquisition.

5-4 The acquisition had a minimal impact on ETG employees.

The acquisition stipulation had two specific requirements regarding employees. First, SJI will maintain an ETG core management team for five years consisting of an ETG President, Chief Operating Officer, and department heads for Rates and Regulatory, Union Field Operations, Northwest Field Operations, Sales, Engineering, Construction Operations, System Integrity, Call Center, and Gas Supply. Currently, there is a separate ETG President position, but no ETG Chief Operating Officer position either in ETG or SJIU. However, we see no need for an ETG Chief Operating Officer position as it would be largely redundant to the SJIU President and ETG President positions.

Currently, there are also all of the required ETG department heads. However, several are provided by SJIU employees serving both ETG and SJG including Rates and Regulatory, Sales, and Gas Supply. We find that the SJIU centralized functions fulfill the spirit of the stipulation and have the advantage of concentration of expertise and possible economies of scale.

Second, the stipulation requires SJI and/or an affiliate, in total, to maintain a minimum of 330 employees in NJ to support ETG and, within 12 months, to add a minimum of 30 new employees in NJ to perform services for ETG provided from other states by its previous parent, Southern Company Gas. The September 14, 2020 Annual Report to the BPU on ETG headcount reported 360 ETG employees which fulfills this commitment.

Please see the Workforce section of this chapter for more information on SJIU and SJG employees.

C. RECOMMENDATIONS

None.

6. DISTRIBUTION AND OPERATIONAL MANAGEMENT

A. BACKGROUND

SJG TRANSMISSION AND DISTRIBUTION SYSTEM

The SJG transmission system is composed of:

- Seven city gate stations connecting to interstate pipelines
- 146.4 miles of transmission pipeline ranging from 250 to 1100 pounds of maximum allowable operating pressure (MAOP)
- 23 district regulator stations directly connected to the transmission pipelines

The SJG distribution system covers 6,684 miles of main and 322,000 services. All distribution systems are 60 pounds MAOP. Summer operating pressure is 40 pounds; winter is 60 pounds. The following exhibit shows the mix of main pipe by division.

2019 Main Mileage by Division

Division	Bare Steel	Plastic	Wrapped Steel	Total
Atlantic	8	1,029	267	1,304
Glassboro	22	1,269	442	1,733
Cumberland	23	923	226	1,172
Cape May	15	615	223	853
Waterford	16	1,151	455	1,622
TOTAL	**83**	**4,987**	**1,614**	**6,684**

All cast iron pipe had been removed prior to the end of 2019 and the remaining bare steel pipe was removed in 2021 with the exception of small amounts where moratoriums currently prohibit replacement but will be replaced as the moratoriums expire.

DIVISION WORK CENTERS

SJG has five geographic operating division work centers and a transmission pipeline operations work center. The Atlantic and Cape May divisions are grouped in the east and the Waterford, Cumberland, and Glassboro divisions are grouped in the west. Each division work center supports the local construction, operations, maintenance, and field services personnel and the clerical staff serving that division. The divisions range in size and density as shown in the following exhibit.

Division Density (2019 Statistics)

Division	Square Miles	Gate Stations and District Regulator Stations	Number of Services	Services per Square Mile	Services per Mile of Main
Atlantic	273	29	65,352	239	50
Glassboro	423	41	74,864	177	43
Cumberland	421	31	42,319	101	36
Cape May	130	23	58,328	449	68
Waterford	281	12	81,137	289	50
TOTAL	**1528**	**136**	**322,000**	**211**	**48**

The average miles of main for a division is 1,337 (6,684 total miles divided by five). Glassboro and Waterford have the most miles of main (1,733 and 1,622 respectively) while the Atlantic, Cumberland, and Cape May divisions have less than average miles of main. Glassboro and Waterford also have the highest number of total services (customers) at 74,864 and 81,137, respectively.

In measures of density, services per square mile and services per mile of main, Cape May is the densest division at 2.1 times the average services per square mile and 1.4 times the services per mile of main. Cumberland is the least dense division with 48% of the average services per square mile and 75% of the average services per mile of main.

Each division has a work center. A division work center has one main building that houses the offices and warehouse. The work centers are fenced and require badge entry. The office and warehouse require a second badge entry. The warehouse is not staffed but is secure. The employee removing materials from the warehouse scans the materials to his badge. The materials contractor restocks the warehouse twice per week. There is also a fenced outdoor laydown yard. Each division work center also has a garage operated by the fleet contractor. The training center is located at the Glassboro work center which has the largest building. The Division Clerks are the principal office tenant at each division office.

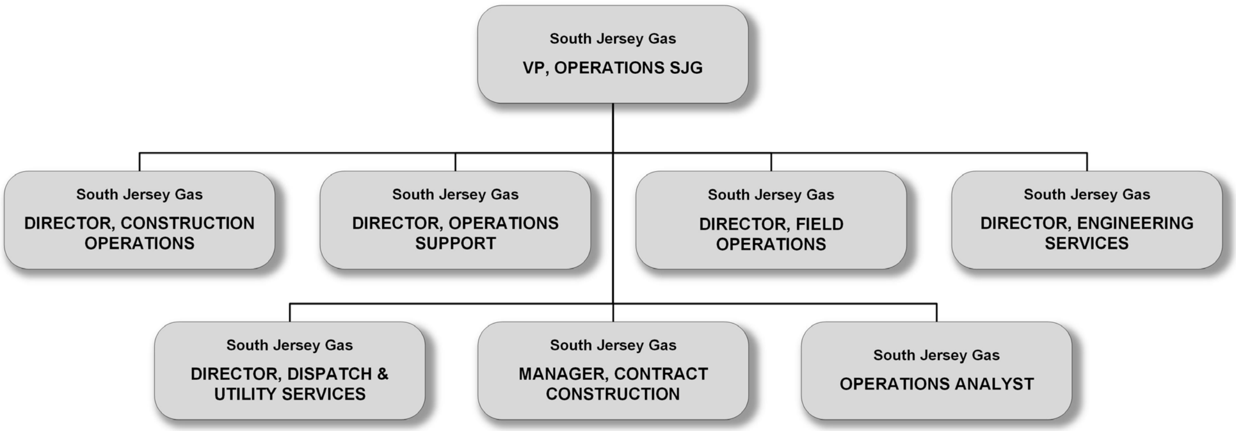
The Cape May division was acquired from New Jersey Natural Gas in 1983 and SJG inherited the union, which is different than the other SJG unions. Cape May employees do both transmission and distribution work and leak surveys. The other four divisions only do distribution work and contract for leak surveys. The Engineering Services (Pipeline) department handles transmission work in the other four divisions.

SJG OPERATIONS ORGANIZATION STRUCTURE

SJG transmission and distribution system construction, operations, maintenance, field service, and related support services is provided by SJG employees and contractors supervised by the Vice President of Operations for SJG who reports to the President of SJG. The SJG Operations group is also supported by two SJIU level centralized groups that serve both SJG and Elizabethtown Gas (ETG): Utility Shared Services and Safety and Quality Assurance.

The top level SJG Operations organization structure is shown in the following exhibit.

SJG Operations Organization Structure



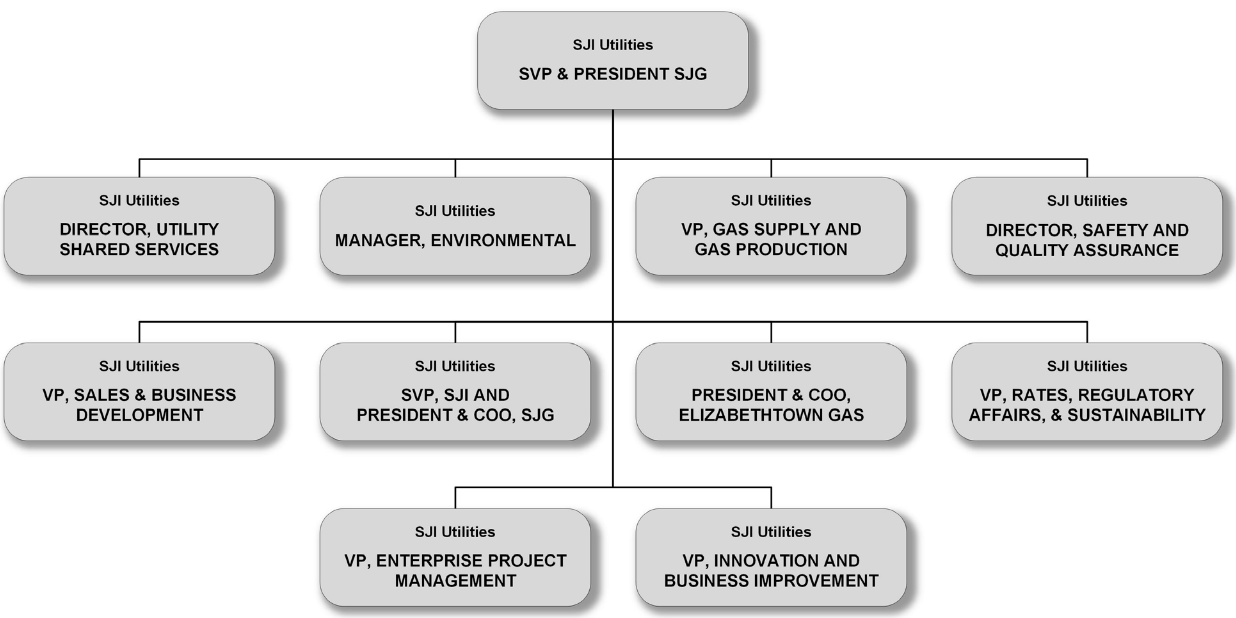
Each of these groups is discussed in separate sections below.

In general, contractors do transmission and distribution design, construction, locating, meter testing, and leak surveys. Employees do contractor management, leak repairs, transmission and distribution line operations and maintenance, and utility services (field service).

SJIU ORGANIZATION STRUCTURE

The SJIU organization structure is shown in the following exhibit.

SJIU Organization Structure



Two of the SJIU functions directly support SJG Operations:

- Utility Shared Services
- Safety and Quality Assurance

These two groups are discussed in separate sections below.

The remaining SJIU functions are covered elsewhere in this report:

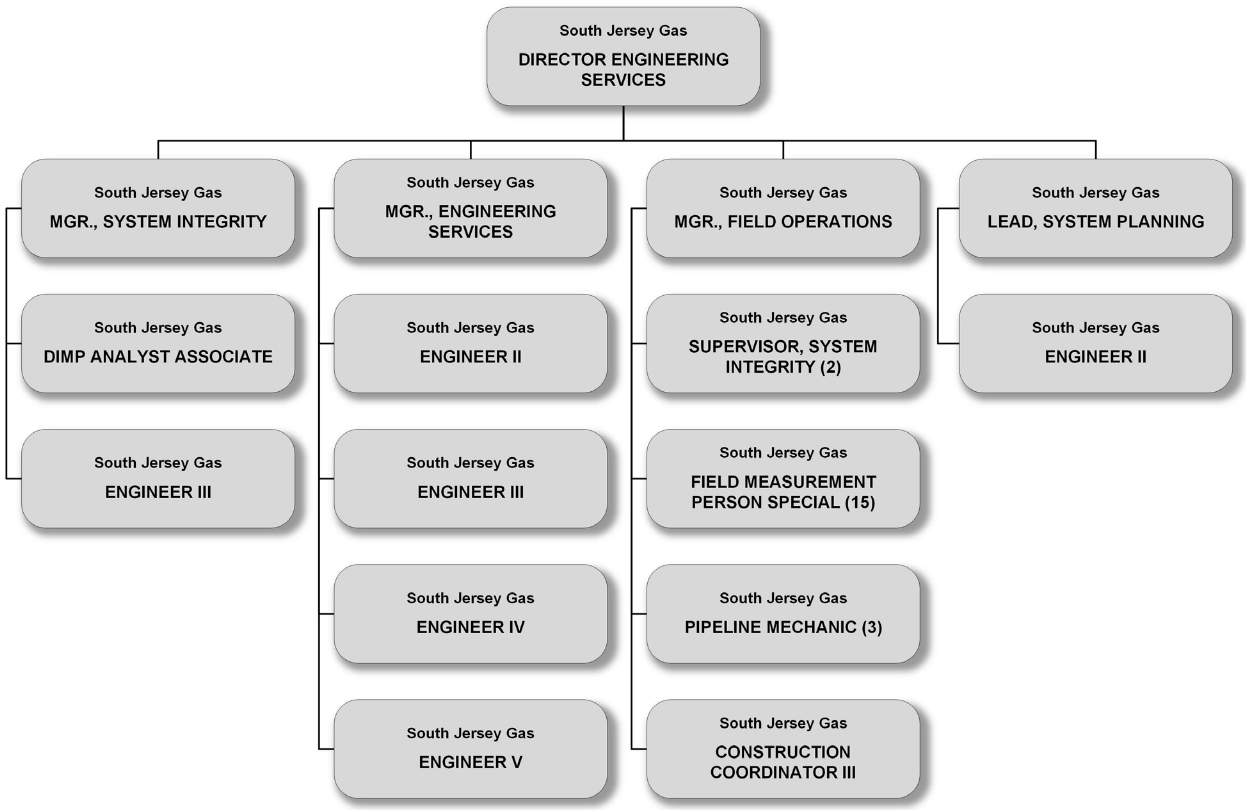
- Rates and Regulatory is covered in Chapter 13, Finance
- Enterprise Project Management Office is covered in the Information Technology section
- Environmental is covered in the Environmental section
- Gas Supply is covered in the Gas Supply chapter
- Innovation and Business Improvement is covered in Chapter 2, Executive Management and Corporate Governance
- Sales and Business Development is covered in the Sales section of Chapter 7, Customer Service
- The president of ETG and her organization is not within the scope of these audits

ENGINEERING SERVICES

The Engineering Services group develops the transmission and distribution system plan, including the accelerated replacement projects; does the analysis and reporting for the accelerated replacement projects; and constructs, operates, and maintains the transmission system.

The organization structure for the Engineering Services group is shown in the following exhibit.

Engineering Services Organization Structure



The Director of Engineering Services has four direct reports: Manager, System Integrity; Manager, Engineering Services; Manager, Pipeline Field Operations; and Lead, System Planning. All functions except Field Operations are located in the SJIU/SJG Atlantic City headquarters. Pipeline Field Operations is in McKee City, collocated with the Liquified Natural Gas (LNG) plant.

System Integrity

System Integrity is responsible for the Transmission Infrastructure Management Program (TIMP) and the Distribution Infrastructure Management Program (DIMP). It also manages an annual review and update of the system integrity manuals and the risk models done by contractors, and it oversees the transmission cathodic protection program provided by another contractor. System Integrity has an individual contributor Manager, an Engineer, and an Analyst.

TIMP is a transmission line inspection program that includes gate stations and regulator stations. While the requirement is a seven-year cycle, SJG inspects on a six-year cycle. It has twelve transmission pipe segments (full length of the same vintage and characteristics) so there is an average of two inspections per year. Inspections include in-line inspection (pigging), calibration digs (spot checks to confirm the tool's measurements), and integrity digs to physically examine flagged pipe portions. The inspections result in work orders to repair problems discovered. The inspections are performed by a long-time contractor. System Integrity manages the contract inspector.

DIMP is a compilation of records on mechanical failures and pipeline failures to produce monthly, quarterly, and annual reports that guide distribution system planning for replacement, renewal, and redundancy (looping) projects.

Engineering Services

Engineering Services provides the engineering support for Pipeline Field Operations including transmission pipelines, gate stations, regulator stations, and large meters. It manages engineering design contractors for all large projects and does some small design projects in house, such as regulator station renewals and minor pipeline adjustments to accommodate developers. Engineering Services has four engineers.

Engineering Services has multiple Master Service Agreements with long-term construction contractors who are invited to bid on construction projects. Most projects are bid. New contractors are qualified from time to time based upon needs.

Field Operations

The Field Operations group is commonly referred to as “Pipeline Operations” and is responsible for all facilities operating above 125 pounds of pressure. Most transmission is at 250 to 700 pounds. There are two short, archaic segments serving the island communities at 125 pounds. There is also one 1,100-pound segment, the interstate pipeline system operating pressure, serving a generating station. All distribution has been converted to 60-pound systems.

Field Operations responsibilities include city gate stations; transmission pipelines; transmission regulator stations; and associated equipment like supervisory control and data acquisition (SCADA), large valves, line heaters, supplemental odorant, and large meters. It also serves transmission-fed large customers like power plants, refineries, and combined heat and power (cogeneration) customers. However, the LNG plant is managed by Gas Supply.

Field Operations has a Manager, two Supervisors, 15 Field Measurement Technicians, three Pipeline Mechanics, a clerk for scheduling large meter work, and 50% of an Administrative Assistant shared with Gas Supply in McKee City. The Field Measurement Technicians and Pipeline Mechanics are union positions.

Field Operations operates and maintains the transmission physical plant. Employees are home dispatched by the two Supervisors and the Manager working as a team. Work activities for Field Measurement Technicians include:

- Filter maintenance
- Maintenance of approximately 700 critical valves
- Regulator station maintenance
- Gate station maintenance
- Line heater maintenance
- Supplemental odorant maintenance at the two gate stations
- Maintenance of 700 to 800 large meters including the ten-year replacements
- Installing new business large meters

- Construction inspection for transmission jobs

Work activities for Pipeline Mechanics include:

- Full-time damage prevention on all work within 25 feet of transmission main
- Right of way clearing
- Rectifier checks
- Monthly station inspections
- Assist Field Measurement techs as needed

Field Measurement Technician positions are filled internally by the most senior union applicant who is otherwise qualified and passes the initial test. There is a second test after one year to become a Field Measurement Technician II.

Field Operations also supervises specialized contractors for patrols and surveys (monthly Department of Transportation [DOT] patrols, biannual non-DOT patrols, highway and railway crossing inspections, enclosed piping surveys, transmission line mark-outs, and the transmission line leak surveys).

System Planning

System Planning operates the hydraulic gas system model and manages its contracted, every two-year calibration. This includes adding new customer loads and optimizing main diameter for renewals and new business. System planning also initiates all renewal and replacement work orders for Construction Operations division engineers (see Construction Operations below). It also maintains a “construction by others” database on the planned projects in the system’s 110 local governments, such as water and sewer construction and road repaving. SJG projects are coordinated with work by other contractors, utilities, and local governments. System Planning is also contacted for blowing gas emergent incidents so it can prioritize valve shut offs to minimize customer impact. This occurred three times in 2020. System Planning has a lead engineer and one other engineer.

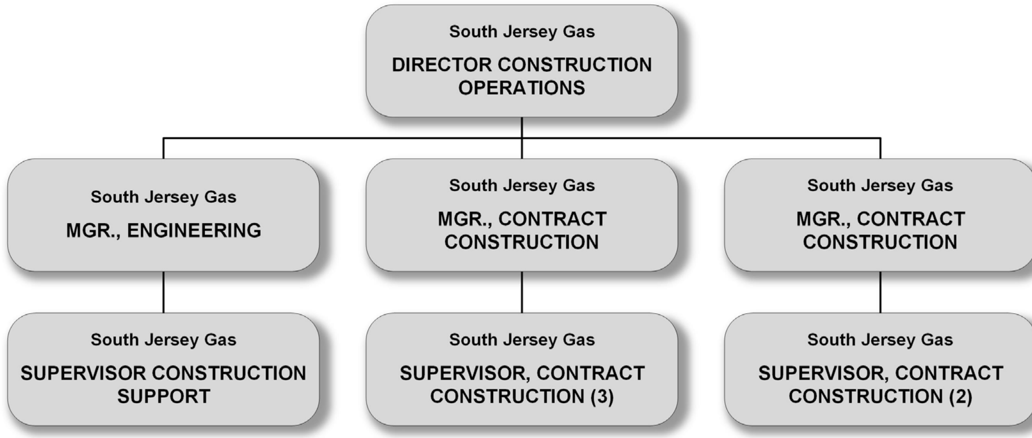
System Planning creates two or three miles of pipe replacement work orders for the Division engineers per week. The Division engineers then pick from the backlog (queue) for their work. They try to balance work in local governments, work by others, and sizes of jobs while still achieving the targeted miles of replacement.

CONSTRUCTION OPERATIONS

Construction Operations manages the contractors who design and build a vast majority of new distribution system facilities and conduct the distribution system replacement and renewal program. This group is responsible for a vast majority of distribution facilities work: mains, services, regulator stations, and new meter installations.

The organization structure for the Construction Operations group is shown in the following exhibit.

Construction Operations Organization Structure



The Director of Construction Operations has three direct reports. The Manager of Engineering is responsible for managing the distribution design contractors. The two Managers of Contract Construction manage the distribution construction contractors, one for the three divisions in the west and the other for two divisions in the east. All design and most construction work, except some small new business main extensions and some new and replacement services, is contracted. SJG has used this contractor model for over ten years.

Engineering

The Engineering group has five degreed (four civil and one mechanical engineers) reporting to the Manager, one for each division. There is also a non-engineer Supervisor reporting to the Manager with three union clerks for the permitting process and project costing for new business.

The Engineering section manages the contract design for both renewal (system replacements) and new business (system expansions). New business work comes from the Sales Department through the sales management system to the permitting clerks who cost the project, secure needed permits, and notify the new business design contractor. The contractor enters the design into SJG's standard work management system for review by the Engineering department which is notified by email when the design is ready for review.

Renewal work comes from System Planning. System Planning identifies and prioritizes system replacements and creates work orders for scheduling by the Engineering unit. Work is balanced among the five divisions, but it is heavier in the western (Waterford, Glassboro, and Cumberland) divisions because they have more applicable plant. Only the Engineering Manager has significant input into the system plan. There is no annual planning process between System Planning and the Division engineers.

All design work is contracted. Beginning in 2021, there are four blanket unit price contracts, one for new business and three for "regions" consisting of two, two, and one division(s) for renewal work. One of the three regional contractors also won the new business contract. Additionally, there are two "peak shaving" contractors for new business and renewal designs for all divisions. These are three-year contracts. Prior to 2021, design contracts were time and materials pricing. The new contracts are unit priced and only allow for time and materials pricing for changes not caused by the contractor, such as a permit requiring extra paving work.

The new 2021 unit price contracts were developed based on the prior 2016 contracts with updates for unit pricing. The units for pricing were developed by the Engineering Manager and his Director. Procurement and Legal reviewed and approved the draft Request for Proposals (RFP). A presentation of the RFP for the approved five bidders (four current contractors and one pre-approved) was held. Two potential bidders were excluded because of prior work quality issues.

Almost all projects are assigned to the blanket contractors. In 2019, there was an experiment to bid the design of a 13-mile renewal project to the several design contractors and two others. The winning bid unit prices resulted in an approximate 25% cost savings. More bid projects for design work will be released in the future.

All distribution work orders are managed through the standard SJG work management system. Design engineers manage the work orders through design completion. Work orders have a materials list input by the contract designers and estimated units input by Engineering.

All design work is done in the standard SJG computer aided design and drafting (CAD) system. It has a standard title block with basic project information and standard “objects” like trees and mailboxes that are dragged and dropped into the designs.

There are specific design contractor employees dedicated to SJG work. The design contractors are not located in SJG territory but they maintain satellite offices to support their “fielders” who visit project sites for measurements and photographs that are sent to the design offices. Some fielders also do simple designs. There are six to eight fielders in the SJG territory with two dedicated to new business and about five working on renewals.

All design contractors are long-term SJG contractors and understand SJG standards. There is no need for ongoing SJG basic training for contractors. The contractors train their own new employees. There are regular meetings with design contractors to discuss workload, scheduling, and any standards changes. Any changes to SJG standards are emailed to the contractors and they must acknowledge the change.

New SJG employee engineers are taught the Design Guide and the Engineering Department best practices. They are given tutorials on the work order system and the CAD system. This is one-on-one training by the Manager or a senior engineer.

Design contractors notify the responsible engineer by email when designs are ready for review. When accepted, the permitting section secures the proper permits. This is all tracked in the work management system.

Contract Construction

The two Contract Construction units manage the distribution construction contractors. One Contract Construction unit manages the work in the three western divisions and the other one manages the work in the two eastern divisions. Each of the five divisions has a Supervisor reporting to the relevant Manager and the Construction Inspectors report to the Supervisors. There are a total of 28 unionized Construction Inspectors. Construction Operations can move inspectors among divisions to match the workload with the exception of the Cape May Division.

Inspectors must have three years of experience in physical street work (Field Operations) and pass a test. The most senior qualified applicant is selected for any vacant position. New Inspectors receive seven days of Operator Qualifications (OQ) training for the inspector position. Inspectors must maintain appropriate OQ certifications including annual OQ requalification, two field OQ audits per year, and regular work management system, standards, and safety training.

Inspectors are home dispatched. They are on the road at 7:00 AM. They are responsible for units of production, quality, schedules, and safety of contractor work. Inspectors are not responsible for materials inventory and usage. However, most production units are tied to materials, such as feet of main and service pipe, valves, and meters.

Construction Inspectors are also responsible for coordination with local government inspectors. Each inspector typically has several projects each day.

There are two construction contractors for blanket work (new business and smaller renewals), one in the east and one in the west. Larger scale projects are bid to the two blanket contractors and four other approved contractors. The contracts are unit priced to the lowest bidder based on estimated units. About half of construction work is done on blanket contracts and half is done on bid projects.

Each assigned work order has an expected completion time. The status of all assigned work orders is reviewed with each contractor bi-weekly.

Asset records are in SJG's standard geographic information system (GIS) and asset management system, which has both maps and asset data (pipe segments and services). The Construction Inspectors do paper as-builts for mains and the contractors do them for services. The GIS and asset management system are 100% complete and available on laptops in the field using cell phone mobile hot spots.

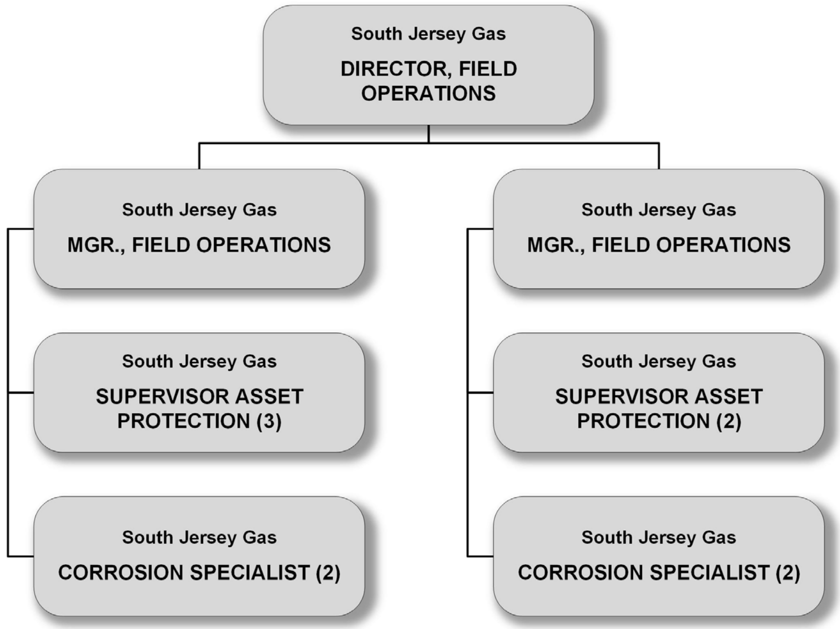
The SJG materials contractor provides all construction materials and manages the stock. Blanket work is pulled by the contractor from one of two consignment warehouses. Large project materials are ordered by the SJG engineer through Procurement and delivered to the job site or a stockroom as a kit.

FIELD OPERATIONS

The Field Operations unit (also known as the "Street" or "Asset" department) repairs underground leaks and does some small new business main extensions and new and replacement services as time allows. It also does critical valve inspections.

The organization structure for the Field Operations group is shown in the following exhibit.

Field Operations Organization Structure



The Director of Field Operations has just two direct reports, a manager for the Millville, Glassboro, and Cape May divisions and a manager for the Waterford and Atlantic, divisions. Each manager has one seaside division, so storm work is shared. The managers oversee supervisors, one for each division.

In addition to the division supervisors, the managers also oversee two corrosion specialists each. The corrosion specialist positions are non-union, non-supervisory. One of the corrosion specialists is the leader overseeing work assignments and also trains new corrosion specialists. The four specialists jointly cover the five divisions. The four corrosion specialists ensure all cathodic protection systems are working properly. Periodic preventive maintenance orders are entered into the work management system. The amount of cathodic protection will decrease in the future as wrapped or coated steel mains with cathodic protection are replaced with plastic pipe. However, the replacements to date have focused on cast iron and unprotected bare steel.

Each division has a mix of Street Foremen and Utility/Street Operations Technicians (ops techs), approximately five foremen and ten ops techs in each division. All are union positions. There are several archaic titles still used, but all workers are functionally either foremen or ops techs. Two to three person crews are normal. Bigger jobs or high traffic areas will have three-person crews. Service line work normally only requires a two-person crew. Crews have a service truck pulling a backhoe and a dump truck.

Field Operations crews do the following work:

- Main leak repair
- Service leak repair or replacement
- Install renewal services
- Install new business services

- Relocate services
- Below-ground work for meter repairs
- Annual valve inspections and maintenance compliance

In addition, foremen can be temporarily assigned as construction inspectors. Further, the Cape May crews do leak surveys and regulator station maintenance due to their different union situation. Also, foremen can informally address damage prevention, such as major street crossings or sites marked as high-risk excavations by the line locate contractor.

The street crews principally repair main and service leaks. As the leak rate has decreased, they have begun picking up small construction jobs like new or replacement services. However, this is highly informal with the Field Operations department asking the Construction Operations department for work when it has a crew available.

Crews start the day with planned work such as non-hazardous leak repairs or service replacements but typically move to emergency calls after the first hour or so. The Utility Services dispatchers assign them emergency work.

Foremen must have four years of street experience (typically as an ops tech) and pass a test. The most senior qualified person is awarded the position. Approximately 75% of ops tech positions are filled by transfers from the Utility Services department. The remainder is from new hires. New ops techs go through basic gas training and OQ training and then learn on-the-job as the third member of a crew until they are deemed qualified to be the second person in a two-person crew.

Crews from the four divisions other than Cape May can be assigned to work in any division. The Cape May division personnel are in a different union and must stay in the Cape May division except in an emergency.

Street crews are home dispatched during the pandemic. They are expected to be on site at their first job at 7:00 AM. However, they may leave for home from their last job at 3:10 PM. Home dispatch has worked well during the pandemic and may be considered for continuation afterward. Crews make appointments for one crew member to visit the division work center for materials and vehicle maintenance to minimize contacts. Field Operations also keeps crews together to minimize COVID-19 transmission. Normally the crews are rotated for cross-pollination.

Leak survey is done by contractors except in the Cape May division, which has a different union. There are two leak surveyors in Cape May, one for mobile main surveys and one for services. Their work is still assigned and monitored by the SJIU Compliance department. Leak surveys result in emergency dispatch for hazardous leaks discovered and leak repair work orders for non-hazardous leaks discovered.

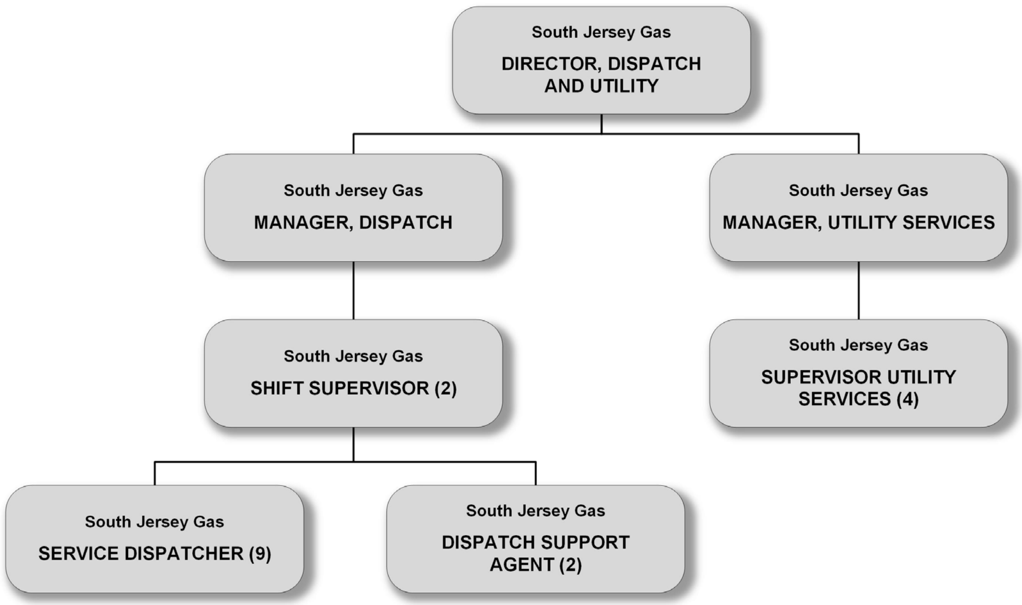
Field Operations uses the Construction Operations blanket contractor when larger equipment, shoring, or specialized skills like welding are needed for a work order. This is on a time and materials basis for emergencies. Field Operations can get quotes for larger planned jobs.

DISPATCH AND UTILITY SERVICES

The Dispatch and Utility Services department is the SJG first responder and field service function. The unit responds to leak reports and also provides field services, such as meter repair work. Dispatch was transferred from Customer Care to Utility Services in 2016.

The organization structure for the Dispatch and Utility Services group is shown in the following exhibit.

Dispatch and Utility Services Organization Structure



The Director has just two direct reports, a Manager of Dispatch and a Manager of Utility Services.

Dispatch

The Manager of Dispatch has just two direct reports, a Day Supervisor and a Night Supervisor. Dispatch is located in the Atlantic City headquarters. Dispatch is staffed with nine Service Dispatchers and five Dispatch Support Agents. Both positions are unionized.

The Dispatch Support Agents are spread over two shifts, Monday through Friday, 7:00 AM to 3:30 PM and 11:30 AM to 8:00 PM. The Dispatch Support Agents take leak calls from customers; monitor scheduled field work; adjust appointments with customers, as necessary; and call in emergency locate requests for Field Operations crews. (The Division Clerks request non-emergency locates. See the Operations Support section below.) Some field employees transfer to become Dispatch Support Agents to have indoor work instead of outdoor work; otherwise, this is an entry-level position. Service Dispatchers come from Dispatch Support Agents, Customer Care agents, and 25% from the outside.

The Service Dispatchers receive emergency calls and dispatch the first responder Operations Technicians. The Service Dispatchers are a seven days per week, 24 hours per day operation. A minimum of two Service Dispatchers are assigned to every shift. All dispatchers rotate to all shifts. Vacations are scheduled one year in advance by seniority to facilitate Service Dispatcher shift coverage. Dispatchers are currently working remotely but will return to the Atlantic City headquarters building after the pandemic.

Dispatchers also receive security alarm calls from the security contractor. They then follow call-out sheets to alert the appropriate division personnel for response.

Utility Services

For Utility Services, there are four supervisors, one for each of four divisions. When the supervisor for the Cumberland division retired, he was not replaced. Now the Utility Services Manager and the other four supervisors cover the supervisory duties for the fifth Cumberland division.

There are several archaic legacy titles for Utility Services personnel but they all do the same work. The modern title is Operations Technician. The current Operations Technician staffing levels are:

- Cumberland division – 8
- Cape May division – 9
- Glassboro division – 12
- Atlantic division – 13
- Waterford division – 11

The emergencies that Operations Technicians respond to are:

- Inside and outside leak calls (smell gas)
- Carbon monoxide
- Third-party damage (dig ins)
- No gas/low pressure
- Fires, as requested by fire departments

The trends in emergency response calls are shown in the following table. Information before 2015 was not available.

Trends in Emergency Response Calls

Type of Call	2015	2016	2017	2018	2019
Inside Leaks	6,453	5,649	5,649	5,608	6,843
Outside Leaks	6,166	5,009	5,009	5,536	5,604
Third-Party Damage	494	520	520	398	398
Fires	266	264	238	281	265
Carbon Monoxide	545	532	436	412	578
No Gas	1,454	1,334	894	793	632
Low Pressure	492	502	440	457	448
Total Calls	**15,870**	**12,810**	**13,186**	**13,485**	**14,768**

Total emergency calls per year ranged between 12,810 and 15,870.

In addition, Operations Technicians do some compliance work:

- Meter exchanges for the sampling program and meter replacements as a result of the meter sampling tests. The SJG materials contractor does the meter testing and if the samples fail at a certain rate, that batch of meters is replaced.
- Rockford Eclipse Valve (REV) replacements – this is a program to replace all 70,704 REVs. Some are replaced incidentally by Construction Operations and Field Operations when services are replaced or repaired. Through 2020, 52,524 REVs have been replaced.
- Odorant injection monitoring.

Further, Operations Technicians do new meter sets and light ups, relights after shutoffs (customer request or non-payment). They do shutoffs for customer requests, but do not do shutoffs for non-payment. These are outsourced by Credit and Collections to a contractor. SJG has not done appliance work since before 2013 but will relight pilots on no gas calls as a courtesy.

To assist with Operations Technician overflow work, a contractor has a unit price contract to do REV replacements, meter exchanges, turn-offs, and relights. The work division between employees and the contractor for 2019 and 2020 is shown in the following exhibit.

Operations Technician Employee and Contractor Work in 2019 and 2020

Type of Work	2019			2020		
	Employee	Contractor	Total	Employee	Contractor	Total
Meter Exchanges	10,613	1,789	12,402	8,140	332	8,472
REV Replacements	3,652	1,071	4,723	6,567	502	7,069
Relights	19,452	1,878	23,208	7,450	1	7,451
Shut Offs	8,786	1,212	9,998	5,916	847	6,763
Totals	**42,503**	**5,950**	**50,331**	**28,073**	**1,682**	**29,755**
Percent Contractor		11.8%			5.6%	

As the overall non-emergency workload decreased from 2019 to 2020, so did the amount of work assigned to the contractor. The work orders assigned to the contractor declined from 5,950 in 2019 to 1,682 in 2020, a reduction of 72%.

Operations Technicians are home dispatched and have been for years. Each Operations Technician has either a utility truck or van (vans are narrower to fit in island alleyways). Both the trucks and vans run on compressed natural gas (CNG).

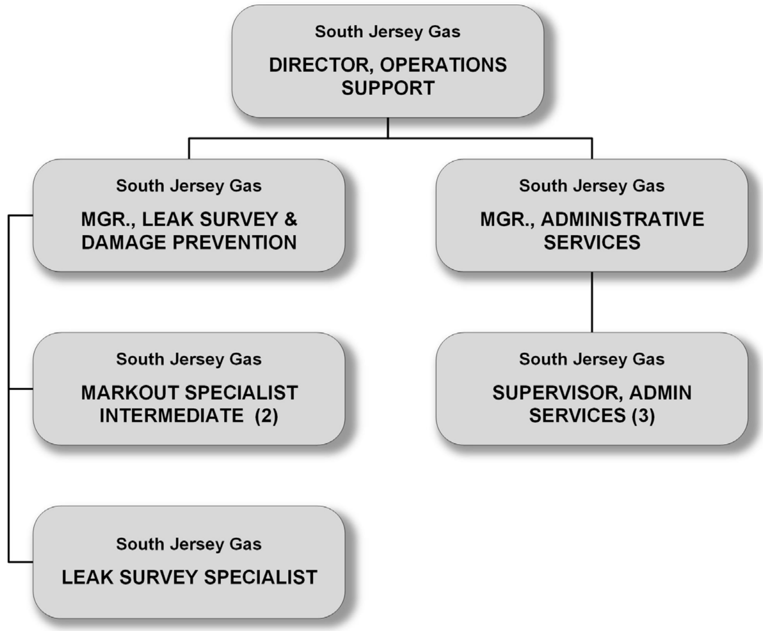
Operations Technician is an entry-level position. While in other utilities, meter reader is a feeder position for Operations Technician, in the case of SJG, meter readers work for Millennium and are not able to bid for these positions due to union restrictions.

The SJG work management system is used for emergency and compliance work orders and a scheduling package is used for scheduling Operations Technicians. Customer service field orders go into the work order system for scheduling in the scheduling system. Customer appointments are Monday to Friday between 8:00 AM and 4:30 PM. The scheduling system creates a schedule for each Operations Technician every day.

OPERATIONS SUPPORT

Operations Support manages the line locating contractor and the leak survey contractor and provides the clerical staff in each of the five division offices. The organization structure for the Operations Support group is shown in the following exhibit.

Operations Support Organization Structure



The Operations Support Director has just two direct reports, a Manager of Leak Survey and Damage Prevention and a Manager of Administrative Services.

Leak Survey and Damage Prevention

The Manager of Leak Survey and Damage Prevention has three direct reports, one Leak Survey Specialist and two Mark-out Specialists.

The Leak Survey Specialist coordinates the leak survey contractor's work and the atmospheric corrosion and meter protection contractor's work. She also does field audits of the contractors' work.

There are six types of leak surveys:

- Annual mobile surveys of all mains
- Annual surveys of all mains and services inside a business district
- Three-year surveys of all services outside a business district
- Quarterly surveys of highway and railroad crossings
- Three-year surveys of exposed pipe
- Three-year surveys of atmospheric corrosion and meter protection

The Director, Manager, and Leak Survey Specialist plan all leak survey work a year in advance. The work is then assigned to the contractors in monthly increments. The contractors are given paper maps marked with the facilities to be surveyed. Leaks found are recorded on a form. Emergency C leaks are called to the Dispatchers immediately. Non-emergency A and B leaks are recorded on a form for entry into the asset records. The Division Clerks also initiate the work order for each leak found. All surveys scheduled for a calendar year are monitored to comply with the Pipeline Safety regulation. There were no late surveys from 2014 through 2019. However, there were three late surveys in

2013 by one month and there were two late surveys in 2020 by four days. Remedial actions were taken in both cases.

The Leak Survey and Damage Prevention Manager also ensures that OQ certifications for all contractor employees working on SJG work are on-file. The contractors are responsible for providing OQ certification training to their employees.

The leak survey and atmospheric corrosion and meter protection contracts are multi-year term with long-established contractors.

The Damage Prevention function and the work of the two Mark-out Specialists is covered in the Locate Contractor Management Section of Chapter 21, Contractor Performance.

Administrative Services

The Manager of Administrative Services manages the Division Clerks. She has three supervisors, one for the Atlantic and Cape May divisions, one for the Waterford and Glassboro divisions, and one for the Cumberland division. There are a total of 19 Divisional Clerks staffing the five divisions. All clerks do all of the divisional clerk work tasks; there is no specialization. The Division Clerks have low turnover and openings are generally filled from Customer Experience or externally. There is also one General Utility Person serving four divisions (except Cape May). This person makes deliveries from one division to another, works in the storerooms, helps with meter inventory, and does other tasks as assigned.

The Division Clerks support the three departments that work out of the division work centers: Field Operations, Construction Operations, and Utility Services. The clerks have multiple responsibilities, including:

- Calling for emergency (during business hours) and scheduled markouts.
- Maintaining the standby list for after-hours callouts. This is provided to the Dispatchers before shift end each day.
- Scanning paper field records into the asset record system (Fieldbook) as associated with the work order system (Maximo), including construction as-builts, service record cards, and main records.
- Customer scheduling and rescheduling for Utility Services and Field Operations work directly affecting customers, such as meter exchanges and service replacements.
- Entering all payroll exceptions such as overtime, vacations, training, and sick time. Regular eight-hour work is recorded by the employee in Maximo.
- Updating leak records (ongoing six- and nine-month resurveys of A and B leaks).
- Invoice processing for uniforms, utility bills, construction contractors, and other local bills. The Division Clerks do not process invoices for the fleet and materials contractors.
- Administering “red tag” records for customer appliances out of compliance.
- Records cleanup.
- Coordinating work orders for building demolitions.
- Special projects as assigned.

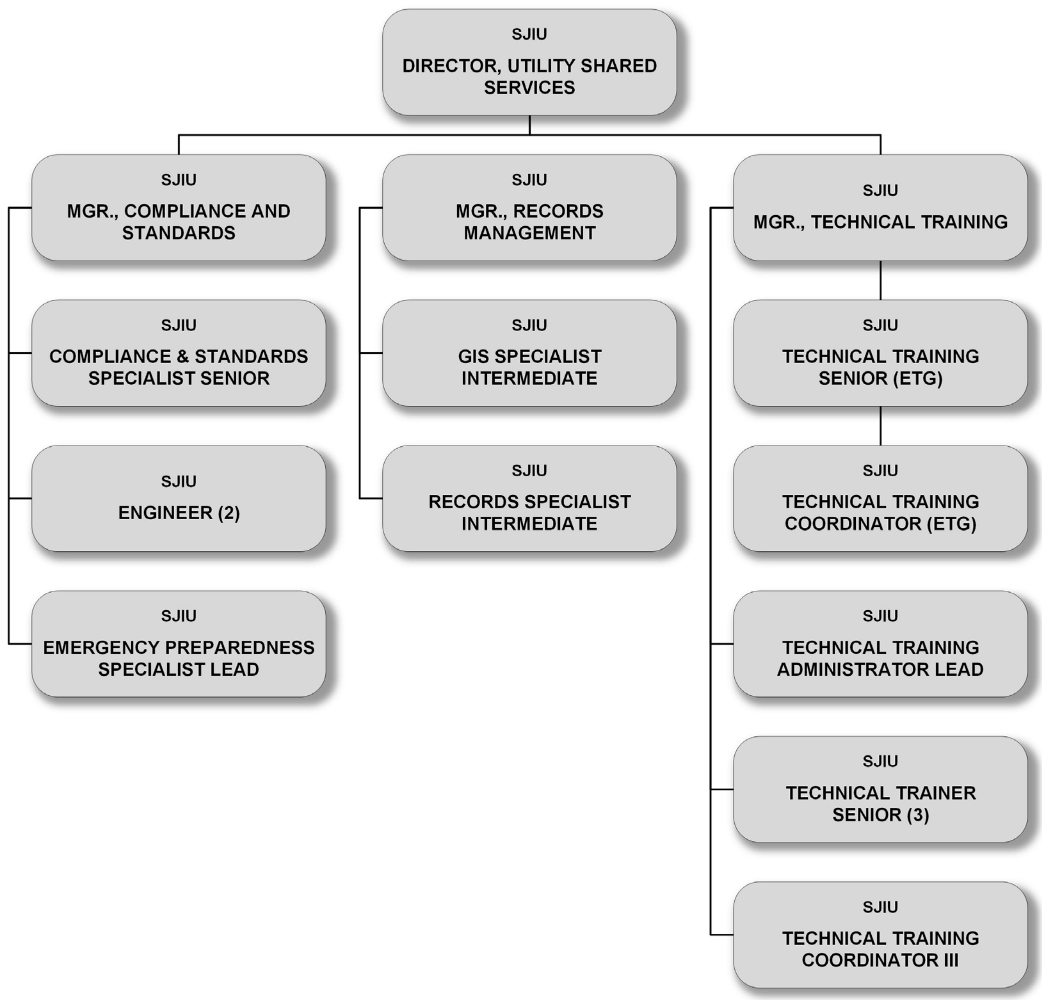
Division Clerks work from 8 AM to 4:30 PM. This gives them an hour after the field crews finish to process that day's work.

UTILITY SHARED SERVICES

Utility Shared Services is a SJIU organization serving both SJG and ETG.

The organization structure for the Utility Shared Services group is shown in the following exhibit.

Utility Shared Services Organization Structure



Compliance and Standards

The Compliance and Standards group has three functions: compliance, standards, and emergency management.

Compliance Management ensures required work is performed, such as leak surveys and valve inspections, through the SJG work management system. It also runs the meter sampling program which identifies meters to be sampled and ensures they are tested.

Standards Management maintains the Construction Manual, Operations and Maintenance Manual, and Approved Materials List. The Manager chairs the Standards

Committee. Manuals are computer-based for easy access. There is an annual review and update of the manuals. The unit is harmonizing ETG and SJG standards over time. The goal was to get to 35% in 2020.

Emergency Preparedness maintains the plans, schedules, and conducts exercises, and interfaces with the emergency community for both SJG and ETG. It was formed in 2020 and has a single individual contributor. Contractors are used to develop plans and conduct drills and joint exercises. An Emergency Preparedness Manual will be created in 2021. SJG has an Emergency Response Control Center, a backup center, and a Mobile Command Center. Working with the Government Relations unit, Emergency Preparedness is establishing relationships with the SJG territory's seven county's Offices of Emergency Management.

Records Management

Records Management operates and maintains the GIS and asset records systems. SJG will be converting from its legacy GIS and asset records systems to the system used by ETG in 2021.

Technical Training

The Technical Training group provides technical training and operator qualification (OQ) certifications for both SJG and ETG. A two-person unit operates the ETG training center at the Green Lane complex. A five-person group operates the Glassboro training center and provides technical training and OQ services to SJG employees and some contractors.

The five-person group for SJG technical training and OQ certifications includes a Coordinator, Administrator, and three Technical Trainers. The Coordinator does class scheduling, administers tests, and maintains the employee and contractor OQ records matrix. SJG has a specialized package information system for OQ tracking.

The Administrator oversees the OQ program for the approximately 2,000 contractor employees including the BPU required semi-annual audit program for both SJG and ETG to ensure that ETG and SJG contractors are complying with the OQ program requirements.

Two of the Technical Trainers are focused on Utility Services and one is focused on Field Operations. Technical Training only does OQ and new hire training for the Pipeline group. The Pipeline group handles all other technical training. All three Technical Trainers plus the manager do the second performance evaluation component of the OQ certifications. The first part is a written test.

The only contractor used for Technical Training is a retired SJI employee who does Maximo training part time. Other departments including Records/GIS, Fleet (CNG refueling), and Safety all help with training as needed.

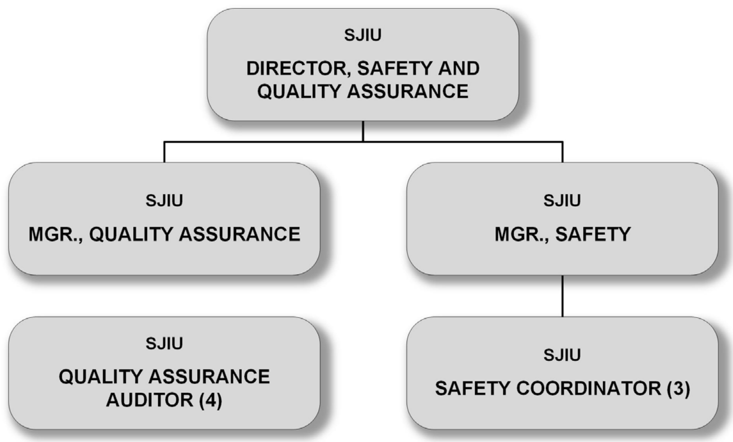
SJG has a fully equipped training facility with a classroom, written testing room, appliance lab, meter wall, sheds for meter set practice, concrete and asphalt for breaking, and a trenching and equipment operation training area.

SAFETY AND QUALITY ASSURANCE

Safety and Quality Assurance is an SJIU level organization serving both SJG and ETG. In addition, Safety serves all of SJI but is focused on the utility field operations: Construction Operations and contractors, Field Operations, and Utility Services. Quality Assurance is focused on SJG and ETG utility operations only and does not serve the rest of SJI.

The organization structure for the Safety and Quality Assurance group is shown in the following exhibit.

Safety and Quality Assurance Organization Structure



The Director of Safety and Quality Assurance has two direct reports, one manager for Safety and one manager for Quality Assurance. These functions are housed at the Glassboro Division, collocated with the Training Center. The Director reports on safety to the Board of Directors Environmental, Safety, and Governance Committee quarterly.

The Safety Department Manager has three direct reports: one Safety Coordinator for SJG, one Safety Coordinator for ETG, and a Safety Coordinator who develops presentations and training materials. The Safety Department has several functions:

- Developing and updating the Safety Policies and Procedures
- Developing and implementing an annual Safety Training Plan (training sessions)
- Investigating workplace injuries and vehicle accidents including the tracking and reporting of timely corrective actions
- Measuring and tracking safety performance
- Advising field managers on safety issues

Safety investigates all material workplace incidents and vehicle accidents. Most injuries are ergonomic: posture and twisting related. There is also a chronic problem with animal safety (customers' dogs). Safety has implemented a new driver safety metric that measures seat belt use, speeding, hard braking, and hard turning. It also implemented a new Near Miss Incident Reporting Program. The Near Miss Program captures incidents like beehives, facilities maintenance issues, contractor dig-ins, and slip and fall concerns.

Safety maintains a comprehensive employee and contractor Safety Policy and Procedure Manual, a Safe Practices for Company Vehicles Manual, an Incident Management Policy, and a Personal Protective Equipment Policy.

The Quality Assurance Manager has four Quality Assurance Auditors, three for SJG and one for ETG. The ETG position is relatively new and replaces the quality assurance previously done by its prior owner's service company.

Quality Assurance (QA) audits are conducted for Construction Operations contractors, Field Operations crews, and Utility Services technicians. Both current inspections of crews working and post-work audits are conducted. The audits check for compliance with standard procedures and specifications. The QA audits include assessment of safety practices at work sites. Other QA functions include:

- Audit the accuracy of Service Record Cards
- Investigate all third-party damage (dig-in) and near miss incidents.
- Hold monthly contractor safety meetings with each contractor.

B. FINDINGS

6-1 Transmission and distribution system integrity and safety are good and getting better.

The principal mission of transmission and distribution system operations is to provide a safe and reliable network that minimizes gas system safety incidents. Local Distribution Companies (LDC) strive to prevent leaks and high- or low-pressure incidents that can cause property damages, injuries, or service interruptions. In recent years, SJG has improved its system integrity and there have been fewer safety incidents. This is evidenced in Pipeline and Hazardous Materials Safety Administration (PHMSA) Reportable Incidents, BPU Reportable Incidents, Notices of Probable Violations, Leaks, Leak Backlog, Gas Service Interruptions, High or Low Pressure Incidents, and third-party damages.

The following table shows the trends in BPU Reportable Incidents, PHMSA Reportable Incidents, and BPU Notices of Probable Violations.

Trends in System Safety Reports

Report Type	2013	2014	2015	2016	2017	2018	2019
PHMSA Reportable Incidents	1*		1	1			
BPU Reportable			17	17	12	22	32
BPU Notice of Probable Violations	4	10	1	3	1	1	1
***NOTE**: The incident captured in 2013 actually occurred in 2012; however, much of the correspondence took place in 2013.							

Each category is discussed below.

PHMSA REPORTABLE INCIDENTS

A PHMSA reportable incident means any of the following events:

- An event that involves a release of gas from a pipeline, gas from an underground natural gas storage facility (UNGSF), LNG, liquefied petroleum gas, refrigerant gas, or gas from an LNG facility and that results in one or more of the following consequences:
  - A death, a personal injury necessitating in-patient hospitalization;
  - Estimated property damage of $50,000 or more, including a loss to the operator and others, or both, but excluding the cost of gas lost; or
  - Unintentional estimated gas loss of three million cubic feet or more.
- An event that results in an emergency shutdown of an LNG facility or a UNGSF. Activation of an emergency shutdown system for reasons other than an actual emergency within the facility does not constitute an incident.
- An event that is significant in the judgment of the operator, even though it did not meet the criteria of paragraph (1) or (2) of this definition.

SJG has been successful in avoiding serious gas safety incidents as shown in its record of PHMSA reportable incidents. There have been just two PHMSA reportable gas safety incidents reported since 2013. The following exhibit summarizes these two incidents.

SJG PHMSA Reportable Incidents Since 2013

Item	2015 Pennsville	2016 Pennsville
Incident	Service Line Explosion Outdoors	Regulator/Meter Set Fire Outdoors
Cause of Incident	SJG Contractor Hit a Steel Service Line	Pickup Truck Struck a Regulator/Meter Set Outdoors
Date of Incident	9/15/15	3/17/16
Time of Incident	8:04 AM	4:51 AM
Response Time	7 Minutes	53 Minutes
Fatalities or Injuries	No	No
Total Cost	$319,026	$116,050
Drug and Alcohol Testing	Six SJG Contractor Employees Tested, One Failed	None
Facility Marking	Mismarked by SJG Contract Locator	N/A

While one of the incidents had a gas explosion and both had fires, there were no fatalities or injuries and neither of the incidents were caused by high or low pressure. However, of particular concern is that the 2015 Pennsville incident was caused by a SJG contract line locator mismarking a line location, which led to an SJG construction contractor digging into a service line. Additionally, one of the involved construction contractor employees failed a drug and alcohol test. There have been no PHMSA Reportable Incidents since 2016.

BPU REPORTABLE INCIDENTS

A BPU Reportable Incident is an incident that is related to utility equipment or operations, other than a motor vehicle accident, that does not create a service interruption, which accident results in one or more of the following circumstances:

- Death of a person.
- Serious disability or incapacitating injuries to person, including employees of the utility or its contractors.
- Damage to the property of the utility, which materially affects its service to the public (and results in an outage to more than 100 customers). Interruptions of service to a hospital, airport, rail system, school, correctional institution, or closure of one or more lanes to an interstate or State highway require immediate notifications as per N.J.A.C. 14:3-3.7.
- Damage to the property of others amounting to more than $5,000.
- Any accidental ignition of natural gas.

The number of annual BPU Reportable Incidents increased to 33 in 2019 but decreased to eight in 2020 through November 19. None of the 2019 BPU Reportable Incidents qualified as the more serious PHMSA Reportable Incidents, meaning that none had injuries or extensive property damage. Of the 33 BPU Reportable Incidents in 2019, 15 were evacuations for gas leaks or odor with no damage reported, 12 for third-party damage, and six for fires or lightning strikes, all typical types of incidents. No unusual trend of causes in incidents was found. Seven of the 2020 reports were for gas leaks or odor resulting in evacuations with no damage reported. One was for a fire at a house that had gas service.

BPU NOTICE OF PROBABLE VIOLATIONS

A BPU Notice of Probable Violations is generated as a result of a non-compliant condition discovered by a BPU inspector from a scheduled or impromptu field or facility records inspection. Conditions discovered are issued to SJG by the BPU for review and remediation.

SJG has reduced its notices of Probable Violations with Minimum Federal Safety Standards. The following exhibit lists the SJG Notices of Probable Violations received from 2013 through 2019.

Notices of Probable Violations

Year	Date of Letter	Probable Violations	Penalty Paid
2013	January 28	Meter set inadequately protected from physical damage	
	August 6	Plastic Insertion Pipe Sleeves required in each end of the casing pipe	
	October 21	Deficiency in the condition of pipeline markers	
2014	January 28	Late remediation of two cathodically unprotected services	
	April 23	Leak surveys exceeded time interval	
	July 22	Operator Qualification Plan did not include some required written provisions	
	August 25	Plastic heat fusions not made properly	
	September 10	LNG plant hose testing interval exceeded	
	November 7	Exposed Pipe Survey Inspection form documentation issues Small amount of missing coating on an exposed steel main Pipeline marker damaged and needs replacement	
	November 12	Recommended revisions to the Distribution Integrity Management Plan	
	December 30	Exposed main inspection interval exceeded the required 39 months	
	December 30	Late remediation and corrosion protection Forms not completed properly	$5,000
	December 30	Drug and Alcohol Testing Procedures and Records Retention inadequate	$2,500
2016	April 1, 2016	Horizontal drilling practices	
	November 9	Hydraulic fusion pressure out of range specified	
	November 9	Odorant testing technician not properly qualified	`
2018	December 3	Four monthly odorant tests not completed	
	February 5	Plastic service fusion inspection issues	$105,000
2019	July 18	Steel main replacement testing inadequate	$10,000

Only one notice was received in 2019 and no violation notices were received through September 2020.

LEAKS

With the improvement in distribution plant from the renewal and replacement program, the number of leaks repaired each year has been steadily declining as shown in the following exhibit.

Repaired Leaks by Division

Division	Leak Type	2013	2014	2015	2016	2017	2018	2019
Atlantic	Hazardous	480	517	431	455	339	258	237
	Non-Hazardous	510	637	294	284	279	193	103
Glassboro	Hazardous	233	320	294	402	271	267	226
	Non-Hazardous	420	520	331	588	309	224	261
Cumberland	Hazardous	316	260	139	179	139	94	106
	Non-Hazardous	328	631	501	389	211	86	141
Cape May	Hazardous	54	299	273	287	223	194	153
	Non-Hazardous	116	187	121	227	198	144	95
Waterford	Hazardous	249	336	281	345	362	353	271
	Non-Hazardous	420	558	494	590	414	483	318
TOTAL		**3,126**	**4,26**	**3,159**	**3,746**	**2,74**	**2,296**	**1,911**

Hazardous leaks (type C classification) are emergencies and are repaired immediately. Non-hazardous leaks (types A and B classification) are scheduled for repair and are checked as required until they are repaired to ensure that they remain non-hazardous. Total leaks repaired per year have declined from a high of 4,265 in 2014 to 1,911 in 2019, a reduction of 2,354, or 55%. Both hazardous and non-hazardous leaks repaired have declined in all divisions over the years.

LEAK BACKLOG

Further, the backlog of non-hazardous leaks (type A and B classifications) not yet repaired at year-end has declined in each of the years as well as shown in the following exhibit.

Pending Leaks at Year End

Leak Classification	2013	2014	2015	2016	2017	2018	2019
A	39	13	12	13	11	3	5
B	1,296	845	799	447	415	284	171
C	0	0	0	0	0	0	0
TOTAL	**1,335**	**858**	**811**	**460**	**426**	**287**	**176**

Pending leaks to be repaired at year end declined from a high of 1,335 in 2013 to 176 in 2019, a reduction of 87%.

GAS SERVICE INTERRUPTIONS

Additionally, SJG has had few gas service interruptions and no mass outages in recent years. There were three gas service interruptions affecting a total of 21 customers in 2018, three in 2019 affecting 41 customers, and none in 2020.

HIGH OR LOW PRESSURE INCIDENTS

SJG conducts formal Pre-Winter Reviews conducted for each distribution division, the transmission system, and the LNG facility each year, and there are formal Post-Winter Operations Reports for each division published each year. These are good practices. In the 2018–2019 winter, there were brief low- and high-pressure issues reported in only the Cape May division for the coastal communities that are challenging to serve. However, no customers were affected, and construction projects are planned to resolve those issues. In the 2019–2020 winter, no pressure related outages were reported but projects to improve identified weak spots are under way.

THIRD-PARTY DAMAGES

Third-party damages are caused when an excavator, landscaper, or property owner digs into SJG facilities and damages them. This could cause gas leaks, fires, or explosions, so it is important to prevent dig-ins. SJG is fortunate to have not had an explosion or fire resulting from a dig-in since 2016. The principal defense against dig-ins is the timely and accurate marking of SJG facilities before third party work commences. The trends in third-party damages are covered in detail in the Locate Contractor Management section of Chapter 21, Contractor Performance.

In general, the damage prevention program success indicators have been improving from 2013 through 2019, including:

- The number of third-party damages has declined despite substantial increases in construction activity
- There are fewer late or inaccurate locate mark-outs and there has been a reduction in damages resulting from mis-marks

6-2 Performance management for SJG Operations is well-developed.

SJG is part of the SJI corporate performance management program (see Chapter 2, Executive Management and Corporate Governance) and the SJG annual balanced scorecard includes goals and metrics appropriate for the Operations functions in four categories: Operational Excellence/Process, Culture/Learning and Development, Foundation/Financial, and Growth/Customer.

Progress against all of the SJG goals, including the Operations goals, is reviewed monthly by SJI, SJIU, and SJG executives and directors. The SJG level balanced scorecard is reviewed first, followed by each of the “business lines” which include the Operations functions of Pipeline Operations, Construction Operations, Utility and Dispatch Services, Street Operations, Engineering, Planning and System Integrity, and Operations Support.

Further, the Operations vice president and the directors each have 10 to 15 annual goals consistent with the Operations Balanced Scorecard and generally appropriate for their scope of responsibility.

6-3 SJIU Quality Assurance and SJG Operations Support have a rapidly developing Quality Assurance program that benefits SJG.

The SJIU Quality Assurance (QA) department was formed in 2015 and has been increasing its QA activities since then. It began audits of Construction Operations work in 2015, Field Operation work in 2016, Utility Services work in 2018, Pipeline Operations and LNG plant operations in 2019, and Service Record Cards also in 2019. The following exhibit shows the number of QA audits conducted since the department's inception in 2015.

Number of QA Audits

Function	2015	2016	2017	2018	2019
Construction Operations	14	274	376	1,331	4,221
Field Operations		32	5	81	264
Utility Services		1		32	237
Pipeline Operations and LNG					57
Service Record Cards					759

In addition, the SJG Operations Support group has an active leak survey audit program. The number of leak survey field audits increased from 12 in 2013 to 28 in 2019.

The success of this QA audit program is reflected in the improving system safety and integrity (Finding 1).

6-4 The Technical Training program is innovative.

Technical Training provides all services for SJG to comply with OQ qualifications requirements. It also has several additional innovations planned or already implemented, including:

- A Gas 101 class that will be available to all employees. While not required, basic gas training for all employees is a good practice that also could be incorporated into the new employee onboarding process.
- A virtual reality training system that will be implemented in 2021 to improve the effectiveness of in-person training.
- A recently implemented, new, interactive Head Mounted Tablet system to improve virtual training.
- A new trailer for educating the public at community events. This will likely aid the damage prevention program and community relations efforts as well.

6-5 SJG employee safety is improving.

SJI, SJIU, and SJG emphasize employee safety. It is a prominent part of the corporate performance program goals and individual manager goals and is included in the incentive compensation program. The Safety department is active and conducts safety training at all levels in the organization. The following exhibit shows the trends in employee safety metrics.

Employee Safety Metric Trends

Metric	2013	2014	2015	2016	2017	2018	2019
OSHA Recordable Work Injury Rate	3.7	3.2	1.14	3.82	4.11	2.85	1.97
Days Away, Restrictions and Transfers (DART) Work Injury Rate	*<Note A>*		0.33	2.78	2.94	2.14	1.31
Preventable Motor Vehicle Accident Rate	*<Note B>*		4.66	4.5	2.68	2.57	2.8
Driver Safety Scorecard Score	*<Note C>*						91.67
New Workers Compensation Cases	53	50	21	39	38	47	45
Note A – DART incidents were not maintained until 2015.							
Note B – Hours were not tracked until 2015 so rates were not available until 2015.							
Note C – Program established in 2019							

Employee safety improvement is seen in most metric categories:

- The OSHA Recordable Work Injury Rate declined from a high of 4.11 in 2017 to 1.97 in 2019.
- The DART Work Injury Rate declined from a high of 2.94 in 2017 to 1.31 in 2019.
- While the Preventable Motor Vehicle Accident Rate increased from 2018 to 2019, the 2019 rate of 2.8 is substantially less than the 4.66 rate in 2015.
- The Driver Safety Scorecard is a new program in 2019 and no trend has been established.
- New Workers Compensation Cases declined from 53 in 2013 to 45 in 2019.

The employee safety improvement trend continued in 2020 in all categories.

6-6 Capital expenditures for transmission and distribution have increased at a high rate from 2013 through 2019 and are projected to continue to increase.

The transmission and distribution system capital expenditures are for both normal additions and replacements and for the several accelerated infrastructure replacement programs. Capital expenditures both support new customers and changing load, the rehabilitation and replacement of aging plant, and system redundancy improvements. The BPU has approved several programs to accelerate the replacement of aging infrastructure. These programs have the advantage of recovering the costs in rates through a rider that is renewed each year without waiting for a rate case. Non-accelerated capital expenditures must be added to the rate base in traditional base rate cases. The accelerated programs include:

Regulatory Initiatives | Infrastructure Modernization

- **SJG: Accelerated Infrastructure Replacement Program (AIRP; 2013-Present)**
  - Authorized program by NJBPU designed to continue efforts to enhance the safety and reliability of SJG's infrastructure system
  - AIRP I: $141M from 2013-2016 replaced ~360 miles of bare steel and cast-iron mains
  - AIRP II: Approved in 2016, $302.5M from 2016-2021 to replace remaining cast iron and bare steel
  - Timely recovery of investment on an annual basis through a separate rider recovery mechanism, with new rates effective on October 1
  - ***Current Status: On track to complete replacement of all remaining bare steel and cast iron main by 2021***
- **SJG: Storm Hardening and Reliability Program (SHARP; 2014-Present)**
  - Following major storms, authorized program by NJBPU to replace low pressure mains in coastal regions
  - SHARP I: $103.5M from 2014-2017 replaced 92 miles of coastal infrastructure
  - SHARP II: Approved in 2018, $100M from 2018-2021 focused on 4 targeted system enhancement projects within the barrier islands
  - Timely recovery of investment on an annual basis through a separate rider recovery mechanism, with new rates effective on October 1
  - ***Current Status: On track to complete project queue by 2021***

The following exhibit shows the capital expenditures for 2013 through 2019.

Transmission and Distribution Capital Expenditure Trends ($ million)

Category	2013	2014	2015	2016	2017	2018	2019
Blankets and Specials – Renewal and Replacement	47.6	60.3	70.6	79.6	93.0	92.3	93.5
Blankets and Specials – New Business	48.4	47.6	48.4	42.8	42.2	42.6	48.9
Accelerated Infrastructure Projects (CIRT, SHARP, and AIRP)	43.3	57.4	71.6	78.4	96.0	73.0	110.9
Totals	**139.3**	**165.3**	**190.6**	**200.8**	**231.2**	**207.9**	**253.2**
Accelerated Infrastructure Projects as a Percent of the Total	**31.1%**	**34.7%**	**37.6%**	**39.0%**	**41.5%**	**35.1%**	**43.8%**

From 2013 through 2019, transmission and distribution capital expenditures increased from $139.3 million to $253.2 million, an 81.8% total increase and an average annual increase of 13.6%. Of the total increase in spending of $113.9 million, over half, $67.6 million was for the Accelerated Infrastructure Projects. During the period, capital expenditures for the accelerated infrastructure projects increased from 31.1% of total spending to 43.8%.

Capital spending for new business stayed relatively constant at around $48 million per year.

While capital expenditures in total were increasing, SJG underspent its transmission and distribution capital expenditure budgets in all years except 2017 and 2019. Capital budget variances are shown in the following exhibit for the years 2013 through July 2020.

System Operations Capital Expenditure Budget Variances

Factor	2013	2014	2015	2016	2017	2018	2019
Total Variance	−7.87%	−22.25%	−12.14%	−5.79%	9.20%	−8.94%	5.30%

Also, the variances each year were significant, ranging from a 22.25% underspend in 2014 to a 9.20% overspend in 2017.

The capital expenditures for SJG transmission and distribution are projected to continue to increase over the next four years as shown in the following exhibit.

Transmission and Distribution Capital Expenditure Projections ($ million)

Category	2021	2022	2023	2024
System Growth and Maintenance	119.0	65.4	89.4	59.2
New Business	56.6	57.4	58.3	59.2
Accelerated Infrastructure Projects (SHARP, AIRP, Energy Master Plan, and PHMSA)	72.7	204.3	184.8	169.8
New LNG Plant for Redundancy	0	0	46.7	153.0
Totals	**273.8**	**327.1**	**379.2**	**441.2**

System growth and maintenance expenditures are expected to decrease through 2024. New business is projected to increase modestly from current levels. After a dip in 2021, capital expenditures for the accelerated programs are expected to increase above 2020 levels from 2022 through 2024. The biggest increase in capital expenditures is in 2023 and 2024 for a total of $200 million for a new, redundant, LNG peaking facility.

6-7 Much of the problem distribution system plant has been replaced or renewed.

A major contributor to the improved system integrity and safety is the replacement of problematic plant components which has been greatly aided by the accelerated replacement programs. For example, SJG estimates that without the accelerated programs, the normal DIMP calculated replacements would have required 50 years to replace the cast iron pipe. All cast iron pipe has been replaced.

Accelerated programs run from July to June. SJG applies for recovery of the accelerated capital spending in the rate base annually after June. Non-accelerated program capital investments are added to the rate base in regular rate cases.

Significant system improvements since 2013 include:

- All cast iron pipe has been replaced.
- All bare steel has been replaced except for three miles of bare steel stalled by a road moratorium. It will be replaced within three years.
- All of the island low pressure systems have been uprated and all distribution systems are now designed for the modern, industry typical 60 pounds MAOP.
- 39 district regulator stations have been rehabilitated or replaced.
- 96,877 excess flow valves have been installed.

- 11 high pressure distribution system reliability improvement projects have been completed for a total of 22.4 miles of 8- to 16-inch pipe operating at 125 to 600 pounds of MAOP.

Cast iron pipe was vulnerable to leaks from joints and cracks. Bare steel pipe was subject to corrosion leaks. Low pressure systems could have high- or low-pressure incidents and water infiltration. The removal of this problem plant has substantially improved the SJG system integrity and safety.

6-8 Transmission and distribution operations and maintenance expenditures increased at a high rate from 2013 through 2018 but decreased in 2019 and are projected to decrease going forward as the system continues to be modernized.

The following exhibit shows the actual and budgeted transmission and distribution operations and maintenance (O&M) expenditures from 2013 through 2020.

Transmission and Distribution Expenditures ($ million)

Actual	2013	2014	2015	2016	2017	2018	2019
Transmission	2.9	3.7	4.6	4.9	5.0	5.6	5.7
Distribution	14.2	15.1	16.9	18.5	19.1	24.1	20.9
Total Actual Expenditures	**17.1**	**18.8**	**21.5**	**23.4**	**24.1**	**29.7**	**26.6**

Since 2013, total transmission and distribution O&M expenditures have increased $9.5 million, or 55.6%. This is an average annual increase of 9.3%. Transmission expenditures increased by an average of 16.1% per year and distribution expenditures increased by 7.9% per year.

Transmission and distribution O&M expenditures exceeded the budget from 2013 through 2018 but 2019 produced a positive variance as shown in the following exhibit.

Transmission and Distribution O&M Budget Variances ($ million)

Actual	2013	2014	2015	2016	2017	2018	2019
Transmission	2.9	3.7	4.6	4.9	5.0	5.6	5.7
Distribution	14.2	15.1	16.9	18.5	19.1	24.1	20.9
Total Actual Expenditures	**17.1**	**18.8**	**21.5**	**23.4**	**24.1**	**29.7**	**26.6**
Budget							
Transmission	2.6	3.3	4.6	5.0	5.6	5.9	5.4
Distribution	13.3	14.2	15.0	16.4	18.3	20.9	22
Total Budgeted Expenditures	**15.9**	**17.5**	**19.6**	**21.4**	**23.9**	**26.8**	**27.4**
Budget Variance							
Transmission	-11.5%	-12.1%	0.0%	2.0%	10.7%	5.1%	-5.6%
Distribution	-6.8%	-6.3%	-12.7%	-12.8%	-4.4%	-15.3%	5.0%
Total Budget Variance	**-7.5%**	**-7.4%**	**-9.7%**	**-9.3%**	**-0.8%**	**-10.8%**	**2.9%**

In 2013, 2014, and 2019, transmission actual expenditures exceeded the budget by significant amounts (5.6% to 12.7%). Distribution actual expenditures exceeded the budget in all years except 2019, also by significant amounts (4.4% to 15.3%).

Going forward, transmission O&M expenditures are expected to continue to increase slightly, likely due to inflation, while distribution O&M expenditures are expected to decrease, likely due to modernized plant, as shown in the following exhibit.

Transmission and Distribution Actual and Budgeted Expenditures ($ million)

Actual	2020 Actual	2021 Budget	2022 Budget
Transmission	6.6	7.3	7.4
Distribution	21.1	18.9	19.6
Total Expenditures	**27.7**	**26.2**	**27.0**

The financial plan projects that SJG total O&M expenditures will decrease by $2.5 million in 2021 and $1.2 million in 2022, 2023, and 2024.

6-9 There is a good chance that the additional planned system reliability and integrity capital expenditures will produce diminishing returns.

As noted above, system integrity and safety is already good and has improved substantially from the large capital investments made in the system. The largest system safety problems, cast iron pipe, bare steel pipe, and low-pressure systems, have all been eliminated. Additionally, thousands of excess flow valves have been installed and many distribution lines are looped. There are fewer leaks and even non-hazardous leaks are repaired quickly. Incremental improvements in system safety and integrity from this point will come at a high capital expenditure price.

Transmission and distribution O&M expenses are projected to decrease slightly, but not at a rate that would justify large capital expenditures intended to reduce O&M expenditures.

The planned redundant LNG peaking facility in 2023 and 2024 would be nice to have for improved reliability, but total sendout in the system has decreased from a high of 67.7 million dekatherms in 2015 to 54.1 in 2020. While there are more SJG customers each year, they are, on average, using less gas. Further, there have been no low-pressure incidents in recent years that directly affected customers.

Currently, the accelerated infrastructure programs are focused on quantity each year, such as, replacing a certain number of miles of pipe. They are not focused on achieving specific system integrity and safety results, such as preventing incidents. Work is balanced among divisions and local government jurisdictions rather than replacing the worst plant first.

6-10 There are possible benefits of concentration of expertise and economies of scale if SJG Operations were consolidated with ETG Operations.

ETG Operations are slightly smaller than SJG Operations as shown in the following exhibit.

Comparisons of SJG and ETG Scale

Customer Count	SJG	ETG
Residential	370,693	275,922
Commercial	25,985	23,445
Industrial	412	98
Total Count	397,090	299,465
Territory Specifications	**SJG**	**ETG**
Square Miles of Territory	2,500	1,431
Distribution Miles	6,684	3,234
Transmission Miles	146	14
Municipalities Served	113	90
Counties Served	7	7

ETG has 25% fewer customers, a 43% smaller service territory, and 90% fewer miles of transmission pipe. However, it has all of the same Operations functions that SJG has: System Planning, Engineering Services, Construction Operations, Dispatch and Utility Services, and Field Operations. However, in ETG, these functions, along with Customer Experience, report directly to the ETG President. ETG does not have a Vice President of Operations.

Considering ETG's two divisions, the Northwest division is at about the average of the SJG divisions in miles of main (1,335 versus 1,337 average) and slightly below average in density (42 services per mile of main versus 48 average) and services (57,471 versus 64,400 average). The Union division is the largest division in services (172,415 versus 64,400 average) and the densest (91 services per mile of main versus 48 average).

All SJI and SJIU functions except Operations and Customer Experience are consolidated and centralized. This includes External Affairs, Finance and Accounting, Human Resources, Information Technology, and Legal at the SJI level. And Rates and Regulatory, Utility Shared Services, Enterprise Project Management Office, Environmental, Gas Supply, Innovation and Business Improvement, Safety and Quality Assurance, and Sales at the SJIU level. Within these functions, there are often individual employees tasked with just serving ETG or SJG, such as safety, human resources, quality assurance, and legal representatives. However, the management of the functions is centralized, and the systems, policies, and procedures are consistent for both ETG and SJG.

Consolidated utility functions provide the benefit of concentration of expertise. Larger numbers of professionals like engineers and lawyers allows specialization and increased depth of analysis.

Consolidated utility functions also offer the potential for economies of scale. The procurement and contracting function is already consolidated but increasing the standardization of materials and procedures between ETG and SJG could lead to lower procurement and contract prices. The “harmonization” of ETG and SJG standards is already underway with 35% completed at the end of 2020.

There are challenges to consolidating ETG and SJG operations, such as union differences. However, SJG already successfully manages union differences between the Cape May division and the other four divisions. Likewise, ETG has a suburban/rural division and a more urban division. However, SJG successfully manages both lower and higher density divisions now.

One opportunity for consolidating a utility function within SJG, even without centralization with ETG, is engineering. SJG currently has three separate engineering and standards units:

- System Planning
- Engineering Services for the Pipeline function
- Contract Construction Design Engineering for the distribution function

There is no formal coordination among these engineering units, only the discussion of immediate problems and informal discussions of planning. These units would benefit from consolidation. The consolidated engineering unit could still designate specialists to serve specific clients like transmission and distribution.

In addition, SJIU has two units serving both ETG and SJG that are often parts of a utility engineering organization:

- Utility Services Records Management
- Utility Services Standards

Should the ETG and SJG engineering functions be consolidated, these groups could be included as well.

6-11 SJG Operations spans of control are too narrow in several cases.

Multiple Operations management positions only have three or fewer direct reports, including:

- Director, Construction Operations
- Manager, Contract Construction
- Director, Operations Support
- Manager, Leak Survey
- Director, Field Operations
- Manager, Field Operations
- Manager, System Planning
- Director, Dispatch and Utility Services
- Manager, Dispatch

Personnel at these levels with director or manager titles can supervise six people with differing responsibilities or eight to ten people with similar responsibilities. For example, the SJI CEO has eight direct reports and the SJIU President has ten direct reports.

With the SJG five division structure, it would be more common for the five division managers or supervisors to report to one functional manager or director and that manager or director could also supervise three to five additional staff support personnel.

6-12 SJG Operations units report generally good support from shared services.

In interviews with the executives and managers of SJG Operations, there were no specific complaints about the level of support for any shared service and most reported good service, including:

- Information Technology
- Human Resources
- Legal
- Labor Relations
- Safety
- Procurement and Contracting
- Materials Management
- Fleet Management
- Facilities Management

Fleet Management, Facilities Management, Materials Management, and much of Information Technology are provided by contractors, not employees.

C. RECOMMENDATIONS

6-1 Refocus capital expenditures on achieving specific system integrity safety objectives and accommodating new customers. (See Findings 6-1, 6-6, and 6-7)

The SJG transmission and distribution system has been modernized and the problem plant has been replaced. System integrity and safety is good and getting better. There are no chronic problems with leaks or low pressure. Continued capital spending on initiatives to improve system integrity and safety will likely produce diminishing returns.

An alternative approach would be to set specific integrity and safety targets to be achieved over a rolling five-year period and then construct the transmission and distribution capital project plan to achieve those targets in the most cost-effective manner. The system planning function should work closely with the distribution division engineers to identify the specific projects that will most cost effectively achieve the integrity and safety targets. This may mean having an unbalanced capital program among the divisions, with the more challenging divisions receiving more capital spending and the others less.

System expansion to accommodate new customers should be achieved in the most long-term cost-effective manner possible.

6-2 Study the costs and benefits of consolidating SJG and ETG Operations. (See Finding 6-10)

All utility functions except Operations and Customer Experience are already consolidated and SJG is enjoying the concentration of expertise and economies of scale this provides. Similar benefits are likely available from consolidating the SJG and ETG Operations functions. Organizational consolidation would also accelerate the standardization of policies, procedures, and systems between the two companies.

The Operations employees who do physical work within each division could remain SJG and ETG employees. Only the senior management would become SJI or SJIU employees. One Operations executive could oversee the five SJG divisions and the two ETG divisions (or the geographies could be restructured to have fewer divisions). The structure could be either the Operations functions of a consolidated Engineering group, Construction Operations, Field Operations, Pipeline Operations, and Dispatch and Utility Services reporting to the centralized Operations executive, or SJI could elect a divisional structure with a division executive for each of the seven (or fewer) divisions with responsibility for each of the Operations units in that division reporting to the Operations executive. Some type of a matrix between functional and geographic responsibilities is normal for holding companies with multiple operating companies. Direct divisional responsibility is often supported by centralized staff support for each function, or a functional organization has a strong geographic coordination function in each division.

6-3 Increase the spans of control for Operations directors and managers to six to ten. (See Finding 6-11)

There are too many instances in which an Operations director or manager has three or fewer direct reports. Personnel at that level should be able to supervise six to ten direct reports. Either through attrition with no reorganization or in conjunction with an Operations consolidation or other reorganization, restructure the Operations organization to have appropriate spans of control for each management position. While there are instances in which a senior manager is an individual contributor and a smaller span of control is justified, most Operations directors and managers are not principally individual contributors and should have an appropriate span of control. This will reduce the total number of director and manager positions as it is implemented. These positions can be redeployed as additional engineer or utility worker positions.

7. CUSTOMER SERVICE

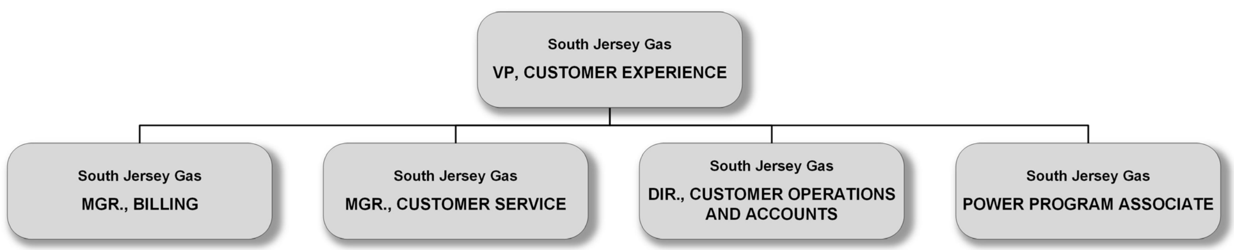
A. BACKGROUND

This chapter assesses Customer Service. It is comprised of the South Jersey Gas (SJG) Customer Experience organization which includes responsibility for the functions of Meter Reading, Billing, Credit and Collections, Complaints, and Revenue Protection. Also included in this chapter is an assessment of the SJG Marketing department, part of the South Jersey Industries (SJI) Sales and Business Development organization.

CUSTOMER EXPERIENCE ORGANIZATION AND STAFFING

The SJG Customer Experience (CX) organization was undergoing redesign and significant changes during the SAGE Audit. As of the end of 2020 (as shown in the organization chart, below), the customer service organization was named Customer Experience and was led by the Vice President, Customer Experience (VP CX), who was appointed to the position in September 2019.

SJG Customer Experience Structure



The VP CX reports to the SJG President and SJI SVP, who reports to the SVP, SJI and President and COO of SJG. In early 2021, the VP CX had six direct reports, two of which were open positions: Billing Manager, Collections Manager, CX Program Manager, Customer Service Manager, Power Program Associate, and Customer Analytics Manager. The CX department identified the need for changes, including the need for full time analysts "to collect, analyze and validate data as well as offer recommendations to support better decision-making within each functional area" and "root cause analysis is not conducted to assess major issues and subsequently develop or improve programs and processes."

CX was planning to implement organizational and staffing changes in 2021. The resulting structure would have four direct reports: a Customer Operations Director, two CX Program Managers, and a Customer Service Manager. The Customer Service Manager would have responsibility for the contact/call center, service centers, and quality and training. The Customer Operations Manager would have responsibility for operations analysis; collections, escalation, and outreach; and billing. Some positions were to be eliminated and new positions added. There were no external hires planned.

As of April 2021, there were 73 unionized positions, 17 leadership positions, nine full time equivalent (FTE) CustomerLink (contractor) customer service agents, and two open positions.

METER READING

Meter reading services are provided to SJG by Millennium Account Services LLC, an SJI affiliate. Millennium is jointly owned by Conectiv Solutions, LLC, a subsidiary of Conectiv, Inc. (50%) and SJI (50%). Millennium was formed in 1999 with Conectiv, owned by Atlantic City Electric (ACE). ACE has been purchased several times since 1999. When Pepco Holdings (PHI) purchased ACE, Conectiv was converted into a subsidiary of PHI. Exelon is the parent company of PHI.

Millennium is managed by the Director, South Jersey Energy Service Plus (SJESP) & Millennium. Functions include meter reading, utility survey, administrative services, and other non-regulated affiliated services. For the purposes of the Millennium organization, the Director reports to the Executive Committee comprised of four individuals, two from South Jersey Energy Solutions (SJES) and two from Exelon. SJES is the parent company of SJI's non-regulated businesses. The two SJES Committee members are the VP Business Development and VP Enterprise Project Management.

Meter Reader Staffing

Millennium, on average, employs 80 meter readers; none of whom are employees of SJG or ACE. Individual meter readers read both gas and electric meters in the four districts, and all the districts have gas meters. The Millennium districts serve both ACE's electric and SJG's gas meters. Based on total meter count of both gas and electric meters for the four districts for year-end 2020, 39% of meters are gas. Applying this ratio to meter reader staffing, in each of the districts, there are four meter readers in the South District, seven in the East, 14 in the North, and seven in the West, for a total of 32 FTEs dedicated to SJG meters.

Each of the districts is managed by Operating Supervisors who report to the Operations and Administration Manager, who reports to the Operations General Manager (GM). The Operations General Manager reports to the Director, SJESP & Millennium.

Millennium recently added the position of QA Assistant Manager who reports to the Operations GM. This position manages planning and scheduling and oversees the daily activities for Safety, Training, Quality Assurance, Fleet Maintenance, and Administration in the service/operational departments, including meter reading services. The QA Assistant Manager coordinates all District Office activities, including those of the District Assistants and the Quality Assurance Supervisor that relate to meter reading.

Meter Reading System

Millennium uses the Itron Field Collection System (FCS) with the FC300 model handheld units to conduct manual daily meter reading services. SJG also has Encoder Receiver Transmitter (ERT) devices on meters installed primarily on properties identified as having access problems. These devices send a radio transmitted signal with the meter reading through a wake-up process to the meter reader's hand-held device.

Regarding Smart Metering or Advanced Metering Infrastructure (AMI), SJI has said: “The Company’s perspective ... is the same for both SJG and ETG (Elizabethtown Gas).” SJI has said that it continues to evaluate AMI technologies, and its costs and benefits. The company is looking at conversion strategies including an accelerated deployment for full conversion, a compliance driven exchange program, and a phased deployment coupled with interim technology, such as Encoder Receiver Transmitters (ERT).

SJG/Millennium Contract

Millennium has been providing meter reading services to SJG and ACE since June of 2013 under a joint agreement which has been amended and extended several times. The most recent contract with Millennium was executed on December 18, 2020, and the VP CX signed on behalf of SJG. The contract term is for two years: January 1, 2021 through December 31, 2022. The contract specifies a work volume for SJG of approximately 418,580 accounts distributed over four regions with 20 cycles per month.

The current contract contains performance requirements with minimum acceptable levels of percentage of meters read and provides for a two-part incentive compensation if Millennium exceeds the minimum levels. The minimum levels for meters read are: 97% of contract read rate, 97.5% of incentive compensation read rate, and 98.5% of exceptional performance incentive compensation read rate. These three rates represent increases of one percent over the prior year's contract.

Meter Reading Performance and Metrics

Millennium, in conjunction with SJG, tracks metrics and performance measures associated with meter reading services, including total meters, percentage of meters read, estimated reads, and meter reading complaints. Some historical information has been limited by the conversion to the Customer Care and Billing (CC&B) system in late 2014, and therefore, comparable data from legacy systems for 2013 and 2014 were not available.

The Balanced Scorecard (BSC) for the Director, SJESP & Millennium, includes Achieved Contract Read Rates for SJG, among other objectives. The 2020 BSC Measure is Year-End Aggregate Read Rates, the Target is 98.0%, and the range of Scoring is from less than 97.0% to greater than 98.6%. These are cascaded down to the Operations GM, Operations Manager, Senior Supervisors, and the QA Supervisor.

Once a month, each meter reader conducts a session on the Meter Pro training software to test reading accuracy. Their Accuracy Rate score must be 99% or better, as required by Millennium's current labor contract. Readers not meeting the monthly minimum read rates and accuracy rates are subject to performance standard progressive discipline. Meter readers who score below 97% on their regular monthly Meter Pro session are removed from the field and are required to complete retraining, extra Meter Pro practice, and additional field training, and additional quality checks are performed to ensure accuracy improvement.

BILLING

Organization and Staffing

The billing function is managed by the Manager of Billing, part of the Customer Care Center (Call Center). The Manager has two Supervisors who manage 15 Billing Representatives. The number of reps is generally stable. Vacant positions are usually filled by SJG Customer Service Representatives (CSR). New Billing Reps are initially given four to six weeks of training. Ongoing training is done one-on-one by supervisors. Billing Supervisor one-on-one meetings are held with Billing Representatives to address BSC results and assess progress of department goals.

During the SAGE Audit, the Customer Experience (CX) department was reorganizing and planned to relocate the billing function within CX. The transition was pending and targeted for the second half of 2021.

The two Billing Supervisors oversee:

- 13 Billing Representatives (Rep) who work on the exceptions to resolve the problems, mostly meter read errors
- One Senior Payment Clerk who handles cash receipts/payments
- One Meter History Clerk who monitors new meter purchasing, meter history including meter moves, in/out of the storeroom, removed from service, meter replacements, and installations.

Billing Processes

The billing process starts with meter reading, done by the Millennium affiliate. Files are generated by Millennium and uploaded to the CC&B and the uploaded data is batch-run overnight. CC&B identifies exceptions, such as reads that exceed high/low parameters and historical usage for the account. The exception reporting goes to the Dashboard, but the Billing Manager and the supervisors do not have access to the Dashboard.

If a re-read is needed, the Billing Rep sends the request via email or phone to Millennium, by geographic area/division. A manual read is done and returned to the Billing Rep who then updates the account in CC&B. This is completed within 24 hours so that the cycle bills can be issued within the 24-hour window. The CC&B automatically transmits the bill file to an outside vendor.

SJG bill redesign was completed February 28, 2018. Utilizing the support of an external consultant, SJG executed a three-month outreach campaign to educate customers about the new bill. Efforts included a special website landing page with answers to FAQs, an informative video that helped customers navigate the changes, and an interactive version of the bill with explanations of each section. Additionally, messages were shared with customers through a bill insert, multiple bill messages, and social media posts. All messaging provided useful information and encouraged customers to view the special landing page for a full suite of resources. The landing page offered customers the ability to view content in either English or Spanish versions of the page by clicking a link at the top of the page.

Contractors and Vendors

The billing function uses three vendors for billing services. Kubra Data Transfer LTD was paid a total of $5,218,963 in 2019 and 2020 for SJG bill printing. Bill2Pay LLC was paid a total of $3,248,855 in 2019 and 2020 for providing electronic payments and returns via the SJG online My Account Portal. ACI Payments, Inc. was paid $24,056 in 2019 and 2020 for accepting and transmitting electronic payments to SJG made by customers at local convenience store locations.

ESCALATED BPU COMPLAINTS

Escalated complaints are complaints received from the BPU. The Complaints function consists of one Supervisor and two Customer Service Coordinators.

The Escalated complaints are transmitted to SJG via the BPU External Access Portal whereby SJG tracks, documents, and manages complaints. An email notifies the complaint team supervisor that a new complaint has been added, who then assigns the complaint to a coordinator. The complaint is analyzed in conjunction with the CC&B system and then adjustments are made as necessary. The customer is contacted by phone to resolve the issue. A response is entered into the BPU system and sent to the BPU for review. The BPU then either responds back with further questions or closes the case. A similar process is used in conjunction with the separate Better Business Bureau Portal.

An Escalated case is added by the customer service coordinator each time a complaint is received. The cases are used to track the complaints and run monthly reports. Each case is entered as an Escalated complaint type and then categorized by the complaint subject. Each month, reports are generated from the cases that are entered to determine the number of cases received, the source of the complaint, and the category of complaint.

The table below shows the number of Escalated BPU Complaints by Type.

Escalated BPU Complaints by Type

Types	2013	2014	2015	2016	2017	2018	2019
Billing Issues	Not tracked before 2018					232	208
Shut Offs	Not tracked before 2018					497	709
Service Appointments	Not tracked before 2018					57	82
Payment Agreements	Not tracked before 2018					315	337
Meter Issues	Not tracked before 2018					31	45
Other	Not tracked before 2018					82	35
Total	746	1573	3666	1427	1066	1214	1416

SJG began to track specific types of Escalated complaints in 2018, comprised of Billing Issues, Shut-offs, Service Appointments, Payment Arrangements, Meter Issues, and Other. Three types of complaints (Billing Issues, Shut Offs, and Payment Arrangements) accounted for 86% in 2018 and 89% in 2019, with Shut Offs representing the most complaints for the two years. Shut Offs increased by 43% from 2018 to 2019.

In 2020, there was a substantial decrease in Billing Issues and Payment Arrangements complaints. SJG has said that prior to the COVID-19 pandemic, these two types of complaints were cited as an Escalation even when a bill was correct. SJG has said that during the pandemic period in 2020 and beyond, SJG has been encouraged to waive down payments and provide significantly extended payment arrangements, up to 24 months in some cases, which resulted in fewer escalated complaints.

SJG also added the Balanced Scorecard performance goal based on a percent of year-over-year reduction in complaints, in 2018 and 2019, and then dropped the metric in 2020, primarily because the 2020 complaints number was historically low due to the moratorium on shut offs.

SJG has taken the following steps to improve complaint metrics:

- Customer Service Coordinators analyze the complaint trends each month to determine top trends. These trends are forwarded to the training and quality team.
- In 2019, complaints were added to CSR Scorecards to improve accountability with the CSRs. The inclusion of complaints on the Scorecards allows the Leadership team to quickly identify complaint trends with certain CSRs. Any identified trends are reviewed monthly with the appropriate Supervisor as part of the CSR's coaching and feedback session.
- Complaint cases were established in the CC&B system to provide a detailed summary and status of all current and prior customer complaints.
- Refresher courses were scheduled throughout the year to improve complaint metrics. These refresher training courses range from topics consisting of de-escalation tactics, seasonal billing issues, soft skill training (reinforcing empathy, tone and acknowledging a customer's concern) and a review of billing procedure and payment arrangement scenarios.
- Improved visibility of complaint metrics throughout the organization by incorporating metrics onto the CX corporate dashboard. This dashboard is presented and discussed each month as part of the SJG Operating Results and Strategy meeting.

CALL CENTER OPERATIONS

Call center operations include contacts primarily by phone, email, and on-line My Account regarding metering, service turn-ons/offs, billing, payments, collections, and others.

SJG call center operations have undergone significant changes over the last several years. Until 2021, SJG call center operations consisted of the company call center and a vendor call center. The contract with Convergent Outsourcing, Inc. ended in 2017 and a new vendor, CustomerLink LLC (CLEAResult Consulting Services Inc.) was onboarded. Convergent and CustomerLink provided similar services. CustomerLink was an overflow call center that was used from November 2018 to April 2021 to handle customer service calls as a backup to the company call center in Atlantic City and to provide weekend and holiday coverage. The use of CustomerLink for CX operations ended in April 2021 because of SJG's dissatisfaction with the vendor's staffing and performance. CustomerLink does continue to provide services to SJG Marketing, by providing support responding to marketing campaign inbound sales calls for new customer leads.

CX was in the process of meeting New Jersey's requirement that SJG handle at least 65% of its call volume within the state and at that time SJG was handling about 73% in-state. The BPU moratorium on shutoffs during the Covid pandemic reduced call volumes and contributed to the increase in SJG's ability to handle calls at its own call center. CX was exploring the potential for in-state overflow and was planning to add more staffing to its own call center, especially for Saturday calls.

The table below shows the headcounts for the SJG call center and two call center vendors for the years 2017 through 2019.

Call Center Headcounts

	2017	2018	2019
SJG Call Center	31	40	45
CustomerLink (vendor)	0	29	24
Convergent (vendor)	26	0	0
Total	57	69	69

Headcount data prior to 2017 is not available. The transition from Convergent to CustomerLink occurred from August to December 2018. The arrangement with CustomerLink ended April 30, 2021. The SJG Call Center headcount declined to 41 in 2020 and to 38 by April 2021.

CX has been restructuring its call routing approach throughout 2021. A “POD” structure comprised of specialized CSR teams is being created with focused training skills and knowledge to respond to specific types of inbound calls. The POD groupings include bill explanation, account and online support, utility service requests, and start/stop/transfer service. The interactive voice response system (IVR) has been redesigned in conjunction with the POD structure to improve handle time and first call resolution. CSR assignments to a POD are based on knowledge assessment, escalation (BPU Escalation calls) tracker data, and agent preference. Anticipated headcount requirements are based on average volume of inbound call types and average number of calls per CSR per day.

CREDIT AND COLLECTION

SJG has been using a combination of in-house and contractor collection agencies. From 2013 through 2017, collection agency service level and performance metrics were not consistently tracked. Beginning in 2018, SJG moved many of the collection agency functions in-house. SJG currently employs eight collection representatives who handle a combination of inbound and outbound phone traffic. In early 2020, SJG implemented a Collections Outbound Dialer to further strengthen collection opportunities. As a result of this shift, SJG went from employing four collection agencies in 2018 to one in 2020. This one vendor pursued collections on inactive accounts.

As a result of Covid impacts and the significant decline in customer payments and to therefore maximize receipt of funds, SJG decided to continue using only one vendor to target more aged arrears and rely on internal resources to collect other arrears.

In 2017, SJG engaged a consultant to assess opportunities to improve the customer experience. The assessment provided recommended actions for the collections process. Specifically, regarding the collection of accounts receivables, it was noted that compared to SJG peers, SJG’s collection process was passive. This passivity was contributing to a customer behavior whereby many customers were dismissing the importance of paying their natural gas bill. To improve the overall collection process and with a mind towards changing customer behavior, several severance and collections process changes were recommended.

In response to the assessment, SJG implemented a revised collections timeline and process after 60 days that includes a late payment message on the second bill (31 days arrears). After the second bill payment due date (45 days arrears) has passed, the Collections department executes, in sequence, an outbound Dialer call; a service disconnection letter sent; a service disconnection service order created; a service disconnection service order scheduled; and a service disconnection physically occurs ten days after the letter is mailed. After the third bill is produced, the final bill is sent ten days after disconnection, followed by two outbound Dialer calls and then the arrears are sent to the collection agency.

SJG has been tracking the following metrics for its in-house collections team: Customer Shut Off Non-Payment, Shut Off Non-Payment Complaints, Inbound Calls, Outbound Calls, Service Level, and Dollars Collected for Past Due Accounts. However, in late 2014 SJG transitioned to the CC&B system and Maximo work management system. Comparable data for Customer Shut Off Non-Payment and Shut off Non-Payment Complaints, from the legacy systems for 2013 and 2014 are not available. Prior to 2019, the SJG collections team consisted of Field Collectors who went door to door collecting past due amounts. In late 2018/early 2019, the Collection team was transitioned into the call center and began making and fielding collection-related calls. Therefore, comparable data for Inbound Calls, Outbound Calls, Service Level, and Dollars Collected-Past Due Accounts is not available prior to 2019.

SJG acknowledges that for the period of 2013 through 2017, collection agency service level and performance metrics were not consistently tracked. Beginning in 2018, SJG moved many of the collection agency functions in-house.

REVENUE PROTECTION

There are several revenue protection functions (including traditional ‘theft of service’) within the CC&B system:

I. New Consumption for Stopped Service Point To-Do’s: This meter read trend process updates meter read trends using consumption from newly added reads. A To-Do entry is created for each meter read where the Service Point is not linked to a Service Agreement and where daily consumption exceeds a trickle consumption threshold, computed as a percentage of the billable average daily consumption derived from the trend.

J. Pending Start/Stop To-Do’s: To-Do entry for pending start/stops that are older than the number of days specified (45 days). This To-Do identifies start/stop requests that have not been completed within the parameters (Number of Days) that have been specified.

K. No Bill Report: This report is generated from CC&B and reviewed daily by the billing team. The process involves reviewing the pending bill, meter read activity, service agreement dates and issuing a bill. Customer Experience has documented the process flows for the No Bill Report and To Do exceptions in its SOX documentation.

L. In addition to the functions built within the CC&B system, SJG has a Theft of Service corporate procedure that is used in the field which outlines steps to find, eliminate, and prevent theft occurrences.

SJG manages performance of the revenue protection functions by: (1) evaluating and monitoring how “To Do’s” are processed within the CC&B system. A “To Do” is a system alert that is generating by the CC&B system based on a defined criterion that would require investigation and validation or represents a potential error and (2) investigating items in the No Bill Report. These metrics have only been available and measured with the implementation of CC&B in 2014.

There is an effort currently underway to transition the No-Bill Report process from a manual process of reviewing the No-Bill Report to an automated To-Do. This automation would eliminate potential human error and would create a more efficient process to remain current with No Bill scenarios. The creation of the No Bill To-Do is expected in 2021. SJG is updating reference documentation, providing refresher trainings, and leveraging cross-training efforts that have proven to be helpful in support of this effort.

MARKETING AND SALES

Organization

The Marketing and Sales (M&S) function reports to the SJI Vice President of Sales and Business Development, who reports to the Senior Vice President of SJIU and President of SJI. The SJI Vice President of Sales and Business Development has four direct reports: (1) SJG Marketing General Manager (Atlantic City), (2) SJG Director of Sales (Atlantic City), (3) Director of Business Development – Commercial Sales (Atlantic Division), and (4) Director Sales (Mid-Atlantic Green Lane Division).

The SJG Marketing General Manager has five direct reports, all located in Atlantic City:

- Marketing Administrator Lead
- Marketing Coordinator
- Marketing Manager
- Supervisor Technical Research
- Technical Research Analyst

The operating advertising budget is about $858,000. Advertising is booked as O&M but is eventually capitalized. Marketing salaries are capitalized.

Marketing Background

The Marketing mission is to generate sales leads for both natural gas conversion and energy efficiency programs and to increase revenue and shareholder value. The Marketing team also manages the promotion of energy efficiency programs to customers resulting in energy efficiency program engagement. The Director of Energy Efficiency and Conservation, not part of Sales and Business Development, manages regulatory-related energy efficiency program compliance.

Marketing procedures are based on industry guidelines including Federal Trade Commission (FTC) Advertising Basics (a set of rules that require advertising claims must be truthful, cannot be deceptive or unfair, and must be evidence-based) and reputable marketing standards. In addition, Marketing states that it adheres to a set of brand standards and guidelines, developed by SJI, which describe the way SJI communicates its products and services. SJI developed a “Brand Book – Brand Identity Guidelines and Logo Usage,” dated August 2020. SJI sees its brand as a powerful marketing tool. The Brand Book is a comprehensive document that details its logo design, logo usage in various markets, brand positioning and attributes, voice, style, and tone, as well as other details.

The SJG Marketing team has retained two advertising and marketing agencies to assist with executing marketing strategies, communications, and data segmentation. Marketing also uses Geographic Information System (GIS) and internal business systems for business development and market research.

Marketing responses and leads are reported by Power BI Dashboards (regarding conversion to natural gas) and third-party reporting (regarding energy efficiency). SJG views its website as a key tool for messaging and includes online interest forms, a Check for Natural Gas Availability Tool, and an Instant Home Energy Assessment tool.

Marketing and Sales (M&S) supports its work with several external consultants and services, including: (1) J.D. Power conducts customer surveys and provides voice of the customer (VOC) data, insights, and analytics, (2) Salesforce is the system used to track monthly leads, opportunities, and closed-won deals for new customers. It is also used to track lead sources and sales activity (e.g., site visits), (3) White Whale is an external vendor providing customer and prospect profile and segmentation analyses as well as energy efficiency advertising, creative development, and media buying. White Whale also executes the direct mail and email deployments and provides campaign analysis, and (4) CustomerLink was the vendor call center providing call management and reporting on all inbound and outbound marketing calls (non-customer service calls), but the contract was to have ended by June 2021.

M&S uses marketing services and consultants for direct mailing campaigns to customers, social media campaigns, customer-related email campaigns, and advertising. Annual expenditures reached a peak of $1,727,886 in 2017 and declined to $815,787 in 2019.

M&S produces several reports, including: (1) Weekly Raw Data Report – lists each contact handled for the week and any information gathered by agents, (2) Inbound Number Call Count – totals number of calls to each dedicated marketing number for the week, and (3) CustomerLink – Gas Conversion Report – previously documented total calls handled, call time, call regarding, and call metrics.

M&S measures its performance by tracking: (1) Responses/Leads Generated, (2) Impressions, (3) Click-thru-Rate, (4) Calls, (5) Returned Business Reply Cards, (6) Completed Online Forms, (7) Email Open Rates, and (8) Email Opt-Out Rates.

New Business Analysis

New business work comes from the Sales Department through Salesforce to the Permitting clerks who cost the project, secure needed permits, and notify the new business design contractor.

The New Business Analysis tool is a spreadsheet that computes a potential customer contribution for a specific new business project. The inputs required for analysis include the following: (1) Type of account (residential or commercial), (2) Total number of services and meters, (3) Total gas load of commercial accounts (in cubic feet per hour), and (4) Total cost of construction which is calculated using current Contractor unit prices including materials, labor, restoration, and permitting. The Associated tax factor and the Distribution Revenue of residential or commercial accounts weighted over a ten-year period are also included in the calculation.

The total revenue from the project is calculated via revenue of a single account multiplied by the number of accounts. The construction costs are then subtracted from the total distribution revenue. Any construction costs more than the distribution revenue are then multiplied by the associated tax factor to determine a customer contribution.

CX GOALS, OBJECTIVES, MEASURES, AND TARGETS

Customer Satisfaction Survey

SJG surveys its customers once a year with its Customer Satisfaction Survey. In 2020, SJG sent 76,452 emails for the survey with a response rate of 7.9%. One of the metrics from the survey is the Net Promoter Score, calculated by taking the percentage of respondents giving a rating of nine or ten (promoters) and subtracting the percentage of respondents giving a rating of six or less (detractors). The Net Promoter Score is closely analyzed, and it is a metric component of the CX VP's Balanced Scorecard and the Performance Management Process which determines incentive compensation. (See Chapter 12, Human Resources, for additional discussion of incentive compensation.)

Voice of Customer Program

SJG obtains customer feedback using its Voice of Customer (VOC) Program. The program tracks feedback regarding service quality and customer experience via phone, email, the online My Account, and other customer interactions. The program provides useful feedback trends that lead to improvement opportunities. The monthly report includes customer response feedback, which is translated into a First Call Resolution proxy rate, and Valued Customer Ratings for communications and functions. These two metrics are focused on the “top two percent box ratings,” defined by the percentage of customers who responded with a six or seven out of ten, where seven is "Strongly Agree" when asked if they agreed with the statement. The VOC performance result is also a goal target metric component of the CX VP's Balanced Scorecard and the Performance Management Process which determines incentive compensation.

Balanced Scorecard

The SJI corporate level “2020 BSC – Customer” BSC, as of July 2020, includes Goals, Targets, Target Value, Status, and Comments. The goals are: (1) Develop and Execute Comprehensive Marketing Strategy, (2) Improve Customer Satisfaction, (3) Meet annual Sales Margin Goal, (4) Meet budgeted after-tax margin/net income, (5) Meet New Customer Growth Targets, (6) Meet Schedule Appointments per BPU, and (7) Gas Services on Main Installs (within 30 days). Five of the goals are financial or revenue-performance driven and two, Improve Customer Satisfaction and Meet Schedule Appointments per BPU, are solely focused on customer service.

The target for the Improve Customer Satisfaction goal is a function of the JD Power Customer Satisfaction Survey and Voice of Customer (SJG-sponsored customer survey) assessments. These are measured and awarded points as follows: Achieve net promoter score of 50.0 or higher in JD Power Customer Satisfaction Survey (= 33.3 points); Improve JD Power score by one percent over prior year (= 33.3 points); and Achieve annualized Voice of Customer rating of 80% or higher (= 33.3 points). The Improve Customer Satisfaction target value is 66 to 80. The July 2020 status for SJG was “Successfully Meets.”

The Meet Schedule Appointments per BPU goal target was meeting 90% or greater of the service lateral installment schedules. The target was met with a 91.11% rate. SJG met the target in November 2020 with a rate of 96.23%.

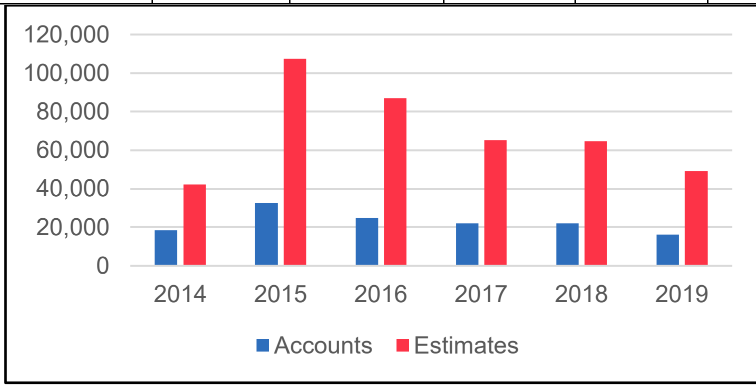
B. FINDINGS

7-1 The number of consecutive estimated meter readings has seen significant reductions from 2015 through 2019, decreasing by 54%.

SJG tracks the number of consecutive estimated meter readings in the “Can't Read Report.” The exhibits below show the number of consecutive estimated bills, for the years 2014 through 2019. Values for 2013 are not available because of the transition from the previous billing system to the Customer Care & Billing (CC&B) system. The table also shows the number of consecutive estimated reads per number of accounts in which these readings occurred.

Consecutive Estimated Reads

	2014	2015	2016	2017	2018	2019
Accounts	18,461	32,393	24,795	22,086	22,083	16,116
Consecutive Estimates	42,142	107,416	86,892	65,054	64,527	49,154
Estimates per Account	2.28	3.32	3.50	2.95	2.92	3.05



The number of consecutive estimates peaked in 2015 and decreased by 54% through 2019. The number of accounts associated with consecutive estimated reads also declined by a similar amount of 50%. The ratio of estimates per account declined from 3.32 in 2015 to 3.05 in 2019. If data for 2020 is considered, estimates increased significantly to 60,983 (about 24%), the number of accounts also increased, and estimates per account increased to 3.16. Values for 2020 may have been an anomaly because of the COVID-19 pandemic.

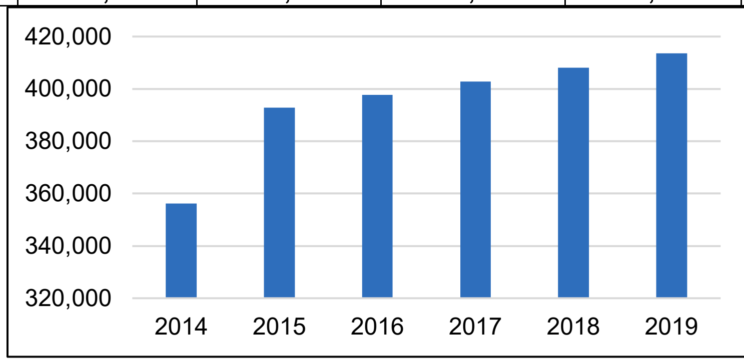
SJG has explained that a portion of the work associated with analysis of difficult-to-read accounts has been returned from the third-party contractor to the in-house team within SJG. This move is intended to provide greater insight, root-cause analysis capabilities, and operational enhancements to improve read rates even for more challenging accounts.

7-2 Annual payments to Millennium have been primarily driven by SJG's strong growth in customer additions.

The exhibits show the number of SJG residential and commercial meters at year-end. Values for 2013 were not available.

Residential and Commercial Meters at Year-End

2014	2015	2016	2017	2018	2019
356,101	392,773	397,662	402,733	408,002	413,560

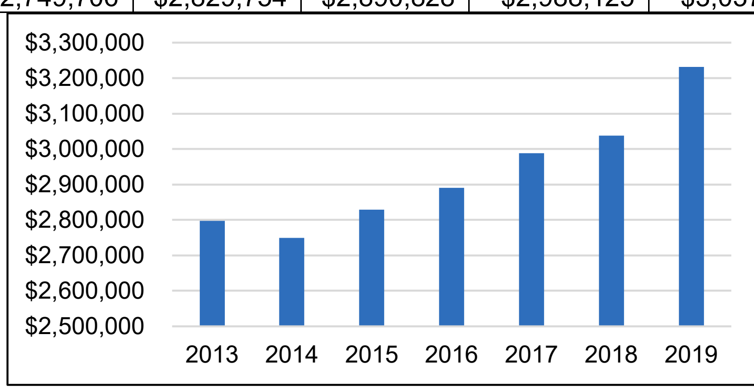


The value for 2014 represents residential meters only. The values for 2015 and later represent a combination of both residential and commercial meters. The increase in residential and commercial meters from 2015 through 2019 was 5.29%. There were 418,493 meters at year-end 2020, an increase consistent with previous years' growth.

The exhibits below show the millennium annual costs from 2013 through 2019.

Millennium Annual Costs

2013	2014	2015	2016	2017	2018	2019
$2,797,482	$2,749,706	$2,829,754	$2,890,828	$2,988,125	$3,037,741	$3,231,571



Millennium annual costs have been increasing each year since 2014. The increase was 17.52% from 2014 through 2019. Annual expense for 2020 was $3,369,000 consistent with previous years' growth. The year-to-year increase in Millennium expense is related to the SJG meter count that has increased each year (as discussed above and below) and contract negotiations that have caused increases to meter read fees, as discussed below.

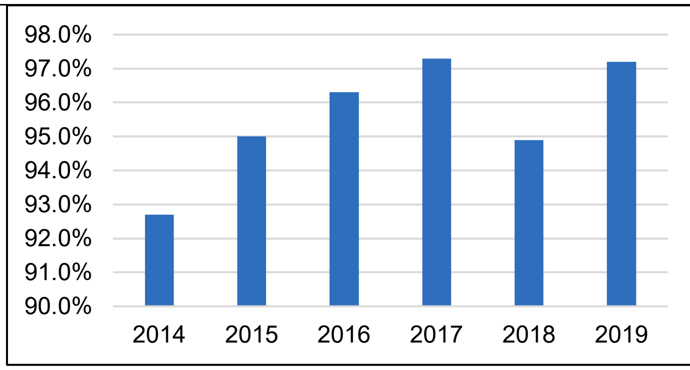
The year-to-year change in in Millennium costs is primarily driven by the increase in SJG meter count, as customer additions generally top 1 – 1.5% per year. Additionally, operating costs increase annually in relation to employee payroll and benefits expenses. The most recent contract negotiated with Millennium for 2021 returned some meter reading performance analytic work to existing SJG employees to improve efficiency and avoid unnecessary redundancy in work, helping to minimize the increase in Millennium expenses where possible. Also contributing to the annual increase in Millennium costs have been fee rates per meter read, increases that occurred in 2018 through 2020.

7-3 The metric "Percent Residential and Commercial Meters Read" has been generally improving and exceeding the goal of 95% since in 2016.

The exhibits below show the percent of residential and commercial meters read from 2014 through 2019.

Percent of Residential and Commercial Meters Read

2013	2014	2015	2016	2017	2018	2019
*	92.7%	95.0%	96.3%	97.3%	94.9%	97.2%
* Data for 2013 reported as not available.						



Variability in meter reads is generally the result of a significant weather impacts that prevents readers from working in all or part of the service area. This was the case in 2018 and 2019, above. The average rate for 2020 was 96.6%. SJG tracks performance against a monthly goal of 95%.

7-4 The billing function lacks formal corporate procedures which impedes improvement opportunities.

The billing function relies on comprehensive flowcharting and relationships to SOX controls. There are 25 controls listed with the flowcharting document, designated Key or Non-Key and supplemented with 26 Notes. (A key control is an action taken to detect errors or fraud in financial statements.) These controls correspond to the SJI SOX controls for billing. SJG has said that “Narrative documentation for the Company's business processes does not exist.”

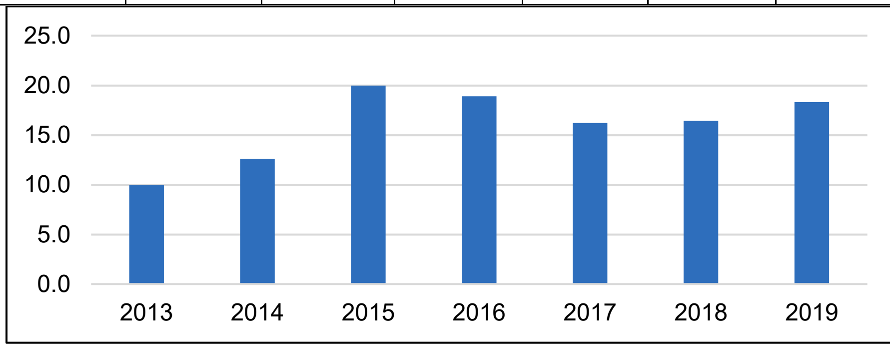
7-5 Billing-related metrics have shown recent improvements.

Billing-related metrics are re-bills per 1000 bills and bill segment completion rate per day.

The table and graph below show the number of re-bills per 1000 bills. Re-bills occur when meter reads by Millennium readers are determined not to be accurate.

Re-Bills Per 1000 Bills

2013	2014	2015	2016	2017	2018	2019
10.0	12.6	20.0	18.9	16.2	16.4	18.3



The graph shows that the re-bill rate decreased from 2015 through 2017 and then increased from 2018 through 2019. The re-bill rate for 2020 decreased to 15.9. The re-bill rate goal is 20 or less, a goal that has been achieved through 2020.

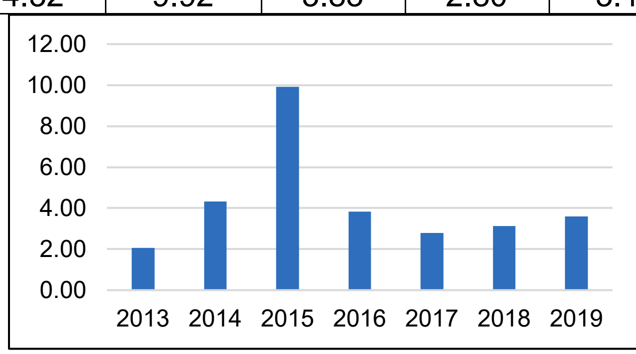
The bill segment completion rate represents the year-end average. Bill segment data was not tracked prior to 2017. The four years of available data are 3.00 for 2017, 1.62 for 2018, 2.00 for 2019, and 1.78 for 2020. SJG achieved its goal of two days or less for the last three years.

7-6 SJG has not been achieving its goal for Escalated BPU Complaints per 1000 Customers.

The exhibits below show escalated BPU complaints per 1000 customers for the years 2013 through 2019.

Escalated BPU Complaints Per 1000 Customers

2013	2014	2015	2016	2017	2018	2019
2.07	4.32	9.92	3.83	2.80	3.13	3.59



The BPU has set a target of less than one complaint per 1000 customers that SJG failed to meet in the years 2013 through 2019. SJG met and exceeded the target with a rate of 0.82 in 2020 because of the BPU's shut-off moratorium in response to the COVID-19 pandemic.

SJG has said that the rates for 2014 through 2016 (and especially for) 2016 were significantly impacted by the total replacement of the CC&B system. Increased wait times and the necessary direction of calls to third-party call centers led to customer frustration that drove complaint escalations significantly higher. As customer service agents grew more skilled and confident in their use of the new customer information system and SJG reduced its reliance on a third-party call center, the escalations rate decreased for 2017.

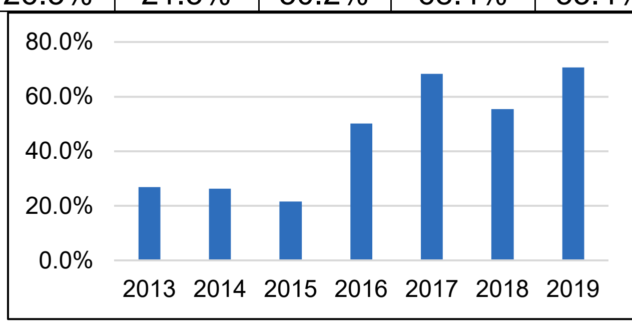
Lastly, SJG has said that its goal has always been to meet the goal of one complaint per 1000 customers, but there was not a specific goal established for employees in their 2020 Balanced Scorecard (BSC). The decision was made to "reset" after an observation period in 2020 and then return with a new goal. However, the impacts of the pandemic postponed that action. SJG has said that it will revisit the issue in 2021.

7-7 SJG has significantly improved its percent of calls answered within 30 seconds.

The exhibits below show the percentage of calls answered in 30 seconds. SJG has shown significant improvement since 2013, although not reaching its goal of 80% through 2019. The data for 2020 show a rate of 88.7%, but it is likely that this is an anomalous year because of the shut-off moratorium and other factors associated with the COVID pandemic.

Percentage of Calls Answered Within 30 Seconds

2013	2014	2015	2016	2017	2018	2019
26.8%	26.3%	21.5%	50.2%	68.4%	55.4%	70.6%



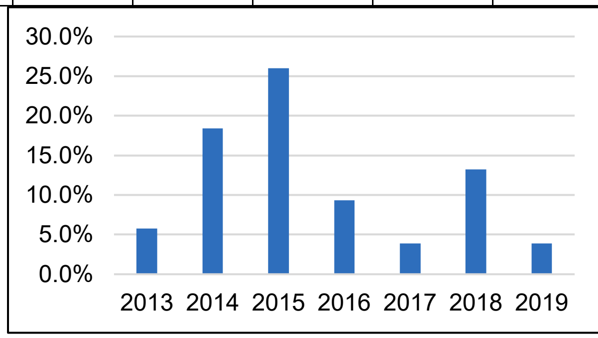
The increasing improvement with call center metrics starting in 2016 can be tied to the October 2014 implementation of the new CC&B system. Due to the legacy system being retired and implementation of the CC&B system, in conjunction with the size and composition of the call center workforce, extensive training was required for SJG employees both in advance of the implementation as well as throughout most of 2015. Improvements were seen beginning in 2016 as agents grew more skilled and confident in their use of the CC&B system.

7-8 Call abandonment rates have reduced from a high in 2015.

The exhibits below show the call abandonment rate for 2013 through 2019. The rate spiked in 2015 and reduced significantly through 2019, but with no consistent trend. SJG achieved its goal of five percent or less in 2017 and 2019. The rate for 2020 was 1.4%, but likely due to the COVID pandemic.

Call Abandonment Rate

2013	2014	2015	2016	2017	2018	2019
5.8%	18.4%	26.0%	9.3%	3.9%	13.2%	3.9%



SJG has said that the increase in call abandonment rate in 2018 is related to lower-than-normal staffing levels due to attrition, as sometimes occurs in years leading up to and immediately following the expiration of a collective bargaining agreement. This necessitated a continuing shift to the third-party call center. Beginning in mid-2018, there was a strategic shift back toward the use of the in-house call center in greater numbers, as a new collective bargaining agreement was in place and a class of new hires was trained and added to internal staff.

7-9 The Customer Experience department has been improving its email response and analytic capabilities as email contacts increased significantly.

Customer contacts via emails have grown by 8,417 (an increase of 35%) from 2013 through 2018 and by 10,026 (42%) through 2019, even though 2019 represents a partial year. SJG upgraded its Email Management System in 2019 to create 24 categories of emails.

The Supervisor extracts the category data to a spreadsheet to identify root causes to reduce future avoidable complaints, such as CSR error. The Email Team uses templates by category as a basis for replying to the customer. The emails are logged into SharePoint under one of three categories: response in less than 24 hours, less than 48 hours, and greater than 48 hours. If a CSR receives a call about an escalated complaint, it is referred to a Row Captain.

Improvement opportunities include one-on-one discussions with a CSR or new or revised training for all call center employees. Also, refresher training includes non-registered meters and meter test results.

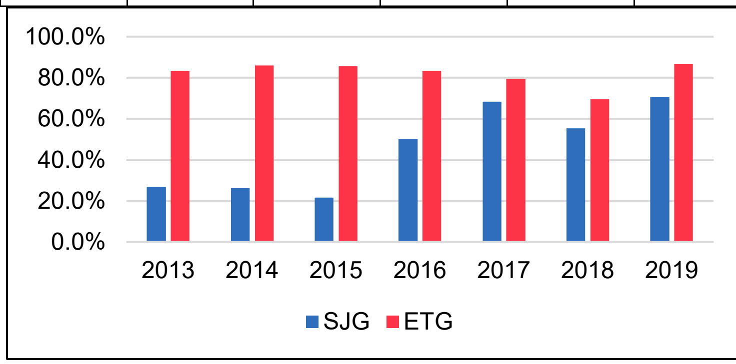
7-10 Historical comparable metrics show that SJG call center operations underperformed relative to ETG, often by a significant performance gap.

Comparable metrics for SJG and ETG were available for meter reading, billing, collections, and call center operations. Metrics were only provided for periods for which both SJG and ETG had the comparable metric. There are differences in how these metrics were derived for SJG and ETG. The company is currently in the early stages of the process of evaluating the calculation and definition of all key metrics between the two companies.

The following set of three tables and graphs shows performance metrics that are representative of call center operations as well as the SJG Customer Experience department. The table and graph below show percent of calls answered within 30 seconds.

Percent of Calls Answered Within 30 Seconds (12-Month Average)

	2013	2014	2015	2016	2017	2018	2019
SJG	26.8%	26.3%	21.5%	50.2%	68.4%	55.4%	70.6%
ETG	83.5%	86.1%	85.6%	83.4%	79.6%	69.7%	86.8%

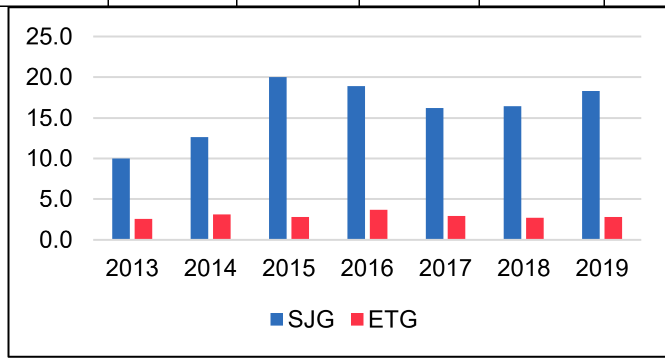


SJG underperformed ETG by as much as 75% during this seven-year period. The performance gaps were reducing beginning in 2016. In 2020, SJG increased the speed of answer to 88.7% and ETG decreased to 76.6%, the first time SJG surpassed ETG's performance during this period. It should be noted that 2020 may have been an anomalous year because of the COVID-19 pandemic.

The table and graph below show re-bills per 1000 customers for the two utilities during the audit period.

Re-Bills Per 1000 Customers (12-Month Average)

	2013	2014	2015	2016	2017	2018	2019
SJG	10.0	12.6	20.0	18.9	16.2	16.4	18.3
ETG	2.6	3.1	2.8	3.7	2.9	2.7	2.8

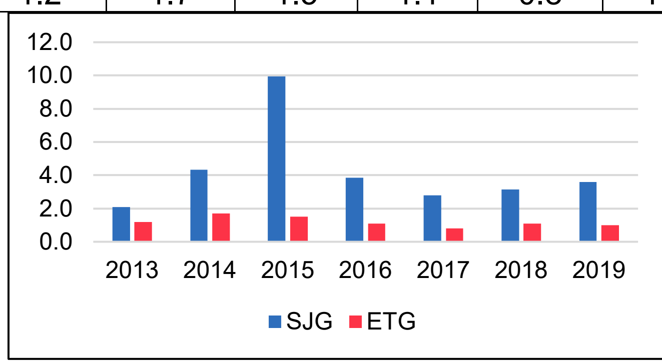


SJG consistently has had about three to six times as many re-bills per thousand customers as ETG.

The following table and graph show escalated BPU complaints per 1000 customers.

BPU Complaints Per 1000 Customers (12-Month Average)

	2013	2014	2015	2016	2017	2018	2019
SJG	2.1	4.3	9.9	3.8	2.8	3.1	3.6
ETG	1.2	1.7	1.5	1.1	0.8	1.1	1.0



SJG consistently has had about two to five times as many escalated BPU complaints per 1000 customers as ETG.

JD Power Customer Satisfaction. SJG and ETG are two of nine utilities in the JD Power East Midsize category reported in the 2020 survey of customer satisfaction. ETG ranked first in the East Midsize category, with a score of 772 compared to third place for SJG. SJG scored 745 and placed fourth, compared to scoring 727 in fifth place in 2019. SJG had increases in all seven factors in 2020 over 2019; the factors are Overall Satisfaction, Safety and Reliability, Billing and Payment, Communications, Corporate Citizenship, Price, and Customer Service.

7-11 SJG's collections agency does not meet contract service levels requirements.

The contract with SJG's single collections agency requires that: (1) the agency deliver Residential Primary equal to 6–12% debt recovery and Commercial Primary equal to 8–15% debt recovery and (2) failure to perform at or above these service level agreements may result in reduction, reallocation, or removal of referred accounts.

SJG said that "For the period of 2013 through 2017, collection agency service level and performance metrics were not consistently tracked." Useful data could not be provided. Beginning in 2018, SJG made a concentrated effort to move many of the Collection Agency functions in house.

In 2019, the agency was given 23,187 referrals totaling $13,537,510 and collected 2.4% totaling $326,182. The agency was paid $206,396, netting a benefit of $119,786 for SJG. Information for the partial year through July 2020 shows 8,306 referrals of $3,075,084 that the percent collected rose to 5.6%. The agency was paid $55,053 and collected $171,982, a net benefit of $116,929 or 15.7% of payments over referrals. The agency did not meet the performance requirements for either the full year of 2019 or the partial year of 2020. Further, SJG does not separate recovery of inactive receivables into residential and commercial groupings. Without that separation, SJG cannot enforce the contract performance requirements.

7-12 In-house call center collections and field collections have increased.

The following exhibit shows collections and service restorations categorized by in-house (call center) and field collections for 2018 and 2019.

In-House and Field Collections

	2018			2019		
	In-House	Field	Total	In-House	Field	Total
Dollars Collected	$6,374,812	$4,734,373	$11,109,186	$6,841,011	$8,026,925	$14,867,935
Service Restorations	N/A	N/A	3,078	N/A	N/A	3,747

SJG acknowledges that for the period of 2013 through 2017, collection agency service level and performance metrics were not consistently tracked. Useful data was not provided. Beginning in 2018, SJG moved many of the collection agency functions in-house.

The in-house collections are a product of inbound and outbound phone calls. Field collections are a product of shut off for non-payment. Service restorations are only measured and tracked as they relate to field collections.

Collections attributed to the in-house call center increased by seven percent. Collections attributed to field personnel increased by 70%.

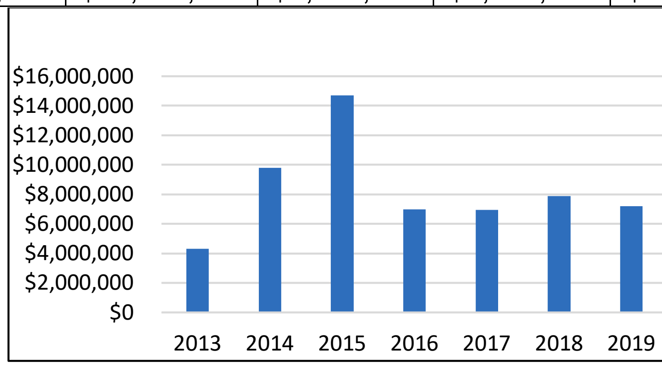
SJG reports that as it enforced a stricter shut-off policy, more and more delinquent customers began to pay. After a shut-off for nonpayment, the Collections team actively communicated with customers in support of a solution that would allow for a prompt restoration of service. Although limited to two years, the increased number of restorations represents an input to improved customer service operations and customer experience.

7-13 Bad debt and write-offs have reduced significantly in recent years.

The following table and graph show SGJ bad debt and write offs for 2013 through 2019.

SJG Bad Debt and Write-Offs

2013	2014	2015	2016	2017	2018	2019
$4,315,024	$9,807,228	$14,688,934	$6,964,125	$6,948,724	$7,897,617	$7,189,196



The 2014 and 2015 increases were a result of a transition to the new Customer Care and Billing (CC&B) system in October 2014 and an initiative to write off aged inactive receivables. After 2015, bad debt and write-offs reduced by about 51% (2019). The new CC&B created improved visibility into aged receivables. Additional aging buckets were created to better analyze aged receivables and assess repayment potential.

7-14 The in-house collection representatives are given appropriate and comprehensive feedback as part of the collections process.

The Collections Manager holds one-on-one meetings with collection representatives bi-monthly to address scorecard results and assess progress of department goals. The review includes total calls (inbound, outbound, and dialer); calls per hour (the standard is eight); average handle time; average hold time; average not ready wrap up; QA percent; attendance; interactions leading to BPU complaints; dollars collected; and positive feedback. The scorecard also includes narrative spaces for excelled/projects; areas for improvement; goals for this month; and progress on goals for previous month. The QA percent are the quality scores on three phone interactions per month as part of the Collections department's Quality Assurance program. There are 12 parameters totaling 100 points.

7-15 The revenue protection function is adequately supported by the Customer Contact and Billing System; and efforts are underway to automate the analysis of a key report.

For the revenue protection function, SJG tracks and analyzes three metrics reported through the CC&B System: new consumption for stopped service, delayed stopped/start actions, and the no-bill occurrences.

There is an effort currently underway to transition the manual process of reviewing the No-Bill Report to an automated To-Do (action item). This automation would eliminate potential human error and would create a more efficient process to remain current with No-Bill scenarios. The creation of the No-Bill To-Do is expected in 2021.

7-16 The New Business Analysis tool allows for the over-estimation of future revenues from new residential customer construction projects. If they do not materialize, SJG can recover the revenue losses from the existing customer base.

The New Jersey Administrative Code Section 14:3-8 new business rules require that gas main extensions must be economical – the costs need to be recovered from the subdivision units. SJG will extend the main for the contractors' requested number of housing units, but when the subdivision units are not fully sold, SJG recovers the costs from the existing customer base. This allows SJG to grow its rate base and recover its costs from future rates.

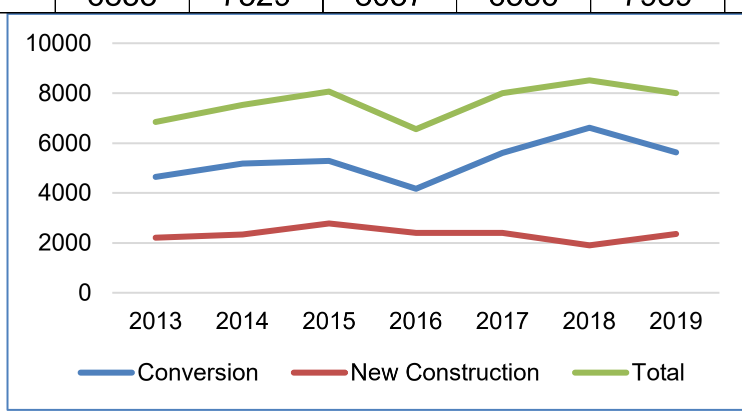
The New Business Analysis tool and process allows for new construction projects to be approved without contributions from the applicants, including single-family, multi-family, commercial, and subdivision.

7-17 SJG has been remarkably successful in adding new residential customers.

The following exhibit shows residential new customer additions from 2103 through 2019.

Residential New Customer Additions

	2013	2014	2015	2016	2017	2018	2019
Conversion	4637	5184	5280	4167	5597	6613	5635
New Construction	2216	2345	2777	2389	2392	1900	2358
Total	6853	7529	8057	6556	7989	8513	7993



SJG has added conversions and new construction customers every year between 2013 and 2019. The total of the two types of customer additions ranged from a low of 6556 to a high 8513. Conversions outpaced new construction by about a factor of two, except for 2018 by a factor of 3.5.

The company sets annual key performance indicator (KPI) budgets for both conversions and new construction. Because these budget targets are established as KPIs, they are a significant driver in the Performance Management Process (PMP) for Executives and Non-Executive Officers (NEO).

7-18 The 2020 and 2021 goals for the Customer Experience department do not incorporate call center performance metrics, such as percent calls answered within 30 seconds.

The goals of the VP CX for 2021 are: (1) achieve exceptional customer service through employee engagement, process improvement, and resource optimization, as measured through JD Power, Net Promoter Score, and Voice of customer (VOC) ratings, (2) complete full year operations within or below 2021 O&M budget of $25.8 million, (3) help drive the achievement of corporate and utility safety goals, (4) reduce receivables greater than 90 days by five percent or more as compared to 2020, and (5) sustain a culture of development and inclusion across the CX organization that helps drive long term success.

JD Power Customer Satisfaction scores and the monthly VOC surveys provide useful understanding of customer satisfaction and experience but do not directly measure SJG's call center operations performance. These surveys are indirectly linked—survey results are filtered through customer responses—and do not directly measure the actions and performance of SJG customer operations.

7-19 The SJG Customer Experience department acted to improve relations and communications with the BPU Customer Assistance staff.

During the SAGE audit, a conference among staff of the BPU, SJG, and SAGE clarified the need for improved communications with the BPU Customer Assistance staff.

SJG CX sent a proposal to the BPU in April 2021 titled "Plan to Improve Customer Service Processes." The document included complaints by classification for previous years and through the first two months of 2021; improvements recently undertaken to improve customer experience and limit the likelihood of Escalated complaints; structural reorganization; update of the Email Management System; update of the IVR redesign; the development of CSR team "pods" to facilitate the redesign of work content and CSR skills; and improved email communications for billing, collections, and payment options.

One of the CX 2021 goals is to "Reduce BPU complaints as compared to BPU agreed baseline presented in the 4/1/21 proposal, through greater customer communication, information, and engagement to achieve collaborative solutions." During the SAGE audit, relations improved and there were no on-going issues with communications.

C. RECOMMENDATIONS

7-1 Develop formal corporate procedures for the Billing function. (See Finding 7-4)

Formal corporate procedures are necessary and important for several reasons. In addition to ensuring that SJG complies with laws and regulations, they provide: an easy-to-use roadmap for day-to-day operations, guidance to supervisors and managers decision-making, a baseline for process redesign and improvement, requirements for training and development programs, a basis for job descriptions and salary guidelines, inputs for performance evaluation, and inputs to incentive compensation programs.

7-2 Continue to analyze and manage the root causes of Escalated complaints and develop achievable goals by complaint types. (See Finding 7-6)

SJG has significantly improved its ability to analyze Escalated complaints when it developed and began tracking specific types of complaints in 2018. These categories are Billing Issues, Shut-offs, Service Appointments, Payment Arrangements, Meter Issues, and Other. SJG should continue to analyze these categories, assess the need to create subcategories and additional ones so that the key root-cause drivers can be used to identify improvement opportunities. SJG should develop goals for the key categories and track the metrics to measure improvements. SJG should consider sharing the performance of these complaint categories with Customer Assistance staff of the BPU.

7-3 Consolidate the management of SJG and ETG call center operations and implement the best practices and systems for both utilities. (See Finding 7-10)

There is sufficient history of comparable customer call center operations that shows SJG underperforming relative to ETG, often by a significant performance gap. SJG is making improvements to its operations and some performance metrics have reflected those changes. The performance gap through 2019 strongly suggests that an examination of the ETG call center's work practices, systems, and management will provide improvement opportunities for SJG’s performance.

Consolidation of the management team of the two utility call centers is a necessary first step so that the team can begin to address performance improvement opportunities. The management team can eliminate duplication of functions, enable more efficient allocation of resources, and optimize the balancing of workload and resources across the two service areas. A team comprised of subject matter experts from both companies, led by a senior officer, should develop a plan that that will ensure that the best practices, systems, and management and supervision are selected from both SJG and ETG and implemented for the best performance for both companies.

7-4 Separate the recovery of inactive receivables into residential and commercial groupings so that the collection agency contract performance can be enforced. (See Finding 7-11)

The more information SJG has with respect to recovery of inactive receivables, the better it will be able to identify opportunities for improvement. Similarly, SJG will be able to better evaluate the performance of its collection agency, and to make decisions about contract renewal and service level requirements.

7-5 SJG should modify its New Business Analysis tool and process so that the model can be run for residential construction phases rather than full build. (See Finding 7-16)

SJG should modify its New Business Analysis tool so that the model realistically produces more conservative results. The model should use segmented phases so that capital expenditures more likely reflect actual construction progress.

7-6 SJG should collect refundable deposits or contributions for future new business residential construction phases. (See Finding 7-16)

SJG should routinely require upfront deposits or contributions from the construction contractors. If the housing construction project is delayed or cancelled after SJG has already begun main extensions, SJG will be able to retain the contributions to reduce its lost revenues, easing the burden on recovery from its customer base. Consistent use of deposits would act as an incentive for housing contractors to propose reasonably expected new construction.

7-7 Modify the Customer Experience department's Balanced Scorecard and goal setting process to include call center operations performance metrics. (See Finding 7-19)

Customers' contact experience with their utility occurs through contact and interactions with call center operations. The current customer satisfaction goals should include performance metrics that directly allow SJG to identify performance trends and their root causes and to implement improvement opportunities. Period-to-period and year-to-year performance metrics will focus management attention on improvements in work practices, information systems, and training and development. SJG has existing call center operations metrics that should be elevated and made identifiable within the Balanced Scorecard and goal setting process and should be more heavily weighted than customer satisfaction survey results. Call center operations metrics, as part of the Balanced Scorecard and goal setting process, coupled with customer satisfaction information, will enhance SJG's ability to focus on the root causes of satisfaction or dissatisfaction that are found within call center operations.

Examples of directly measured performance metrics are percent calls answered within 30 seconds, average speed of answer, call abandonment rates and incomplete interactive voice response (IVR) transactions, first call/contact resolution, CSR phone quality scores, and email and online contact response times.

8. AFFILIATE RELATIONSHIPS

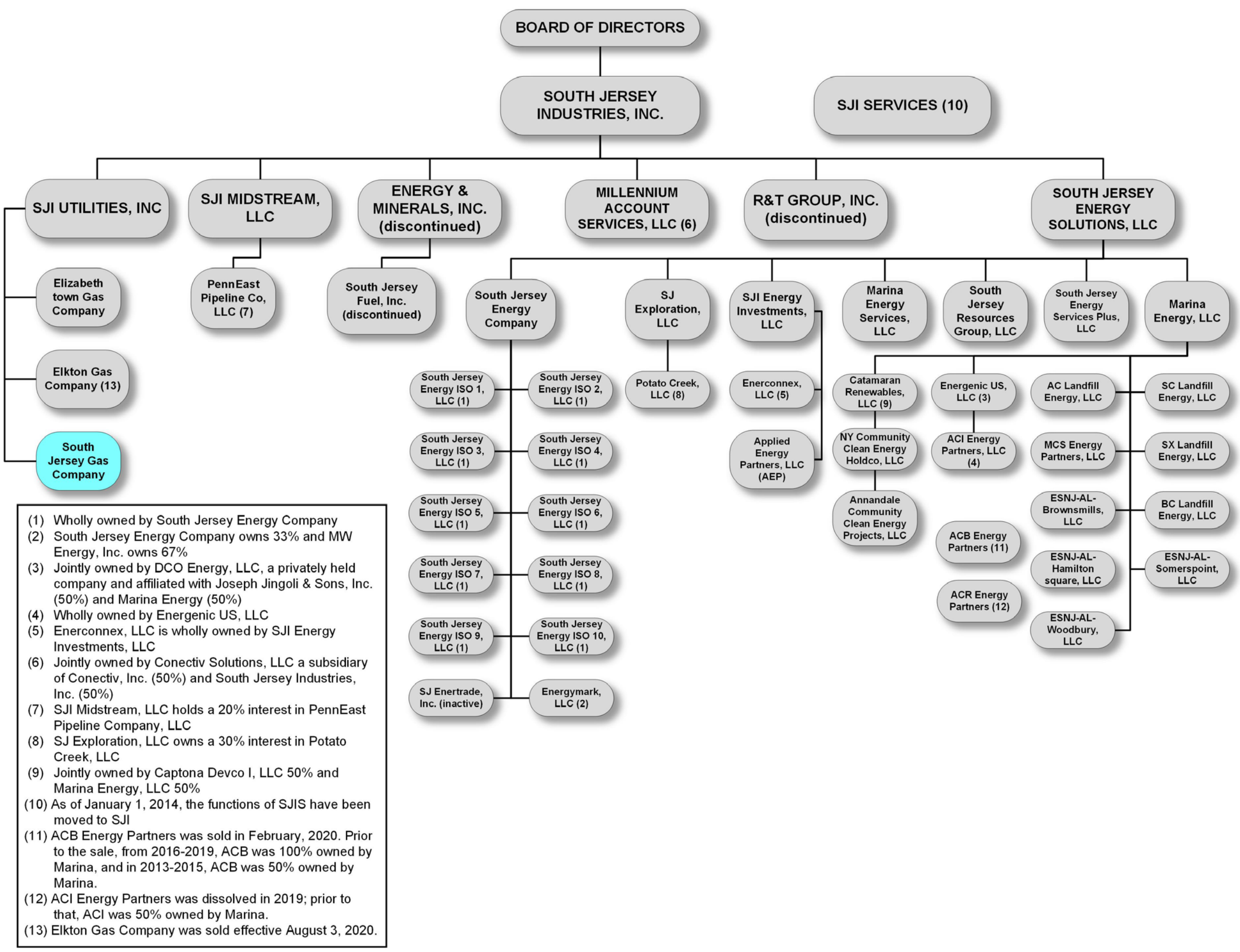
A. BACKGROUND

ORGANIZATION

South Jersey Gas (SJG) is a wholly owned subsidiary of SJI Utilities, Inc. (SJIU), which itself is a wholly owned subsidiary of South Jersey Industries, Inc. (SJI).

SJG's location in relation to the South Jersey Industries companies is shown in the following organization chart.

SJI Organization Chart



Affiliates Providing Goods or Services to SJG

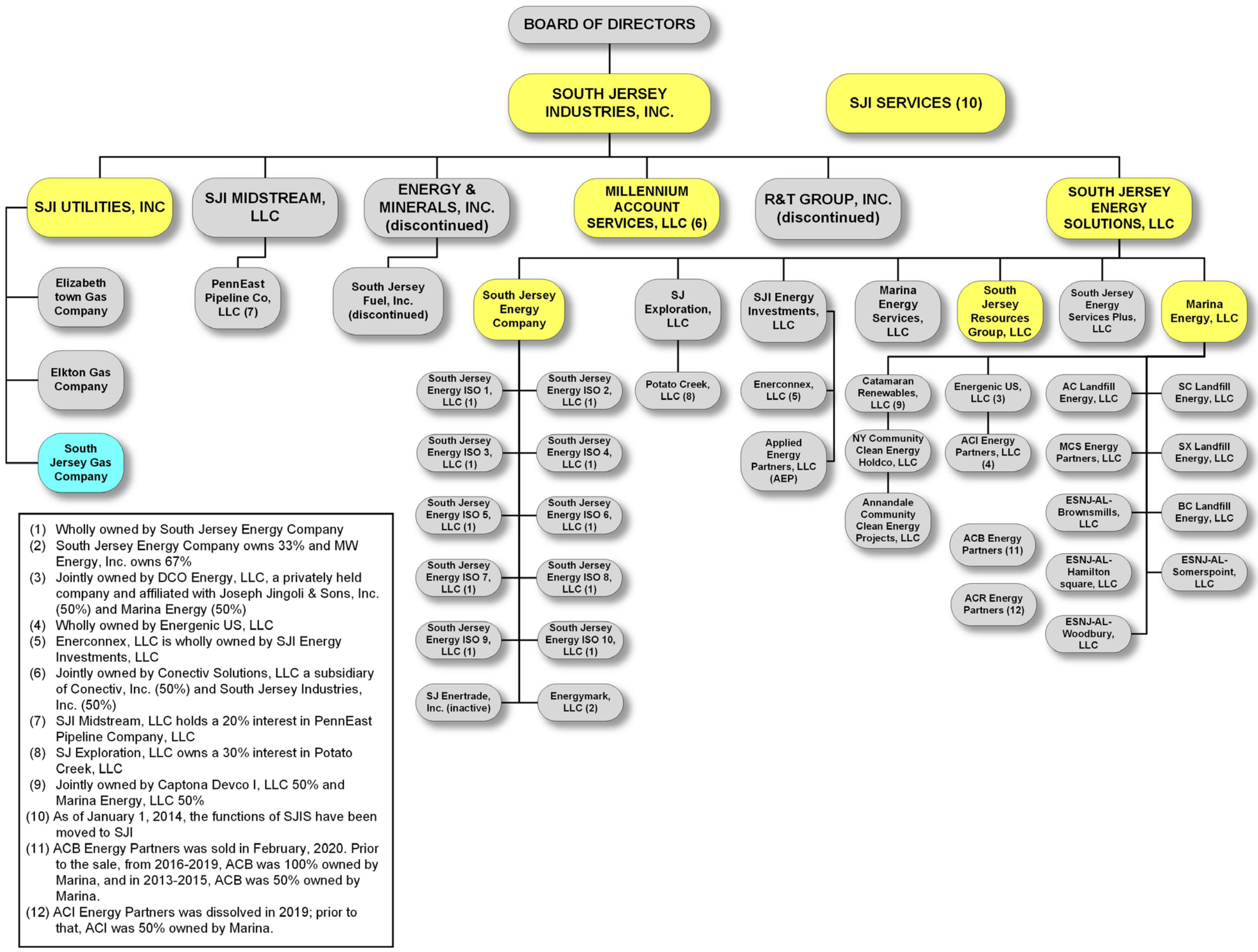
Over the past seven years (2013 through 2019), SJG has paid for goods or services charged or allocated to it from eight of its affiliates, including its parent. These affiliates and their primary functions are listed below:

- South Jersey Industries, Inc. (SJI) – holding company providing a variety of energy-related products and services, primarily through its wholly owned subsidiaries.

- SJI Services, LLC (SJIS) – wholly owned subsidiary of SJI that provided information technology, human resources, corporate communications, material purchasing, and fleet management to SJI and all its subsidiaries, including SJG. This company was dissolved January 1, 2014, and all services previously handled by SJIS were provided by SJI.
- SJI Utilities, Inc. (SJIU) - formed in 2018 as a holding company for SJI's regulated gas utility businesses: SJG, Elizabethtown Gas Company (ETG), and Elkton Gas Company (ELK). ETG, which distributes natural gas in seven counties in northern and central New Jersey and ETG, which distributes natural gas in northern Maryland, were acquired by SJI in 2018. In December 2019, it was announced that SJI had entered into an agreement to sell ETG to a third-party buyer, pending Maryland Public Service Commission approval. Sale was completed, effective August 3, 2020.
- Millennium Account Services, LLC (Millennium) – a partnership between SJI and Pepco Holding, Inc. which reads utility customer meters monthly for a fee.
- South Jersey Energy Solutions, LLC (SJES) – a wholly owned subsidiary of SJI that serves as a holding company for all of SJI's nonutility businesses.
- South Jersey Energy Company (SJE) – a wholly owned subsidiary of SJES that is a third-party energy marketer that acquired and marketed natural gas and electricity to retail end users and provided total energy management services to commercial and industrial customers. In November 2018, SJI sold SJE's retail gas business.
- South Jersey Resources Group, LLC (SJRG) – a wholly owned subsidiary of SJES that markets natural gas storage, commodity, and transportation assets along with fuel management services on a wholesale basis in the mid-Atlantic, Appalachian, and southern states.
- Marina Energy, LLC (Marina) – a wholly owned subsidiary of SJES that develops and operates on-site energy-related projects, such as landfill gas-to-energy production facilities.

The following version of the SJI organization chart shows the SJG affiliated companies (highlighted in yellow) that provided goods or services to SJG.

SJI Companies that Provided Goods or Services to SJG



Charges from Affiliates to SJG

The value of the goods and services provided by SJG's affiliates to SJG over the seven-year period from 2013 through 2019 averaged over $70 million with the amounts increasing almost every year from a low in 2014 of approximately $48 million to a high in 2019 of almost $100 million.

The dollar amount of transactions related to goods and services provided to SJG are shown in the following table.

Goods and Services Provided by Affiliates to SJG ($000)

Affiliate Company	2013	2014	2015	2016	2017	2018	2019	Total
Marina	63.2	64.8	80.2	51.5	67.3	48.8	0.00	375.8
Millennium	2,797.5	2,749.7	2,829.6	2,890.8	2,988.1	3,037.7	3,231.6	20,525.0
SJE	0.0	0.0	0.3	3.2	0.0	0.0	0.0	3.5
SJES	131.3	3.1	61.0	63.0	188.4	167.0	86.5	700.3
SJI	30,116.0	29,512.2	45,072	53,058.0	60,223.4	50,835.0	73,116.0	341,932.6
SJI Services	6,206.2	0.0	0.0	0.0	0.0	0.0	0.0	6,206.2
SJIU							3,804.7	3,804.7
SJRG	14,859.3	15,230.3	26,017.6	16,127.6	27,707.3	33,501.0	9,645.1	140,088.7
Total	54,173.5	47,560.1	74,060.7	72,194.1	88,174.5	87,589.5	89,884.4	513,636.8

Charges for goods and services provided to SJG from its affiliates have increased by 66% over the seven-year period from 2013 to 2019. This was a compound annual growth rate (CAGR) of 8.81%. Most charges resulted from goods and services provided to SJG by its parent, SJI, followed by gas purchases from SJRG. For the seven-year period, charges from SJI made up approximately 67% of total charges to SJG ($341.9 million out of the total $513.6 million).

Goods or Services Provided from Affiliates to SJG

The following table lists the goods and services provided to SJG from its affiliates.

Goods and Services Provided to SJG from Its Affiliates

Affiliate	Goods and Services Provided
SJI	Administrative Services ▪ Office Equipment Management ▪ Purchasing and Materials Management ▪ Fleet Management ▪ Building Services ▪ Security Support ▪ Property Asset Management ▪ Records Management ▪ Policy and Procedure Control ▪ Data entry, Mailroom, Shipping and Courier Management ▪ Radio Communications Corporate Communications ▪ Public Relations ▪ Client Communication Strategies and execution ▪ Client Networking Strategies and execution ▪ Employee Communication Strategies and execution ▪ Support client's sales and marketing efforts ▪ Media relationships Government and Community Relations

<table>
<tr><th>Affiliate</th><th>Goods and Services Provided</th></tr>
<tr><td></td><td>
Legislative and some Regulatory research, tracking and reporting
Legislative and some Regulatory advocacy
Strategically position clients to develop relationships with revenue or savings potential
Liaison to local, state, and federal agencies, leaders, and community organizations
Management of client social investment programs, providing visibility
Support public relations, sales, and marketing efforts

Human Resources Services

Strategic Labor relations leadership and guidance
Compensation plan design, policy recommendations and administration
Employee Benefits design, policy recommendations and administration including placement of coverage
Employee policies and procedures development and administration
Recruitment
Succession Planning and Diversity initiatives
Employee relations services
Change Management

Insurance Services

Risk Management Services including Contract and RFP Reviews
Insurance Policies and Bonding Procurement
Liability Claims management
Facility Damages Collection
Loss Control
Special projects requested by SJI Management

Information Technology Services

Information Technology Services
Communications Services
</td></tr>
<tr><td>SJIS</td><td>Allocated Corporate overhead expense
Allocated payroll
Intercompany receivables</td></tr>
<tr><td>SJIU</td><td>Sales and Marketing

Strategic oversight for the operational sales department
Marketing support including content development

Rates and Regulatory

Strategic oversight for the operational regulatory departments

Safety

Safety Program development of policies and procedures
Safety compliance reporting
Support of safety incident investigations and reporting
Safety training

Utility Shared Services

GIS and Records Management

Support of GIS
Mapping of distribution and transmission system
QA/QC of service records and as-builts

Technical Training

Development and support of written OQ plans for utility subsidiaries

</td></tr>
</table>

Affiliate	Goods and Services Provided
	- Technical training support for operational employees - Content Development for OQ and non-OQ technical training - Vendor management for outsourced training ▪ Compliance and Standards - Development and support of written Operating Procedure Manuals (OPM) - Update of standards in conjunction with state and federal regulations - Support and Delivery of compliance reporting - Serve as a liaison with regulatory agencies for operations ▪ Organizational Effectiveness - Strategic and Analytical support for improvement initiatives - Develop and monitor key performance indicators for overall effectiveness and productivity - Support benchmarking and AGA Best Practices for subsidiaries - Spearhead innovation and business process changes ▪ Customer Experience - Provide strategic and analytical support for customer experience metrics ▪ Gas Supply, Allocations, and LNG Operations
Millennium	Meter reading services
SJES	Payroll allocations System depreciation Miscellaneous expense
SJE	Performed billing services Purchased accounts receivable
SJRG	Base load and storage injection gas
Marina	Meter reading services

Affiliates Receiving Goods or Services from SJG

During the same seven-year period SJG provided goods or services to seventeen of its affiliates, as shown below.

- South Jersey Industries, Inc. (SJI) – holding company providing a variety of energy-related products and services, primarily through its wholly owned subsidiaries.
- SJI Services, LLC (SJIS) – wholly owned subsidiary of SJI that provided information technology, human resources, corporate communications, material purchasing and fleet management to SJI and all its subsidiaries, including SJG. This company was dissolved January 1, 2014, and all services previously handled by SJIS were provided by SJI.
- SJI Utilities, Inc. (SJIU) - formed in 2018 as a holding company for SJI's regulated gas utility businesses – SJG, Elizabethtown Gas Company (ETG), and Elkton Gas Company (ELK). ETG, which distributes natural gas in seven countries in northern and central New Jersey and ETG, which distributes natural gas in northern Maryland, were acquired by SJI in 2018. In December 2019, it was announced that

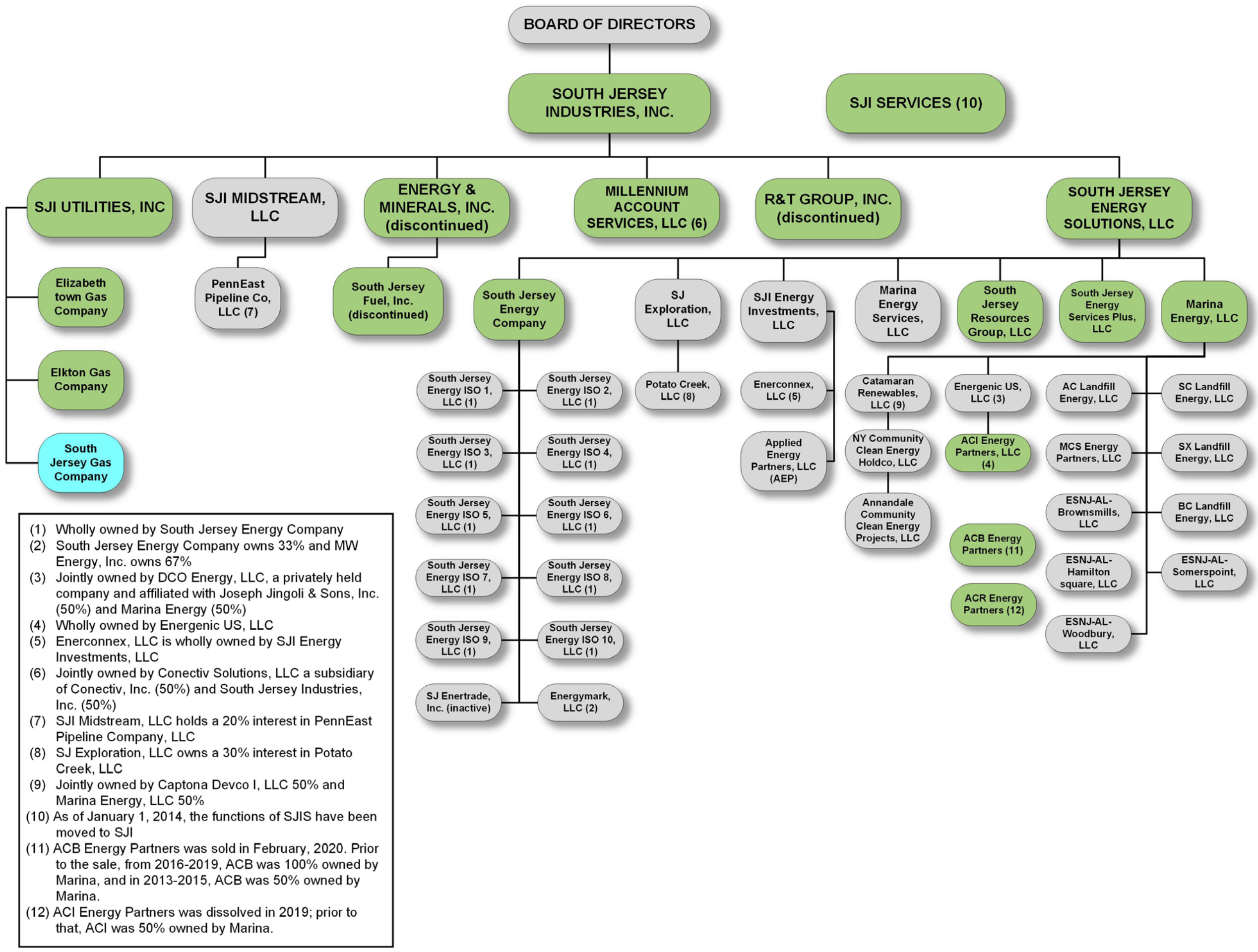
SJI had entered into an agreement to sell ELK to a third-party buyer, pending Maryland Public Service Commission approval. The sale of ELK was completed effective August 3, 2020

- Energy & Minerals, Inc. (EMI) – subsidiary of SJI, now discontinued; consist of environmental remediation activities related to properties of South Jersey Fuel and the product liability litigation and environmental remediation activities related to the prior business of the Morie Company (Morie). South Jersey Fuel previously operated a fuel oil business. Morie is the former sand mining and processing subsidiary of EMI. EMI sold the common stock of Morie in 1996.
- Millennium Account Services, LLC (Millennium) – a partnership between SJI and Pepco Holding, Inc. which reads utility customer meters monthly for a fee.
- R&T Group, Inc. (R&T Group) – Discontinued operation; receiving small amount of allocated expense.
- South Jersey Energy Solutions, LLC (SJES) – a wholly owned subsidiary of SJI that serves as a holding company for all SJI's nonutility businesses.
- Elizabethtown Gas Company (ETG) – subsidiary of SJIU; regulated natural gas utility which distributes natural gas in seven counties in northern and central New Jersey.
- South Jersey Fuel, Inc. (SJ Fuel) – subsidiary of EMI, now discontinued, which previously operated a fuel oil business.
- South Jersey Energy Company (SJE) – a wholly owned subsidiary of SJES that is a third-party energy marketer that acquired and marketed natural gas and electricity to retail end users and provided total energy management services to commercial and industrial customers. In November 2018, SJI sold SJE's retail gas business.
- South Jersey Resources Group, LLC (SJRG) – a wholly owned subsidiary of SJES that markets natural gas storage, commodity, and transportation assets along with fuel management services on a wholesale basis in the mid-Atlantic, Appalachian, and southern states.
- South Jersey Energy Services Plus, LLC (SJESP) – Subsidiary of SJES; receives commissions on service contracts from a third party.
- Marina Energy, LLC (Marina) – a wholly owned subsidiary of SJES that develops and operates on-site energy-related projects, such as landfill gas-to-energy production facilities.
- Elkton Gas Company (ELK) – a regulated natural gas utility which distributes natural gas in northern Maryland. ELK was a wholly owned subsidiary of SJIU; in December 2019 SJI announced it had entered into an agreement to sell ELK to a third-party buyer, pending Maryland Public Service Commission approval.
- ACI Energy Partners, LLC (ACI) – wholly owned by Energenic US, LLC; this was a Combined Heat Power (CHP)/Thermal facility that served the Revel Casino in Atlantic City, NJ before it was shut down.

- ACB Energy Partners, LLC (ACB) – was a subsidiary of Marina; owned and operated a Combined Heat Power (CHP)/Thermal facility that served the Borgata Casino in Atlantic /City, NJ; sold in February 2020.
- ACR Energy Partners, LLC (ACR) – dissolved in 2019; was 50% owned by Marina; this was a Combined Heat Power (CHP)/Thermal facility that served the Revel Casino in Atlantic City, NJ before it was shut down.

These affiliates are shown in the following version of the SJI Organization Chart.

Affiliates That Received Goods or Services From SJG



Charges from SJG to Affiliates

The dollar amount of transactions related to goods and services provided by SJG are shown in the following table.

Goods and Services Provided by SJG to Affiliates ($000)

Affiliate Company	2013	2014	2015	2016	2017	2018	2019	Total
ACB[1]		3,483.4	2,394.7	1,716.8	158.2	202.7	210.2	8,166.0
ACI[1]	3,910.9	3,128.7	126.6	76.1	77.5	83.3	79.1	7,482.2
ACR[1]	146.3	208.8	524.7					879.8
ELK	0.0	0.0	0.0	0.0	0.0	76.7	228.1	304.8
EMI	32.3	25.5	7.9	2.4	0.6	2.0	3.4	74.1
ETG	0.0	0.0	0.0	0.0	0.0	. 78.8	6,549.1	6,627.9
Marina	217.8	208.7	233.9	194.7	209.1	230.9	193.2	1,488.3
Millennium	868.3	1,063.1	915.2	1,032.6	1,118.7	941.8	1,020.0	6,959.7
R&T	2.0	5.1	5.8	2.4	0.5	0.6	0.1	16.5
SJ Energy	70.8	77.1	(9.5)	56.2	54.7	61.4	20.8	331.5
SJ Fuels	3.7	8.2	6.6	2.2	0.6	3.6	4.3	29.2
SJES	2,879.1	3,350.6	2,590.5	3,239.5	3,135.4	3,790.8	2,369.0	21,354.9
SJESP	1,914.1	1,409.1	2,686.6	691.3	268.6	3.0	(1.0)	6,971.7
SJI	2,741.9	4,462.0	3,090.5	4,800.5	4,313.0	8,070.7	20,294.4	47,773.0
SJI Services	1,924.7	0.0	0.0	0.0	0.0	0.0	0.0	1,924.7
SJIU	0.0	0.0	0.0	0.0	0.0	0.0	592.7	592.7
SJRG	338.2	194.2	7,923.7	1,308.4	153.2	3,052.0	1,191.3	14,161.0
Total	15,050.1	17,624.5	20,497.2	13,123.1	9,490.1	16,598.3	32,754.7	125,138.0

[1] 2013 data not available from old billing system; data came from 2013 Annual Report to the New Jersey Board of Public Utilities.

The dollar amount of goods and services provided by SJG to its affiliates from 2013 through 2019 were approximately one quarter the value of the charges for the goods and services provided by affiliates to SJG ($125.1 million / $513.6 million). The largest percentage of the goods or services provided by SJG were to its parent (38%). The annual amount of total goods or services provided by SJG to its affiliates more than doubled during this seven-year period. The CAGR of these transactions during this period is approximately 14% (13.8%).

Goods or Services Provided to Affiliates

The following table provides a schedule of goods and services provided by SJG to its affiliates during the period from 2013 through 2019.

Goods and Services Provided by SJG to Its Affiliates

Affiliate	Goods and Services Provided
SJI	Tax Refund IT Managed Cost Allocation Management Cost Allocation Intercompany Rent Charges Pension and Benefits
SJIS	Allocated Corporate Overhead Expense Allocated Payroll Intercompany Receivables
SJIU	IT Managed Costs Payroll Benefits
EMI	Management Cost Allocation Payroll Benefits
Millennium	Management Cost Allocation Payroll Benefits
R&T Group	Management Cost Allocation
SJES	Payroll allocations System depreciation expense Miscellaneous expenses
ETG	Management Cost Allocation IT Managed Cost Payroll Benefits
SJ Fuel	Management Cost Allocation
SJE	Management Cost Allocation
SJRG	OTC Commodity charges Miscellaneous expenses Management Cost Allocation
SJESP	Management Cost Allocation Non-management Cost Allocation Payroll Benefits
Marina	Record solar revenue
ELK	Management Cost Allocation Fiber Tech Payroll Benefits
ACI	Large volume gas service
ACB	Large volume gas service
ACR	Large volume gas service

AFFILIATE RELATIONS DOCUMENTATION

There are three documents that provide instructions or guidelines for conducting affiliate relations between SJG and its affiliates. These are:

Affiliate Relations, Fair Competition, and Accounting Standards and Related Reporting Requirements Compliance Plan

Cost Allocation Manual (CAM)

Procedure for the Allocations, Recording, and Invoicing of Affiliated Company Transactions – Cost Allocation Manual

Affiliate Relations, Fair Competition. and Accounting Standards and Related Reporting Requirements Compliance Plan (Compliance Plan)

SJG has the responsibility for maintaining this Compliance Plan, and also for regularly scheduled communication of the Compliance Plan to existing employees and a review of the Compliance Plan with all new employees.

The Compliance Plan was prepared and submitted to the New Jersey Board of Public Utilities (NJBPU) in accordance with the requirements of N.J.A.C. 14:4- 3.1, et seq. NJBPU's Affiliate Standards Regulations, adopted in 2000, govern the interactions between the New Jersey energy utilities and their affiliated companies. The Affiliate Standards Regulations were designed to promote fair competition in retail markets where SJG deals with its affiliates. For the period of this audit, 2013–2019, there have been three submissions of the Compliance Plan – in 2015, 2018, and 2019.

The Compliance Plan provides guidance concerning NJBPU's Affiliate Standards Regulations and serves to remind employees of their responsibilities when they interact with SJG's affiliates. This Compliance Plan is submitted to the Board as required by N.J.A.C. 14:4-3.7, to show that SJG has procedures in place to comply with the Affiliate Standards Regulations.

The Compliance Plan identifies SJI's corporate structure and identifies SJI's principal subsidiaries, their officers and a summary of each subsidiary's business functions. Not all the SJI subsidiaries that are affiliated with SJG are considered Related Competitive Business Segments ("RCBS"), as defined in the Affiliate Standards Regulations. As referred to in this Compliance Plan, an RCBS is a functionally separate business unit, joint venture, partnership, or subsidiary of SJI or SJG offering or providing competitive services to retail customers in the State of New Jersey. The Compliance Plan states that the Affiliate Standards Regulations apply to South Jersey Gas Company and its interactions with the following RCBSs:

- South Jersey Industries, Inc. (SJI)
- South Jersey Energy Solutions, LLC (SJES)
- South Jersey Energy Company (SJE)
- South Jersey Energy Service Plus, LLC (SJESP)
- South Jersey Resources Group, LLC (SJRG)
- Marina Energy, LLC (Marina)

The three primary categories of standards of conduct that are governed by the Affiliate Standards Regulations are:

- Regulations Applicable to Transactions between SJG and a RCBS

- Regulations Applicable to Competitive Products and Services
- Regulations Applicable to Regulatory Oversight and Related Processes

The Regulatory Affairs Counsel for SJG is responsible for overseeing compliance with the NJBPU's Affiliate Standards regulations.

The Compliance Plan is provided by the Human Resources Department to all new employees, and all employees are required to sign an acknowledgment of their responsibility to read and understand the Compliance Plan and accompanying handouts and memos. The Compliance Plan also requires that there be in-person Affiliate Standards training provided for all SJG employees every two years.

The Gas Supply Department maintains documentation regarding any commodity procurement from their wholesale affiliate, South Jersey Recourse Group (SJRG). The documentation includes the Daily Price Survey published by Platts, "Instant Message" from all competing parties, with trader notes made in real time regarding the prevailing market conditions. Additionally, all affiliate transactions are captured separately for accounting/reporting purposes and all such transactions are provided to the NJBPU on an annual basis and are subject to review and/or audit.

Cost Allocation Manual (CAM)

The Electric Discount and Energy Competition Act (EDECA) and its implementing regulations (the Affiliate Standards Regulations) require that:

> *Transfers of services not produced, purchased, or developed for sale on the open market by the electric and/or gas public utility from the electric and/or gas public utility to related competitive business segments of its public utility holding company shall be priced at fully allocated cost.*
>
> *Transfers of services not produced, purchased, or developed for sale on the open market by a related competitive business segment of the public utility holding company from that related competitive business segment of the public utility holding company to the electric and/or gas public utility shall be priced at the lower of fully allocated cost or fair market value.*

The CAM prescribes the way costs will be charged to South Jersey Gas, the other regulated SJI utilities, and the non-regulated affiliates. The prevailing premise is to ensure that allocation methods do not result in subsidization of non-regulated services or products by regulated entities, or among the regulated entities, unless specifically authorized by the NJBPU.

The guidelines set forth in the CAM are designed to minimize the possibility of subsidization to protect South Jersey Gas ratepayers and to help preserve competition in the gas supply and related competitive services markets. The guidelines also provide flexibility to accommodate exceptions where the outcome is in the best interest of SJG, its ratepayers and competition.

The responsibility for establishing and updating specific cost items included in the CAM belongs to the department responsible for the cost and most familiar with specific cost causation factors. The use of a standard form which describes the cost item, the affiliate(s) and/or competitive service(s) affected, the allocation methodology, and the responsible departments helps ensure the consistent application of this procedure. Forms must be approved by the appropriate department head before being submitted to the Controller for final approval and distribution to all holders of the CAM.

Additional details concerning the CAM are addressed in Chapter 9, Affiliate Cost Allocation Methodologies.

Procedure for the Allocation, Recording, and Invoicing of Affiliated Company Transactions – Cost Allocation Manual

This CAM Procedures Document prescribes the procedure to allocate, record, and invoice affiliated company transactions with the following objectives:

- To standardize the methodology utilized to derive costs to bill affiliated companies for services rendered in accordance with SJI's Cost Allocation Manual (CAM). The CAM formally documents the details pertaining to each cost item subject to inter-and intra-company allocation as required by the NJBPU.
- To document methodology used for inter-company billings.
- To support employee training and to comply with internal and external audit requirements.
- To ensure proper classification and presentation on the Company's books of account for transactions between affiliated companies.
- To assign responsibility for specific intercompany cost items as well as overall responsibility for the CAM and this policy.

The overall responsibility for maintaining this CAM Procedure Document, ensuring compliance with this procedure and the maintenance of the CAM, rests with the CAM Coordinator, who is described as the head of the Accounting Department; for SJG this would be the SJI Controller. All entries into the CAM must be approved by the CAM Coordinator.

All entries, or changes, to the CAM are to be made via a CAM Form that describes the new or modified procedure, identifies the affiliates involved, describes the allocation methodology, and identifies the responsible departments. All entries or changes are to be submitted to the CAM Coordinator for approval prior to being added to the CAM. Any disputes regarding the CAM Form are submitted to the SJI Chief Financial Officer for final determination. This CAM Procedures Document specifies the following:

- SJI and each of its subsidiaries will maintain separate accounts in their ledgers for the purposes of recording intercompany transactions. All transactions are to be processed through these intercompany receivable and payable accounts unless circumstances dictate that doing so would violate GAAP or other regulations.
- A summary of all intercompany transactions must be maintained by SJI and each of its subsidiaries. Such summaries are to be updated no less frequently than quarterly and on a three-month lag.
- The supervisors responsible for the Accounts Payable function of SJI and each of its subsidiaries are responsible for ensuring the accurate and timely invoicing and

payment of intercompany transactions. Charges classified to the intercompany accounts receivable are generally billed to the respective subsidiaries following month-end closing, with payment expected within 30 days.

- SJG must not advance funds to an affiliate for the payment of goods or services prior to receipt of such goods or services.
- If, while acting as an agent for SJG, SJI requires funds to be transferred from SJG to SJI, such funds shall not be transferred more than 24 hours prior to SJI making payment to the third-party beneficiary (i.e., pension, insurance and FIT payments). Exceptions shall be permitted for weekend and holiday scheduling.
- SJG shall not extend to affiliates payment terms longer than those extended to third- party providers of similar services (generally 30 days). SJI and its non-regulated subsidiaries shall not take any action to expedite payments from SJG unless specifically provided for above, or special approval has been obtained by SJG's Controller.

There is no formal annual review of the Cost Allocation Manual. Cost allocations are generally reviewed during the rate making process.

AFFILIATE CONTRACTS AND AGREEMENTS

Contracts and agreements between SJG and its affiliates consist of the following documents:

- South Jersey Industries, Inc. Master Services Agreement
- SJI Utilities, Inc. Shared Services Agreement
- Joint Meter Reading Services Agreement
- Asset Management Agreement
- Lease Agreements with Marina Energy, LLC

These agreements govern the provision of professional services from SJI, SJIU, and Millennium to SJG, for the delivery of gas from SJRG to SJG, and lease with Marina Energy. These documents have been agreed to and signed by responsible officers of SJI, SJIU, Millennium, Marina, SJRG, and SJG.

Master Services Agreement

This agreement sets forth the scope of services that SJI will provide to SJG and the relationship between both parties. It also details the level of service that will be provided, key contacts, expectations of service levels and key performance indicators, SJG's responsibilities, the reporting of work performed and the level of service achieved, agreed upon communication channels, the change process for services, and any specialized conditions.

The Master Services Agreement also specifies a fee schedule that is based on employee time spent on the provision of services to SJG. This agreement requires that all employees of SJI participate in the SJI Time Recording System and enter time in accordance with the procedures established by SJI for recording time. SJG is billed for time worked, and all employee charges include charges for employee benefits. Employee benefit costs are allocated in accordance with the SJI Cost Allocation Manual (CAM).

Fees are evaluated on an annual basis and adjusted accordingly. Information on hourly fees by employee are available to SJG upon request. Those SJI employees who do not normally complete time sheets will have their hourly rates and benefit costs included in a unit cost determined and billed to SJG in accordance with the SJI Cost Allocation Manual.

The Master Services Agreement reviewed was dated December 2016, superseding prior agreements dated January 2010 and amended January 2014.

Shared Services Agreement

This agreement is between SJI Utilities, Inc. (SJIU), as the provider of professional services and SJG as the client for those services. Services noted in this agreement include administrative, corporate communications, government relations, human resources, information system, legal, and insurance.

This agreement specifies the scope of the services to be provided to SJG as well as service levels. Payment instructions dictate that all employees of SJIU will participate in the Time Recording System developed for SJIU and that SJG will be billed for all time worked. Labor cost include employee benefits as allocated in accordance with the SJIU Cost Allocation Manual. Costs charged to SJG are to be evaluated and adjusted as necessary on an annual basis.

The Service Agreement reviewed in this audit was dated September 2018 and was to continue until terminated by either party with three months' notice.

Joint Meter Reading Services Agreement

This agreement is between SJG, Atlantic City Electric Company (ACE), and Millennium Account Services, LLC (Millennium) and stipulates that Millennium is the contractor and will perform meter reading services for SJG and ACE. The first contract was executed in 2013 and has been amended three times.

The minimum acceptable levels for meters read is listed in the Joint Meter reading Services Agreement as shown below:

- Contract Read Rate – 97%
- Incentive Compensation Read Rate – 97.5%
- Exceptional Performance Incentive Compensation Read Rate – 98.5%

The current contract extends through 2022, and the joint agreement and subsequent amendments may be terminated in whole or in part by SJG and/or ACE after providing 120 days advance written or electronic notice.

Asset Management Agreements

There were three Asset Management Agreements (AMA) between SJG and SJRG in the seven-year period from 2013 through 2019. Details and analysis of these agreements, other AMAs involving SJG, evaluations concerning the release of pipeline and storage assets, capacity releases or assignment of capacity to others, and scheduling and trading practices can be found in Chapter 10, Procurement and Purchasing and Chapter 11, Market Conditions.

Lease Agreements

There are four lease agreements between SJG and its affiliates

- Lease agreement executed September 21, 2009, with a term of 15 years between Marina Energy, LLC and SJG
- Lease agreement between Marina Energy LLC and SJG for McKee City Solar Phase 1, executed October 14, 2009, with a term of 15 years
- Lease agreement between Marina Energy, LLC and SJG for McKee City Solar Phase 2, executed February 1, 2010, with a term of 15 years
- Lease agreement between Cape May City and SJG executed on June 29, 2018, with a term of 15 years

Other than listed above, there were no contracts or written agreements in place for transactions between SJG and any of SJG's affiliated companies during the seven-year period covered by this audit.

There are no current leases between SJG and its affiliates.

TRAINING

Employee training activities and methods of communicating the requirements of the Affiliate Standards Regulations are set forth in the SJG NJBPU Affiliate Standards Communication Plan (Communications Plan). As outlined in the Communications Plan, all employees are required to participate in biennial live training on Affiliate Standards Regulations and compliance. Additionally, SJG provides Affiliate Standards Regulations training to all new employees when hired, either as a part of the biennial live training or by providing them with the handouts contained in the Communication Plan. These handouts are included in the Employee Manual provided to new employees and all new employees are required to acknowledge their obligation to read and understand the documents included in the Employee Manual. This Compliance Plan is posted on the SJG intranet for reference; compliance with the Affiliate Standards Regulations is required by the SJI Code of Ethics.

Affiliate Standards training is conducted bi-annually by the legal department in conjunction with the rates and regulatory function. Training is required for every employee of South Jersey Gas. The Legal Department coordinates with Human Resources and department leads to ensure that all gas utility employees are trained. The 2017–2018 training sessions were performed in-person. Training occurs at the primary office of each employee. If an employee is unable to attend the training at their location, they are required to attend the training at another office. There was a supplemental training session provided to the South Jersey Gas customer care center representatives in 2017, at their request, to cover some specific issues that were encountered. Employee attendance was tracked through a sign-in sheet.

SJI's corporate commitment to their affiliate relations training is described in the training as follows:

> *SJI and each member of the corporate family are committed to conducting all business in full compliance with applicable laws and regulations, and in accordance with the highest standards of ethical conduct and integrity.*
>
> *The purpose of this training is to provide you with an overview of the NJBPU Affiliate Standards and remind you of our responsibilities.*

The background for the affiliate relations standards in place at SJG and its affiliates is based on the Electric Discount and Energy Competition Act (EDECA) which required the NJBPU to adopt standards governing the interactions between the New Jersey energy utilities and their affiliated companies. The affiliate relations standards are designed to promote fair competition in markets when SJG deals with its affiliates. The affiliate relations training material states that affiliates of SJG should not gain any unfair competitive advantage (over non-affiliated entities) due to their relationship with SJG.

The affiliate relations training material further states that the affiliate standards apply to SJG and its dealings with:

- South Jersey Industries
- South Jersey Energy Solutions
- South Jersey Energy Company
- South Jersey Energy Services Plus
- South Jersey Resources Group
- Marina Energy

Any transaction or interaction between SJG and any of the above affiliates should be guided by the NJBPU's Affiliate Standards Regulations. The principles of the affiliate standards that should be followed includes:

- A utility employee cannot do or say anything that would give an unfair advantage to an affiliate.
- Affiliates shall receive the same treatment SJG gives to other unaffiliated companies or their customers.
- SJG shall not provide its affiliates or affiliates' customers any preference in the services offered by SJG.

INTERNAL CONTROLS

There were no internal or external audit reports relevant to affiliate relationships and transactions during the 2013–2019 period.

Employees who work for multiple companies or cost centers are required to assign hours worked to the different cost centers. These allocations are reviewed monthly and are pulled based on the 26th–25th of each month (ex: August reallocations are pulled for 7/26-8/25). The reallocation is done because there often are employees whose wages need to be split between different companies or who work on projects for multiple companies. The reallocation is done via journal entries based on employee time records. Reminder emails are sent out each month to employees regarding entering their time allocations by the 27th of each month for the period ending on the 26th. The reminder email includes instructions of how to enter time allocations and how to make corrections if time was entered incorrectly in a previous period.

PURCHASING

The purchasing function is centralized for SJI, SJIU, SJG, ETG, and the nonregulated subsidiaries. It is an SJI function. While the purchasing function is centralized for all of SJI, it is highly focused on purchasing and contracting for the regulated gas distribution companies, SJG and ETG. SJG and ETG are a high priority for the purchasing function, and SAGE found no evidence that its other responsibilities distracted from its attention to SJG and ETG needs. See Chapter 10, Procurement and Purchasing, for review and assessment of the Purchasing function.

SCHEDULING AND TRADING PRACTICES

A review of SJG's nomination and confirmation of gas volumes is included in Chapter 10, Procurement and Purchasing.

CORRESPONDENCE

The communication and correspondence between the SJG Board of Directors (Board) and management is typical for a company of this size. The communication is centered on the regular full Board and Board committee meetings with ample opportunities for communication between Board members and management personnel. Informal communication between Board members and management personnel is also encouraged and occurs as issues or questions arise. Board members are well informed about company activities and performance and management personnel receive clear direction from the Board.

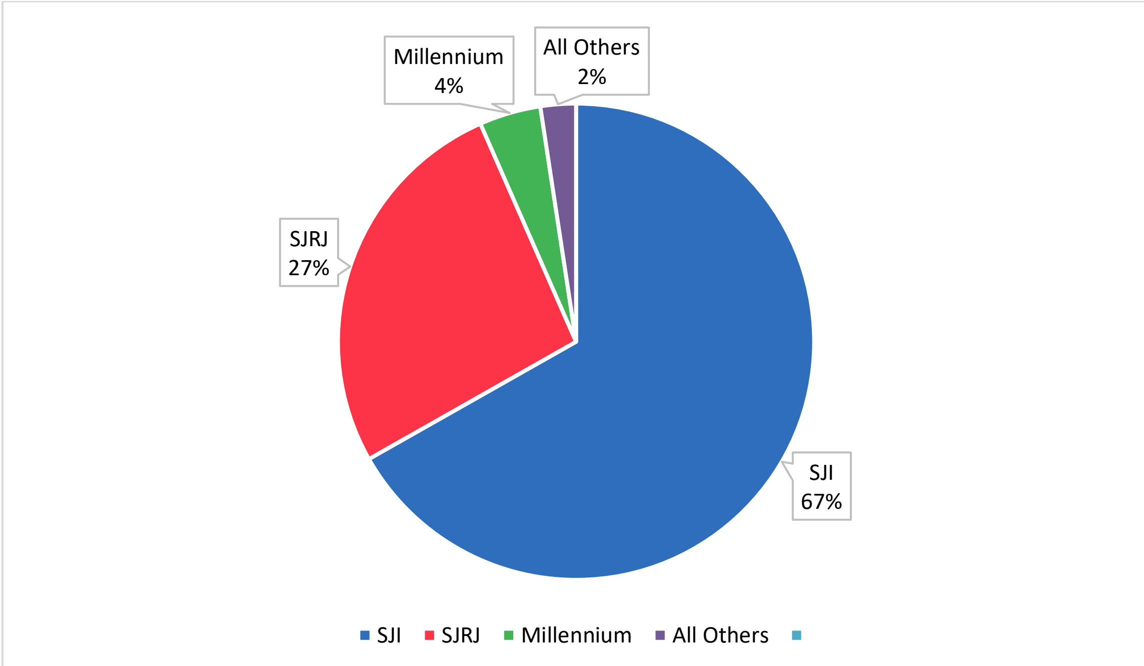
The review and assessment of correspondence concerning affiliate relations among management and the Board is covered in Chapter 2, Executive Management and Corporate Governance.

B. FINDINGS

8-1 The amount and type of SJG's purchases of goods or services from affiliates appear to be reasonable.

The vast majority of SJG's purchases of goods and services from affiliates from 2013 through 2019 consisted of allocations of corporate or service company services ($327.6 million paid to SJI or 67% of the total), gas purchases ($130.5 million paid to SJRG, or 27% of the total), and customer meter reading services ($20.5 million paid to Millennium, or 4% of the total). Payments to these three affiliates account for 98% of the total paid by SJG to affiliates in the seven-year period from 2013 through 2019. These types of goods and services provided to SJG seem reasonable for a gas distribution utility. The percentage of goods and services provided by affiliates to SJG from 2013 through 2019 is graphically shown in the following chart.

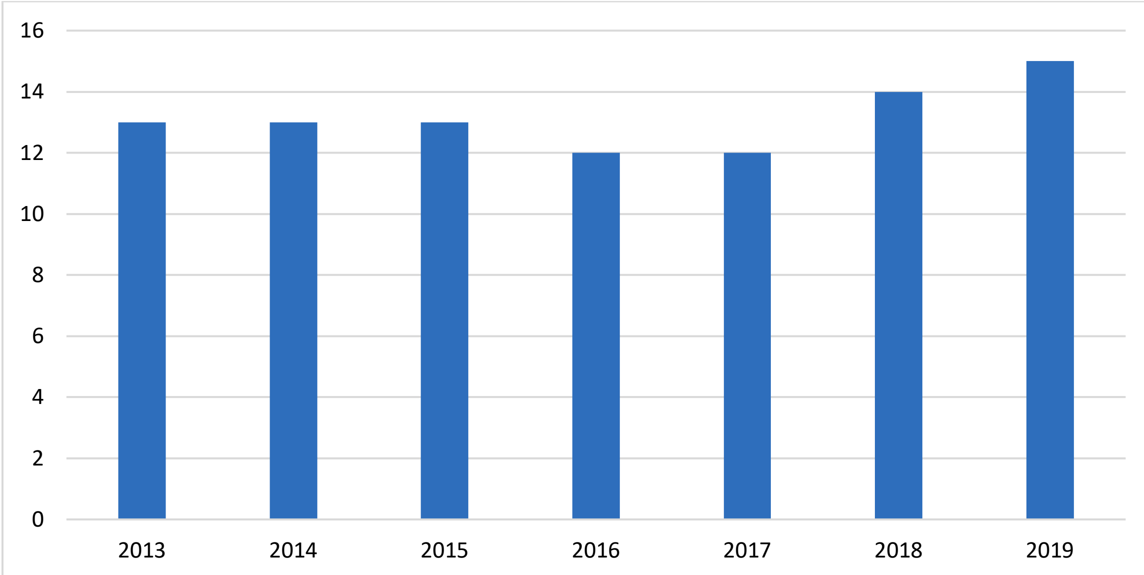
Percent of Goods and Services Provided by Affiliates to SJG



8-2 SJG provides goods and services to an excessively large group of affiliates.

From 2013 through 2019 SJG provided goods and services to 17 of its affiliated companies. The number of affiliates and the types of goods and services involved would be more appropriate for a service company than a gas utility. Organizational changes toward the later part of this period, such as the formation of SJIU in 2019, portend a change in the type of interaction between SJG and its affiliates. However, even in 2019, SJG delivered goods and services to 15 of its affiliates. The value of goods and services from SJG to affiliates more than doubled over the seven-year period from $15 million to almost $33 million. The number of SJG's affiliates that received goods or services from SJG from 2013 through 2019 is depicted in the following table.

Number of Affiliates Receiving Goods and Services



8-3 Contracts and agreements concerning affiliate transactions meet federal and state requirements.

SJG, through the operations of its parent, SJI, complies with the NJBPU requirements concerning Affiliate Standards Regulations, which were adopted in 2000, and govern the interactions between the New Jersey energy utilities and their affiliated companies. These regulations were designed to promote fair competition in the retail markets in which SJG has business dealings with its affiliates.

SJI prepared a Compliance Plan that provides guidance concerning NJBPU's Affiliate Standards Regulations and serves to remind employees of their responsibilities when they interact with SJG's affiliates. This Compliance Plan is submitted to the NJBPU as required by N.J.A.C. 14:4-3.7, to show that SJG has procedures in place to comply with the Affiliate Standards Regulations. For the period of this audit, 2013–2019, SJI submitted three editions of the Compliance Plan – in 2015, 2018, and 2019.

Contracts and agreements between SJG and its affiliates include: (1) South Jersey Industries, Inc. Master Services Agreement, (2) SJI Utilities, Inc. Shared Services Agreement, (3) Joint Meter Reading Services Agreement, (4) Asset Management Agreement, and (5) Lease Agreements with Marina Energy, LLC. All contracts/agreements govern the provision of professional services and are signed by responsible officers of the companies involved. SJG's contracts and agreements regarding affiliate transactions meet federal and state requirements.

8-4 Systems and functions are in place to help ensure that affiliate transactions are conducted at the lowest possible cost and maximum benefit to the ratepayer.

SJG's affiliate transactions consist either of SJG providing services or allocating a portion of costs for services provided to multiple affiliates, or SJG receiving services from affiliates or being allocated a portion of the costs for services provided to affiliates. All the affiliate transactions, whether provided to SJG or provided by SJG, are processed through SJG's normal accounting and purchasing functions, which are identical to all of SJG's other (non-affiliate) transactions.

Internal controls for all of SJG transactions are a primary concern of SJI's Sarbanes-Oxley (SOX) controls and testing. There are 348 key SOX controls and 230 non-key SOX controls for SJI and its subsidiaries, including SJG. There are 64 key SOX controls and 74 non-key SOX controls for SJG, or a total number of SOX controls that specifically address SJG's functions and transactions of 138. SJI's Internal Audit Department is responsible for all SOX testing, consuming up to 60–65% of Internal Audit's time. All SOX controls are tested every year. The internal controls that are in place protect against irregular, illegal, and/or improper affiliate transactions.

8-5 Responsibility for the Cost Allocation Manual (CAM) and affiliate relations and transactions rests with various work groups or sub-departments within the Accounting Department.

The Procedure for the Allocation, Recording, and Invoicing of Affiliated Company Transactions – Cost Allocation Manual states that the maintenance of the CAM rests with the Cost Allocation Manual Coordinator, and that this coordinator is the head of the Accounting Department. However, below this Vice President-level position, there is no single work group or organization within the Accounting Department that is totally responsible for affiliate transactions. Various groups or individuals are involved with different maintenance aspects for the CAM and affiliate transactions, but there is no single work group or department that has overall responsibility under the VP, Accounting.

8-6 The CAM has not been reviewed and updated on a regular basis.

The CAM has not been updated annually, nor is there a formal annual review of this document. The CAM has only been updated twice from 2013 through 2019 – in 2015 and 2018.

8-7 The Affiliate Relations, Fair Competition and Accounting Standards and Related Reporting Requirements Compliance Plan (Compliance Plan) has not been updated on an annual basis.

New Jersey Administrative Code 14:4-3.7- Regulatory Oversight requires that electric and gas utilities file their compliance plans "at least once in every 12-month period or upon changes to the plan, and thereafter, within 12 months of the revised plan." The SJG Compliance Plan was updated three times in this audit period: in 2015, 2018, and 2019.

8-8 Contracts and agreements do not cover all affiliate transactions.

SJG received goods and services with a total value of $490.4 million from eight of its affiliates and provided goods and services with a total value of $127.4 million to 17 of its affiliates during the 2013–2019 period. Contracts and agreements in place consisted of the following:

- Master Services Agreement – goods and services provided by SJI to SJG
- Shared Services Agreement – goods and services provided by SJIU to SJG

- Joint Meter Reading Services Agreement – services provided by Millennium to SJG
- Asset Management Agreements – goods or services provided by SJRG to SJG
- Lease Agreements – goods or services provided by SJG to Marina Energy

There were no contracts and agreements for the following affiliate transactions:

- Goods or services provided to SJG from:
  - SJIS
  - SJES
  - SJE
  - Marina
- Goods or services provided from SJG to:
  - SJI
  - SJIS
  - SJIU
  - EMI
  - Millennium
  - R&T Group
  - SJES
  - ETG
  - SJ Fuel
  - SJE
  - SJRG
  - SJESP
  - ELK
  - ACI
  - ACB
  - ACR

8-9 There have been no specific internal audits of affiliate relations and transactions.

In the 2013 through 2019 period, SJI's Audit Department conducted 437 internal audits. Additionally, during this time there were seven external audits conducted by SJI's external auditors. None of these audits were relevant to affiliate relationships and transactions. Additionally, as discussed in Chapter 13, Finance, during this period there were no audits of the Cost Allocation Manual (CAM).

8-10 There are no Sarbanes-Oxley (SOX) controls specifically addressing affiliate relations and transactions.

SJI has 578 SOX controls, 138 of which specifically address controls concerning SJG. However, there are no controls addressing SJG's Cost Allocation Manual (CAM) or its affiliate relations and transactions.

C. RECOMMENDATIONS

8-1 SJG should limit their affiliate transactions to operational requirements. (See Finding 8-2)

In the seven-year period covered by this audit, SJG provided goods and services to 17 affiliates in the amount of $127.4 million. Many of the transactions provided by SJG appear to be administrative in nature, such as usually provided by a support services company. With the formation of SJIU, there would seem to be little need for SJG to act as a support services company and provide administrative functions to affiliates. A review of all the services provided by SJG should be made, and where possible, transfer the responsibility for delivering most of these administrative services either to SJIU or to SJG's parent, SJI.

8-2 Affiliate relations and transactions should be the responsibility of one sub-department within the Accounting Department. (See Findings 8-5, 8-6, 8-7, and 8-8)

SJG's affiliate relations and transactions guidelines state that the maintenance of the CAM rest with the Cost Allocation Manual Coordinator, and that this coordinator is the head of the Accounting Department. However, beneath this vice president, there is no single work group or sub-department that is tasked with the overall responsibility for guiding, managing, and documenting compliance with the State of New Jersey's rules and regulations concerning affiliate relations and transactions. During this audit there was confusion concerning various responsibilities for affiliate relations and transactions. Affiliate transactions accounted for a significant amount of the revenues and expenses of SJG over the 2013 through 2019 period. Additionally, the state and federal rules and regulations that govern these transactions require more focused attention.

This area is important enough to require a dedicated sub-department's attention to ensure that all rules and regulations are followed, disseminated, and complied with; that all transactions are costed appropriately; that all necessary contracts and agreements are in place; that governing documentation is current and reviewed and revised on a regular basis; and that personnel receive all necessary affiliate relations training.

8-3 The CAM should be reviewed and updated on a regular basis. (See Finding 8-6)

SJG's CAM has not been reviewed on a regular annual basis. The CAM was updated in 2015 and 2018. These guidelines should be reviewed on an annual basis. This review should be documented and should be approved by a responsible SJG or SJI officer. Verification that the review took place should be included in SJG's SOX controls. The CAM should be updated whenever changes are made in responsibilities, organizations, accounting, allocations, and the methods of delivering goods and services among affiliates. Whenever the CAM is revised, there should be positive assurance that all affected departments and individuals have been notified.

8-4 The Affiliate Relations, Fair Competition and Accounting Standards, and Related Reporting Requirements Compliance Plan (Compliance Plan) should be updated on an annual basis. (See Finding 8-7)

The Compliance Plan was updated in 2015, 2018, and 2019. Regulations require that this plan be updated "at least once in every 12-month period." The responsibility for ensuring that the Compliance Plan is updated should fall on the proposed new sub-department with the Accounting Department that should have responsibility for all affiliate relations and transactions (See Recommendation 8-2).

8-5 Contracts and agreements should be developed to cover all transactions between SJG and its affiliates. (See Finding 8-8)

A review of SJG's contracts and agreements in place from 2013 through 2019 with its affiliates revealed only five documents. These concerned (1) goods and services provided by SJI, SJIU, Millennium, and SJRG to SJG; and (2) goods and services provided by SJG to Marina Energy. Contracts and agreements covering the transfer of goods and services either to SJG from affiliates or from SJG to affiliates are necessary. These should either be developed, or existing contracts and agreements should be revised to add the missing affiliates and the affiliate transactions.

8-6 SJI's Internal Audit Plan should include audits related to affiliate relations and transactions. (See Finding 8-9)

None of the audits conducted by the Internal Audit Department specifically addressed affiliate relations and transactions. Neither has the CAM been audited during the seven-year period of this audit. Considering the value of the affiliate transactions, the number of affiliate companies involved, and the sensitivity concerning compliance with state and federal rules concerning affiliate relations, the Internal Audit Plan should include an annual audit covering this area.

8-7 SOX controls should be added to address affiliate relations and transactions. (See Finding 8-10)

Currently, there are no SOX controls addressing affiliate compliance, procedures, or functions. The importance of the accuracy of affiliate transactions and compliance with requirements around affiliate relations necessitates the use of SOX controls for affiliate relations and transactions.

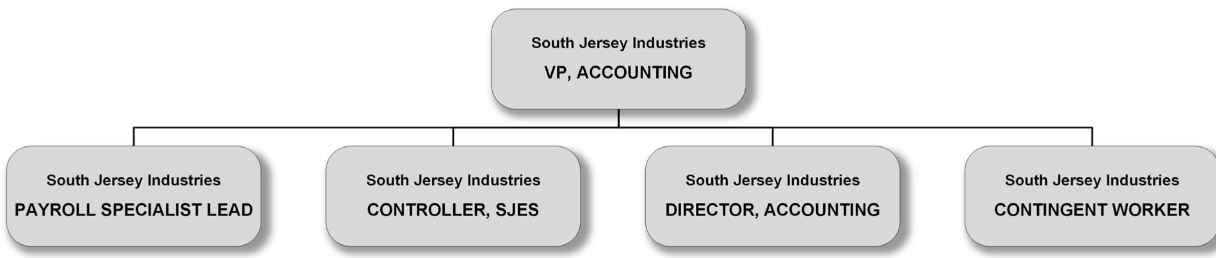
9. AFFILIATE COST ALLOCATION METHODOLOGIES

A. BACKGROUND

ORGANIZATION

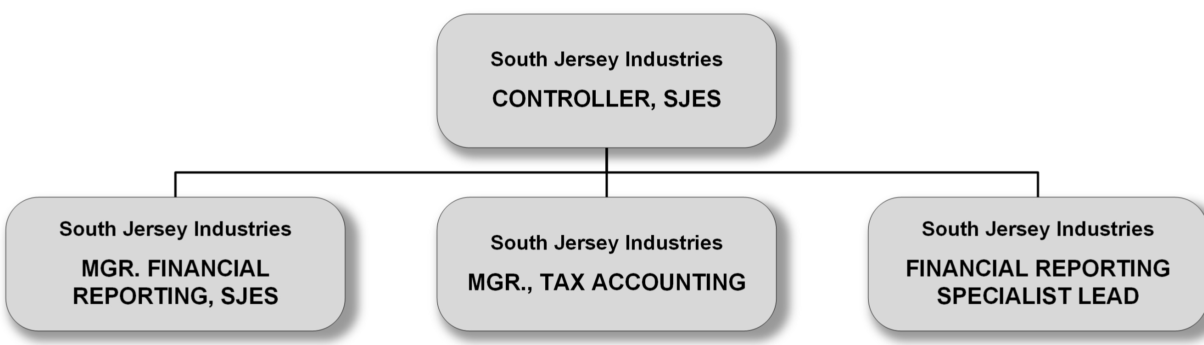
The responsibility for cost allocations to or from South Jersey Gas (SJG) and its affiliates is the responsibility of the South Jersey Industries, Inc. (SJI) Accounting Department, under the direction of the Vice President, Accounting. The organization chart for the Accounting Department is shown in the following exhibit.

SJI Accounting Organization Structure



Within the Accounting Department, the actual day-to-day responsibility for implementing and managing the cost allocation methodologies rests with the Manager, Financial Reporting, South Jersey Energy Solutions (SJES), reporting to the Controller SJES, who, in turn, reports directly to the Vice President Accounting. The organization chart for these positions is shown in the following exhibit.

Controller, SJES Organization Structure



AFFILIATE TRANSACTION REQUIREMENTS

New Jersey's Electric Discount and Energy Competition Act (EDECA) and its implementing regulations (the Affiliate Standards Regulations) require that:

> *Transfers of services not produced, purchased, or developed for sale on the open market by the electric and/or gas public utility from the electric and/or gas public utility to related competitive business segments of its public utility holding company shall be priced at fully allocated cost.*
>
> *Transfers of services not produced, purchased, or developed for sale on the open market by a related competitive business segment of the public utility holding*

company from that related competitive business segment of the public utility holding company to the electric and/or gas public utility shall be priced at the lower of fully allocated cost or fair market value.

ALLOCATION PRINCIPLES

In order to comply with the regulations stated above, SJI and SJI Utilities, Inc. (SJIU). have set forth the following allocation principles to be used whenever products or services are transferred between South Jersey Gas (SJG) and its affiliates.

a. If only one affiliate, entity, division, or service causes a cost to be incurred or benefits from a cost, that cost shall be directly assigned to that affiliate, entity, division, service or jurisdiction. Direct assignment should be performed whenever practicable and is preferred over allocation.

b. The general method for charging indirect costs should be on a fully allocated cost basis. Under appropriate circumstances, the NJBPU or PSC may consider incremental cost, prevailing market pricing or other methods for allocating costs and pricing transactions among affiliates.

c. To the extent possible, all direct and allocated costs between regulated and non-regulated services and products should be traceable on the books of the applicable regulated utility to the applicable Uniform System of Accounts. Documentation should be made available to the appropriate regulatory authority upon request regarding transaction among affiliates.

d. The allocation methods should apply to South Jersey Gas', Elizabethtown Gas' and Elkton Gas' affiliates in order to prevent subsidization from and ensure equitable cost sharing among the regulated entity and its affiliates, and vice versa.

e. All costs should be classified to services or products which, by their very nature, are either regulated, non-regulated, or common to both.

f. The primary cost driver of common costs, or a relevant proxy in the absence of a primary cost driver, should be identified and used to allocate the cost between regulated and non-regulated services or products.

g. The indirect costs of each business unit, including the allocated costs of shared services, should be spread to the services or products to which they relate using relevant cost allocators.

TRANSACTIONS AMONG AFFILIATES

Recording

Separate accounts to record intercompany transactions are maintained by SJG and each of its affiliates. All transactions are processed through the intercompany receivable and payable accounts except if doing so would violate GAAP or other governing rules and regulations. Summaries of all intercompany transactions are maintained by SJG and its affiliates, updated on a quarterly basis with a three-month lag.

Invoicing

The Accounts Payable function for SJG and each of its affiliates is responsible for the invoicing and payment of intercompany transactions, generally at the end of each month.

SJG is not allowed to advance funds to an affiliate for the payment of goods and services to be received. Rules concerning SJI and SJIU acting as an agent for SJG in the acquisition of goods or services allow for the transfer of funds from SJG to either SJI or SJIU within 24 hours of SJI or SJIU making payment for the services or goods being provided. Exceptions are allowed for weekend and holiday scheduling. SJG is not allowed to extend to affiliates payment terms longer than those extended to third-party providers of similar services.

COST APPORTIONMENT METHODOLOGY

To allocate the costs of products and services to South Jersey Gas and its affiliates, the costs are first classified into four categories. These four cost categories are:

- **Directly Assignable** – Expenses incurred for activities and services exclusively for the benefit of South Jersey Gas and its affiliates. As the following three exhibits demonstrate, most costs charged or allocated to South Jersey Gas or its affiliates are classed as this category, most often based on personnel time reporting.
- **Directly Attributable** – Expenses incurred for activities and services that benefit more than one affiliate and which can be allocated based on direct measure of cost causation. This category utilizes the relative counts of personnel, transactions, space, items, etc. to allocate costs among SJG and its affiliates.
- **Indirectly Attributable** – Expenses incurred for activities and services that benefit more than one affiliate and which can be allocated based on general measures of cost causation. This category includes the SJI and SJIU Management Fee, using a three-factor formula allocation to distribute costs to SJG and affiliates.
- **Unattributable** – Expenses incurred for activities or services that have been determined as not appropriate for apportionment. These costs relate primarily to activities such as corporate diversification, and political or philanthropic endeavors. As such, they are charged directly to South Jersey Industries.

Services Provided by SJI

Service Provided	Cost Allocation Methodology
Corporate Counsel and Secretary	Services are directly assigned to the entity responsible for the service provided. Primarily labor and benefits – allocation based on time reports. Services assigned to SJI are allocated as part of the Management Service Fee using the three-factor general allocator.
Investor Relations	Indirectly attributable to the various entities through the Management Service Fee allocation factor using the three-factor general allocator.
Strategic and Financial Planning	Primarily labor and benefits – allocation based on time reports. Remainder allocated as part of the Management Service Fee.
Accounting	Primarily labor and benefits – allocation based on time reports. Tax expense is allocated based on actual tax liabilities.
Risk Management	Primarily labor and benefits – allocation based on time reports.

Service Provided	Cost Allocation Methodology
Internal Auditing	Primarily labor and benefits – allocation based on time reports.
Environmental Affair	Primarily labor and benefits – allocation based on time reports.
Insurance Payment and Processing	Primarily labor and benefits – allocation based on time reports.
Insurance Policy Placement and Claims Administration	Primarily labor and benefits – allocation based on time reports. The cost of insurance coverage is allocated as described in Table 10.
Shareholder Records	Indirectly attributable to the various entities through the Management Service Fee allocation factor using the three-factor general allocator.
Treasury (Cash Managements)	Primarily labor and benefits – allocation based on time reports. Bank fees are assigned based on actual costs incurred by bank accounts.
Human Resources Services	Primarily labor and benefits – allocation based on time reports.
Human Resources Services – Employee and Benefits	Primarily labor and benefits – allocation based on time reports. Benefits are typically allocated based on percentage of users.
Information Technology	Primarily labor and benefits – allocation based on time reports. Certain allocations are done using specified head counts.
Administrative Services	Primarily labor and benefits – allocation based on time reports. The cost of materials and supplies purchased or issued from stores is directly assigned. Labor and benefits costs are allocated based on time reports. Non-labor fleet costs are allocated as described in Table 10.
Facilities and Building Services	Allocated as part of the facilities charge which is based on occupied space.
Corporate Communications	Primarily labor and benefits – allocation based on time reports.
Stakeholder Relations	Primarily labor and benefits – allocation based on time reports.
Payroll Department	Primarily labor and benefits – allocation based on head count by entity.
Accounts Payable	Primarily labor and benefits – allocation based on time reports.

Services Provided by SJIU to SJG

Service Provided	Cost Allocation Methodology
Sales and Marketing	Primarily labor and benefits – allocation based on time reports.

Service Provided	Cost Allocation Methodology
Rates and Regulatory	Primarily labor and benefits – allocation based on time reports.
Safety	Primarily labor and benefits – allocation based on time reports.
Utility Shared Services	Primarily labor and benefits – allocation based on time reports.
Organizational Effectiveness	Primarily labor and benefits – allocation based on time reports.
Customer Experience	Primarily labor and benefits – allocation based on time reports.
Gas Supply, Allocations, and LNG Operations	Primarily labor and benefits – allocation based on time reports.

Non-Labor Costs – Allocation Methods

Cost Item	Allocation Method
Officers Annual Cash Bonus	Directly Attributable – Officer Hours
Officers Restricted Stock Grants	Directly Attributable – Percentage of Salary
Benefits and Payroll Tax Allocation	Directly Attributable – Hours Worked
Blue Cross/Blue Shield Medical Plan	Directly Attributable – Number of Employees
Defined Contribution Plan/401(k)	Directly Assignable
Defined Contribution Plan/401(k) Accounting Fees	Directly Attributable – Number of Employees
Dental Plan	Directly Attributable – Number of Employees
Group Life Insurance	Directly Assignable
Long-term Disability	Directly Attributable – Payroll Dollars
Pension Plan	Non-Union - Directly Attributable based on Salaries Union – Directly Assigned to SJG and SJESP
Prescription Plan	Directly Attributable – Number of Participants
Short-term Disability and Family Leave	Directly Attributable – Number of Participants
Employee Assistance Program	Directly Attributable – Number of Participants
Health Savings Account	Directly Assignable
Additional Retainer Fees Paid to Committee Chairs and Lead Independent Director	Directly Attributable – Board Memberships
Retainer Fees	Directly Attributable – Board Memberships
Travel Reimbursement – BOD	Directly Attributable – Board Memberships
SJI Management Service Fee	Indirectly Attributable – Assets, Payroll, Margin
Restricted Stock Program	Indirectly Attributable – Assets, Payroll, Margin
Directors Pension	Indirectly Attributable – Assets, Payroll, Margin

Cost Item	Allocation Method
Gasoline Credit Cards	SJG - Directly Assignable – Wawa card and divisional fuel dispensers South Jersey Energy Services Plus, LLC (SJESP) – Directly Assignable – Wawa card
Vehicle Lease Charges	Directly Assignable
Motor Vehicle Charges	SJG/ASB - Directly Attributable – Hours
Outsourced Vehicle Maintenance	Directly Attributable – Based on actual vehicle per affiliate
Garage Square Foot Cost Allocation	Indirectly Attributable – RE tax, depreciation, utilities
Bonding	Directly Assignable
General Liability and Umbrella Excess Insurance	Directly Attributable – Based on insurance industry standards
Crime Policy	Directly Attributable – Number of Participants
Directors and Officers Insurance	Directly Attributable – Number of Directors and Officers by Subsidiary
Employment Practices Insurance	Directly Attributable – Number of Employees
Fiduciary Insurance	Directly Attributable – Number of Employees
Property Insurance	Directly Attributable – Insured Property Values at Replacement Cost
Self-Insured (Uninsured Risk) Liability	None
Workers Compensation	Premiums - Directly Attributable – Payroll Adjustments – Directly Assignable
Underground Tank Insurance	Directly Attributable – Based on insurance industry standards
Mobile Services	Directly Assignable
Network Services	Directly Attributable – Number of PC's
IT – Telephone Services	Directly Attributable – Number of Participants
PC User Support	Directly Attributable – Timecard system
Unified Computer Services (UCS)	Directly Attributable – Number of Servers
Call Management System and Services	Directly Attributable – Number of Calls
Lawson Maintenance and Licensing Fees	Directly Attributable – Lawson user count and Time Sheets
Shared Software Systems	Directly Attributable – Number of users
Bank Service Fees	Other than Wells Fargo – Directly Assignable Wells Fargo – Directly Attributable – Service Utilization/Excess Balances
Catered Services	Indirectly Attributable – Management Service Fee
Employee Expenses	Directly Assignable – Based on Employee Expense Reports
Office Space and Services	Directly assignable – Based on square Footage
Outside Professional Services	Directly Assignable

Cost Item	Allocation Method
Purchase and Payment of Goods and Services	SJI, South Jersey Energy Company (SJE) – Directly Assignable ASB and certain affiliates – Directly Assigned (parts and Supplies), Directly Attributable (time reporting) and Indirectly Attributable (management cost allocation)
Stationery and Office Supplies	Directly Assignable
Electric Billing Services	Directly Assignable – $0.075 per Bill (based on Special Study) x Actual Number of Bills
Electronic Data Distribution with Marketers	Tariff-based Pricing – $100 per month
Itron Maintenance Agreement	Directly Assignable – 100% to Millennium
Residential Marketer Billing and Receivable Purchase Services	Directly Assignable – $0.075 per Bill and' $0.90 per Purchase fee x Actual Number of Bills/Fees
Commercial Marketer Billing Services	Directly Assignable – $0.075 per Bill (based on Special Study) x Actual Number of Bills
Customer Care Center Payroll Allocation for Marketer-Related Work	Directly Attributable – Based on Time Sheets submitted to Payroll
Mailroom and Courier Services	Directly Assignable
Website Charges – External and Internal	Directly Attributable – Outside source: Based on invoices and MSF Internal: Time Sheets
SJI Employee Time Allocation	Directly Attributable – Based on Time Sheets submitted to Payroll
Federal Income Tax Allocation	Directly Attributable – Based on estimated tax liability trued-up at year-end when return is filed
State Income Tax Allocation	Directly Attributable – Based on estimated tax liability trued-up at year-end when return is filed

MANAGEMENT SERVICE FEE

The Management Service Fee collects the costs for time and expenses that cannot be directly assigned or directly attributed to an end user but can be indirectly attributed to an entity such as SJG or one of its affiliates. This indirectly attributed cost pool is then distributed using a general allocation factor to companies that received benefits from the cost being incurred. The Management Service Fee uses a three-factor formula (assets, margin, and payroll) to make this allocation. The formula percentages change each year, based on the values of the three factors. Also, percentages will change if there is some material change during the year. For the calculation for the upcoming calendar year starting in January, the value of assets or the totals for margin and payroll for the 12-month period ended June 30 is utilized. The Management Services Fee is used for intercompany transactions, which are eliminated in consolidations.

SJI has used the three-factor formula, which had not been challenged by regulatory bodies. Changes to the calculation of the three-factor formula were prompted by a recommendation from the last management audit, as well as the acquisition of Elizabeth Town Gas (ETG) and Elkton Gas (ELK).

Assets

The value of a company's assets is calculated by starting with total assets of all SJI subsidiaries as of June 30 of the prior calendar year (as of December 31, 2017, for purposes of including ETG/ELK into 2018). Several adjustments are then made to eliminate such items as intercompany accounts receivable (AR), dividends, notes receivable and holding company investments in subsidiaries; deferred and prepaid taxes; derivative assets; cash credit balances; unamortized debt issuance costs; and accrued utility assets for SJG and the other utilities that have corresponding accrued liabilities (i.e., environmental, asset retirement obligations and regulatory assets). These are eliminated as, if included, they could skew the percentage allocation.

Margin

This is calculated by taking the total margin for each SJI subsidiary for the 12 months ending June 30 of the prior calendar year (12 months ended December 31, 2017, for purposes of including ETG/ELK into 2018). The term "margin" represents total revenues less total cost of sales. The Company uses Economic Earnings ("EE") revenue and cost of sales when determining margin for purposes of this calculation, which consists of eliminating the following:

- Change in unrealized gains/losses on all commodity derivative transactions.
- Adjustments for legal accruals/settlements on transactions that related primarily to prior periods.

This is done to eliminate the impact from mark-to-market accounting under GAAP, along with eliminating the impact of legal items that relate to prior periods and keep revenues and cost of sales consistent with the non-GAAP measure "EE" used by Management. This is done for all entities impacted by the Management Service Fee to the extent they have commodity derivative transactions or legal accruals/settlements related primarily to prior periods that impact total margin.

Payroll

Payroll is calculated using the gross payroll for each SJI subsidiary for the 12 months ending June 30 of the prior calendar year (12 months ended December 31, 2017 for purposes of including ETG/ELK into 2018). Adjustments are then made to eliminate intercompany payroll allocations, which is done in order to determine the final payroll distributions for each subsidiary. Holding companies are excluded, with the SJES payroll being allocated to the SJES subsidiaries only, and not to the utility companies.

The amount of SJI department expenses included in the Management Services Fee from 2013 through 2019 is shown in the following exhibit.

Management Service Fee by SJI Department 2013–2019 ($000)

Acct. Nr.	Cost Center	2013	2014	2015	2016	2017	2018	2019	Total	Percent of Total
3001	General and Corporate	3,085.6	1,808.3	366.5	207.3	694.1	5,369.6	(8,195.1)	3,336.3	1.9%
3003	Strategic Planning	920.5	650.3	967.5	776.2	441.1	792.7	910.0	5,458.3	3.1%
3004	Shareholder Services	361.8	77.2	2.2	267.8	263.7	285.1	327.0	1,584.8	0.9%
3005	Treasury	593.0	550.1	564.0	569.2	642.4	674.9	913.1	4,506.7	2.6%

Acct. Nr.	Cost Center	2013	2014	2015	2016	2017	2018	2019	Total	Percent of Total
3006	Internal Audit	754.4	799.9	600.9	621.4	618.5	741.2	789.4	4,925.7	2.8%
3007	Risk Management and Accounts	491.3	531.9	563.3	616.3	777.6	791.3	651.5	4,423.2	2.5%
3008	Corporate Accounting	1.5			214.6	342.2	973.7	1,236.5	2,768.5	1.6%
3009	Officers	4,462.8	6,365.5	5,168.9	7,372.8	9,729.8	13,202.8	9,250.5	55,553.1	31.6%
3010	Internal Communications	765.0	1,311.9	1,257.5	1,047.8	422.8	655.9	716.4	6,177.3	3.5%
3011	External Affairs/Government Relations		0.3	0.1	2.5	2.0		759.9	764.8	0.4%
3012	Investor Relations	242.3	431.6	555.2	326.0	195.4	312.1	326.1	2,388.7	1.4%
3013	Legal	920.2	1,256.5	1,452.2	2,558.4	2,910.8	2,503.1	1,791.8	13,393.0	7.6%
3014	Insurance	306.6	328.7	301.2	325.5	292.6	453.0	667.6	2,675.2	1.5%
3016	Environmental	425.5	461.4	458.2	451.4	607.2	831.5	546.1	3,781.3	2.2%
3017	Tax	464.6	362.2	361.0	389.3	412.9	493.2	729.3	3,212.5	1.8%
3018	SJI Fleet		107.7	102.5	277.4	392.8	509.9	268.2	1,658.5	0.9%
3019	Stakeholder Relations		191.7	30.1	638.5	1,513.4	1,416.2	54.6	3,844.5	2.2%
3020	Corporate Facilities		165.3	147.0	279.2	283.8	192.2	349.0	1,416.5	0.8%
3021	Marketing				556.3	685.8	215.2	17.5	1,474.8	0.8%
3022	IT – Plan		(11.2)	838.9	1,108.4	1,735.8	720.2	446.4	4,838.5	2.8%
3023	IT – Build		593.8	735.1	1,061.4	1,406.2	1,775.7	1,670.9	7,243.1	4.1%
3024	IT – Run			393.5	688.5	688.0	2,738.4	2,173.8	6,682.2	3.8%
3025	Security					171.5	333.0	237.1	741.6	0.4%
3026	Procurement							444.9	444.9	0.3%
3027	Benefits		312.7	642.1	803.4	1,000.0	1,019.8	441.6	4,219.6	2.4%
3028	Labor Relations		322.1	519.2	685.7	676.5	856.5	296.6	3,356.6	1.9%
3029	Recruiting		356.5	398.3	556.0	550.7	646.6	448.5	2,956.6	1.7%
3030	Organizational Develop.		193.0		15.4	488.6	827.3	657.4	2,181.7	1.2%
3031	SJI Sales				131.6	219.7	42.2	14.0	407.5	0.2%
3032	Corporate Development and Strategic Analysis				298.1	713.1	528.8	266.8	1,806.8	1.0%
3033	IT - Report						632.7	229.3	862.0	0.5%
3034	IT - Protect						382.5	342.8	725.3	0.4%
3035	IT - CIO						713.1	930.2	1,643.3	0.9%
3036	Accounts Payable							325.8	325.8	0.2%
3037	Payroll							227.5	227.5	0.1%
3038	Corporate Secretary							2,641.0	2,641.0	1.5%
3040	Executive Compensation and Board. Support						15.0	938.1	953.1	0.5%
3041	HR Operations							299.3	299.3	0.2%
3042	HR Compensation							267.6	267.6	0.2%
3043	HR Business Partners							472.1	472.1	0.3%
3044	IT Managed Costs							1,371.8	1,371.8	0.8%
3045	Innovation and Business Improvement							227.6	227.6	0.1%
3046	SJI Benefits Managed. Costs							7,276.7	7,276.7	4.1%
3090	Elizabethtown					94.9			94.9	0.1%
	Total	**13,795.1**	**17,167.4**	**16,425.4**	**22,846.4**	**28,973.9**	**41,645.4**	**34,757.2**	**175,610.8**	**100.0%**

Over the time covered by this audit, the cost center that accounted for the largest percentage of the Management Service Fee was the Officers' expense cost center. This cost center contributed $55.6 million of the total amount of $175.6 million, or 31.6%. The percentages representing the other cost centers were in single digits.

The Management Service Fee is allocated to SJG and its affiliates based on the annual calculations of the three-factor formula. The annual allocation percentages are shown in the following tables. The Management Service Fee amounts allocated to SJG and its affiliates during the 2013 through 2019 period is shown in the following table.

Management Service Fee Allocated to SJG and Affiliates 2013–2019 ($000)

Company	2013	2014	2015	2016	2017	2018	2019	Total	% of Total
SJG	10,804.4	13,134.8	12,406.1	17,692.2	21,957.2	26,343.2	20,121.0	122,458.9	69.7%
SJESP	493.9	697.0	514.1	504.9	350.4	0.0	0.0	2,560.3	1.5%
SJE	572.5	769.1	703.0	1,087.5	1,317.4	1,771.9	650.0	6,871.3	3.9%
SJRG[1]	769.8	1,071.2	1,294.3	1,384.5	2,304.7	2,575.9	1,897.7	11,298.2	6.4%
ME[2]	1,154.7	1,495.3	1,507.9	2,177.3	3,044.2	4,252.6	1,320.8	14,952.6	8.5%
ETG						6,579.1	10,569.7	17,148.8	9.8%
ELK						122.7	198.1	320.8	0.2%
Total	**13,795.1**	**17,167.4**	**16,425.4**	**22,846.4**	**28,973.9**	**41,645.4**	**34,757.2**	**175,610.9**	**100.0%**

[1] South Jersey Resources Group
[2] Marina Energy, LLC

GAS PRICING POLICIES

This section includes a review and assessment of pricing policies between affiliate interests [e.g., the cost of gas purchased by SJG from South Jersey Resources Group (SJRG) compared to market pricing available and the cost of gas sold to SJRG by SJG]. The review focused on the following three areas:

- Asset Management Agreements (AMA) between the parties
- Off-System Sales (OSS)
- Standard or traditional gas sales by SJRG to SJG.

Asset Management Agreements

AMAs had two components as follows:

SJG released firm transportation capacity for a minimum of a twelve-month period to SJRG and received payment for that capacity that is not limited to a particular maximum. As a safety measure during severe colder than average weather, SJG could call on SJRG to deliver to its city gate volumes up to the daily maximum volumes released. The Call Option is on a daily basis at Gas Daily index prices.

The following exhibit reflects the AMAs in place with SJRG during the seven-year period reviewed in this audit and shows the daily volumes and dollars paid by SJRG to SJG. See Chapter 11, Market Conditions, for a discussion of all AMAs.

Asset Management Agreements with SJRG

Begin Date	End Date	External Name	Daily Volume	Amount Paid to SJG	Payment Mechanism
12/1/2010	10/31/2013	South Jersey Resources Group, LLC	90,000	$390,653.56	Sharing
11/1/2015	10/31/2016	SJRG	10,000	$1,253,140.00	
11/1/2016	10/31/2017	South Jersey Resources Group, LLC	10,000	$1,302,155.75	Sharing

Off System Sales

Utility companies frequently find that they have excess product not otherwise required to serve the core utility load and therefore is available for sale. SJG did sell to its affiliate, SJRG, 3.5% of total OSS volumes over the seven-year period of this audit. The majority of sales were for periods of one day or a few days at a time. Because of the daily nature of the sales, Gas Daily index pricing was applied.

The following exhibit reflects OSS made by SJG to SJRG for periods greater than thirty days. Pricing is based on First-of-the-Month Index Transco Non-New York.

Off System Sales to SJRG

Year	Gross Volume (Dths[1])	Gross Revenue	SJRG Annual Volume from SJG (Dths)	SJRG Annual Amount to SJG	SJRG Average Unit Price	SJRG Percent of Gross OSS
2013	9,684,601	$37,016,219.92	65,900	$256,068.00	$3.89	0.68046%
2014	9,410,579	$47,601,659.95	62,249	$175,185.00	$2.81	0.66148%
2015	14,602,862	$47,966,725.00	923,200	$3,360,764.00	$3.64	6.32205%
2016	16,525,714	$44,302,980.01	1,114,320	$3,912,227.80	$3.51	6.74295%
2017	25,560,075	$87,204,168.91	34,238	$87,245.00	$2.55	0.13395%
2018	13,582,135	$55,675,590.52	1,024,691	$2,983,035.13	$2.91	7.54440%
2019	14,730,625	$49,386,245.24	416,800	$1,038,222.00	$2.49	2.82948%
Totals	**104,096,591**	**$369,153,589.55**	**3,641,398**	**$11,812,746.93**		**3.49810%**
[1] Dekatherms						

Traditional Gas Purchases from SJRG

Base load volumes were not purchased using the prudent purchasing strategies outlined in SJG's Risk Management Policies and Procedures (RMP). In accordance with RMP guidelines, only swing gas could be purchased in the daily gas market. Swing gas volumes are generally limited to quantities needed to handle short-term increases in gas demand that may not be readily handled with adjustments to storage injections or withdrawals. The short-term spikes in gas demand are generally due to weather that could not be anticipated and are referred to as swing gas. SJG ignored the policy in its entirety for the purchase of physical gas. Instead, SJG purchased most of its gas in the day market and spent a great deal more money than it would have if the policy had been followed. Gas Daily Index pricing was applied to the majority of SJG's purchases. Seventy-one suppliers sold to SJG during the seven-year period examined in the audit, though not all were active during each of the seven years.

The following exhibit shows annual volume purchases based on the Gas Daily Index (GD) and First of the Month Index Price (IF) and the difference between daily prices and monthly prices. SJG spent an excess of $149,174,767.7 in gas costs from January 2013 through December 2019. GD was a better value in some months of the 7-year period and off-set the excess spending by $32,245,538.7. This adjustment reduced the excess spending to $116,929,230.14. It's understood that some volumes would be purchased at GD prices as swing gas, the excess spending was reduced by 25% and resulted in overspending of $87,696922.61. SJG's affiliate supplier SJRG realized 28% of the excess spending or $32,496,191 See Chapter 10, Procurement and Purchasing, Finding 10-31, for a list of all suppliers and their percentages.

Annual Cost Difference: Gas Daily vs Monthly Use ($)

Year	Monthly Volume (Dths)	Invoiced Based on Daily Prices	First of Month Index Prices	Difference
2013	657,809.00	(7,114,273.00)	(6,456,464.00)	(4,842,348.00)
2014	17,871,303.00	(50,384,562.00)	(32,513,259.00)	(24,384,944.25)
2015[1]	2,233,832.00	(21,197,461.00)	(18,963,629.00)	(14,222,721.75)
2015[2]	458,522.08	(727,013.54)	(268,491.46)	(201,368.60)
2016	1,876,747.00	(6,424,618.00)	(4,547,871.00)	(3,410,903.25)
2017	5,544,623.00	(8,914,966.00)	(3,370,343.00)	(2,527,757.25)
2018	1,197,920.51	(51,553,370.19)	(50,355,449.68)	(37,766,587.26)
2019	1,880,795.00	(1,587,590.00)	293,205.00	219,903.75
2020[3]	523,986.00	(1,270,914.00)	(746,928.00)	(560,196.00)
Totals	**32,245,537.59**	**(149,174,767.73)**	**(116,929,230.14)**	**(87,696,922.61)**

[1] 2015 Jan–Apr
[2] 2015 May-Dec
[3] 2020 Jan–Jul

B. FINDINGS

9-1 The accounting and allocation procedures for separating costs of inter-company transactions of SJG from affiliates are performed in a consistent and equitable manner.

The procedures for the allocation of common costs among SJG and its affiliates are well established and documented. Training on allocation and time reporting requirements is held on a regular basis for all personnel. Costs are transferred from one entity to another entity within the SJI family of companies based on three cost categories – directly assignable, directly attributable, or indirectly attributable.

Directly assignable costs include most the cost transfers among affiliates. Directly attributable costs benefit more than one entity and are allocated to entities based on some direct measure of cost causation. Indirectly attributable costs benefit more than one entity and are allocated based on general measures of cost causation, such as the Management Service Fee.

The Management Service Fee was utilized to allocate costs from SJI to all of the affiliates, including SJG. Over the 2013 through 2019 period, 35.8% of all SJI charges to SJG came via the Management Service Fee as shown in the following exhibit.

Management Service Fee (MSF) as Percentage of SJI Charges to SJG ($000)

Description	2013	2014	2015	2016	2017	2018	2019	Total
MSF allocated to SJG	10,804.4	13,134.8	12,406.1	17,692.2	21,957.2	26,343.2	20,121.0	122,458.9
Total SJI charges to SJG	30,115.7	29,512.2	45,071.7	53,058.0	60,223.4	50,834.9	73,115.7	341,931.6
MSF as Percentage of SJI Charges	35.9%	44.5%	27.5%	33.3%	36.5%	51.8%	27.5%	35.8%

9-2 Allocations of joint/common costs between SJG, SJI, and their affiliates during the seven-year period of this audit are consistent and accurately reflect the documented and reported methodology.

Common costs that cannot be directly attributed to affiliates are collected in a general allocation pool for eventual allocation to the final receiving companies. This would include labor costs as well as non-labor costs from a multitude of SJI cost centers, totaling $175.6 million from 2013 through 2019 as shown earlier in this chapter in the exhibit titled "Management Services Fee by SJI Department." SJI uses a three-factor formula to distribute the costs from this general allocation pool to the receiving companies.

The three-factor formula computes the weighted average of each company's percentage of assets, margin (total revenues less total cost of sales), and payroll. To calculate the weighted average, the percentage relationship of the assets, margin, and payroll for each affiliate are summed and divided by three. The calculated formula percentages for 2013 through 2019 are shown in the following exhibit.

Management Service Fee Percentages for SJG and Affiliates 2013–2019

Company	2013	2014	2015	2016	2017	2018	2019
SJG	78.32%	76.51%	75.53%	77.44%	76.67%	53.15%	57.89%
SJESP	3.58%	4.06%	3.13%	2.21%	1.99%		
SJE	4.15%	4.48%	4.28%	4.76%	4.65%	3.44%	1.87%
SJRG	5.58%	6.24%	7.88%	6.06%	8.07%	4.92%	5.46%
ME	8.37%	8.71%	9.18%	9.53%	10.61%	10.09%	3.80%
ETG						27.88%	30.41%
ELK						0.52%	.57%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

For the 2013 through 2017 time period, SJG received an average of 76.6% of the MSF allocations from SJI based on the three-factor formula calculations. After ETG and ELK were acquired in 2018, the allocation of MSF to SJG in 2018 and 2019 dropped to 53.15% and 57.89%, respectively.

Calculations of the three-factor formula were verified from balance sheet data through resulting allocation amounts. No errors in the calculations were identified. The allocations of joint or common costs among affiliates, including SJG, appear to be correct and consistent with the stated methodology and procedures as documented in SJG's Cost Allocation Manual (CAM) and as reported to regulatory authorities.

9-3 The potential for cross-subsidization is minimized by effective time reporting policies and procedures.

All employees of SJG, SJI, and their affiliates are responsible for accurately reporting time and for following their company procedures and associated accounting requirements. For all individuals, standard time sheets are used to report time. Three methods of distribution are used to apportion wages and salaries of employees: positive time reporting, exception time reporting, and time reporting based on the number of transactions completed.

SJG's CAM specifies that all employees of SJG, who provide services to any affiliate of SJI, including one another, and all employees of SJI and non-regulated affiliates who provide service to SJG must complete a time report indicating the assignment of their time among affiliates. The CAM also specifies that SJG's time reporting procedures comply with Section 6-3(a) of the Affiliates Standards Regulations which state:

> *All electric and/or gas public utility employees who are directly involved in the provision of noncompetitive services as well as competitive services, or who are involved in the provision of more than one competitive service, must maintain complete and accurate time sheets to track and record the amount of time spent in the performance of each service. For those employees' who travel to remote or customer locations in provision of competitive service, time sheets shall account for and allocate time to the competitive service job, as well as the time spent performing related diagnostics, repair and/or installation, and allocated share of downtime.*

Training, along with periodic reminders, is provided annually emphasizing the importance of accurate time reporting and how to report time accurately. Time worked on behalf of an affiliate is compiled and charged to that affiliate monthly as reported on the time sheets. Actual employee wage rates are used to price out the hours of service provided, and employee benefits and related costs are added to the direct labor costs billed to the affiliate and are adjusted periodically to reflect actual costs. Additional discussion on time reporting is contained in Chapter 16, Payroll Reporting.

The policies and procedures governing the appropriate recording of employee time serves to minimize opportunities for cross-subsidization among SJG and its affiliates.

9-4 Affiliate charges and cost allocation methodologies among SJG, SJI, and their affiliates comply with applicable legal, regulatory, and contractual requirements.

SJG's transactions with its affiliates are governed by a number of requirements that are enumerated in three SJI affiliate relations and transactions documents:

- Affiliate Relations, Fair Competition, and Accounting Standards and Related Reporting Requirements Compliance Plan
- Cost Allocation Manual (CAM)

- Procedure for the Allocations, Recording, and Invoicing of Affiliated Company Transactions – Cost Allocation Manual

In turn, these rules and company requirements are based on New Jersey's Electric Discount and Energy Competition Act (EDECA) and its implementing regulations (the Affiliate Standards Regulations). These state regulations require that the transfers of goods and services from SJG to its affiliates be priced at fully allocated costs and that goods or services transferred from affiliates to SJG be priced at the lower of fully allocated cost or fair market value. The affiliate charge and cost allocation methodologies employed by SJG, SJI, and their affiliates comply with regulatory requirements as set forth in the SJI documents and the New Jersey regulations.

9-5 The AMA buy-back volumes called on by SJG at their city gate were purchased at market index prices.

There are not a variety of pricing options when gas is purchased daily at the city gate. Gas Daily publishes gas prices daily at a particular geographic point. Gas daily index prices were applied to the AMA called upon volumes by SJG.

9-6 The AMA dollars paid for the assignment of firm transportation by SJRG are lower than expected for the 90,000 Dths per day.

The term for the 90,000 Dths per day capacity assignment was for thirty-six months effective November 2010. For a complete assessment, the entire period should be reviewed. Since this audit covers the period January 2013 through December 2019, only one of the three years of this assignment were reviewed.

The profit-sharing mechanism is 75% of the difference between Transco Non-New York index and Dominion South point index plus nine cents. For gas hauled north and west, the profit-sharing mechanism will be the difference between Leidy index and Dominion South Point plus three cents.

9-7 OSS sales by SJG to SJRG were priced at market rates.

Daily sales or sales made for a few days at a time represent excess gas due to milder weather conditions that could not be identified in advance of the day or month. Gas Daily publishes pricing on a geographic point basis and is the most reliable pricing available.

9-8 SJG made OSS sales to SJRG for periods greater than thirty days.

Sales made in advance of the flow month can be priced at first-of-the-month index pricing and is a reliable method of pricing supplies. An OSS commitment of any amount of firm transportation capacity to the utility city gate for one whole month or multi-months that affect the winter period November through the following March can compromise SJG's ability to supply its core customers. The winter period is subject to critical cold weather and OSS sales are final and without recourse.

9-9 SJG purchased in the Gas Daily Market from many suppliers including their affiliates.

The affiliates sold the greatest percentage of total volumes to SJG. Over a period of seven years, SJG established a buying pattern and any supplier who could anticipate the daily purchases by SJG could plan to have volumes on hand to support those volumes and make a sizeable profit.

SJG purchased its base load and its storage injection gas volumes in the monthly and daily markets The following exhibit reflects gross annual purchased volumes of 357,837,201 with a separation that reflects 195,100,836 of volumes purchased in the daily market. Approximately 17% of those gross volumes was purchased from SJRG and SJ Energy and 32% of the volumes purchased in the daily market was purchased from SJRG and SJ Energy. SJG purchased from many other suppliers over this audit period but was in no way dependent on their affiliates. Purchases were priced at the appropriate index with a plus or minus to the index if appropriate. The same method of pricing was applicable to all other suppliers. The affiliates of SJG do not own gas in the ground; therefore, the affiliates are not exceptional or unique in any way other than the fact that they are an affiliate.

Volumes Purchased from Affiliate

Year	Volume Purchased	Gas Daily Volume	Percent Gross Vol / Gas Daily	SJRG Sales	SJRG Percent Gas Daily Vol	SJRG Percent Gross Vol
2013	41,575,834	33,101,376	79.62	29,339,192	88.63	70.57
2014	42,491,309	34,970,707	82.30	2,936,972	8.40	6.91
2015	22,777,477	20,682,072	90.08	3,813,423	18.44	16.74
2015	22,576,842	10,758,323	47.65	3,955,697	36.77	17.52
2016	47,036,195	23,540,615	50.05	5,213,481	22.15	11.08
2017	56,118,863	20,675,941	36.84	5,064,558	24.49	9.02
2018	49,716,907	21,801,430	43.85	5,122,922	23.50	10.30
2019	48,819,195	19,205,451	39.34	4,359,162	22.70	8.93
2020	26,724,579	10,364,921	38.78	2,086,589	20.13	7.81
Totals	**357,837,201**	**195,100,836**	**54.52**	**61,891,996**	**31.72**	**17.30**

C. RECOMMENDATION

9-1 SJG should not make non-recallable transportation capacity commitments for city gate capacity for more than a few days at a time during the winter period of November through the following March. (See Finding 9-8)

SJG is making commitments where a portion of firm transportation capacity is transferred to others without recourse and cannot retrieve the transportation capacity to meet its utility load. The firm transportation capacity was contracted for by SJG based on a study by their Load Forecasting Department which determined the level of firm transportation capacity required to serve the coldest possible day. Should that severe cold day present itself, SJG would not be able to call on the transportation capacity bundled into the OSS sale.

10. PROCUREMENT AND PURCHASING

This Chapter is presented in nine sections:

A. Gas Control
B. Load Forecasting
C. Infrastructure Required to Initiate the Procurement Function
D. Reliability
E. Gas Procurement Strategy and Plan
F. Financial Hedging Products
G. Findings
H. Recommendations

A. GAS CONTROL

BACKGROUND

South Jersey Gas (SJG) is a natural gas utility in business for over a hundred years. It delivers natural gas to more than 398,000 residential, commercial, and industrial customers. SJG's service area covers over 2,500 square miles; that's one third of the geographic area of New Jersey. SJG's service area covers the seven southernmost counties of New Jersey and includes all of Atlantic, Cape May, Cumberland, and Salem counties and parts of Burlington, Camden, and Gloucester counties. SJG owns and operates the pipes in the ground within their geographical footprint.

As a natural gas utility, SJG must act in accordance with numerous requirements from several regulatory agencies including the New Jersey Board of Public Utilities (BPU) which oversees the regulated utilities within the state and the Federal Energy Regulatory Commission (FERC), which regulates the interstate transmission of natural gas and the transmission and sale of natural gas for resale in interstate commerce.

All utility companies must file a tariff that is approved by their public utility commission. The terms and conditions of service are governed by the tariff. All rates and charges are also governed by the tariff.

THE GAS CONTROL GROUP

The SJG Gas Control Group (Gas Control) controls the physical flow of natural gas and the electronic measurement and monitoring of that gas as it enters SJG from interstate pipelines on the acquisition side, travels through the distribution system, and is delivered to a burner-tip user.

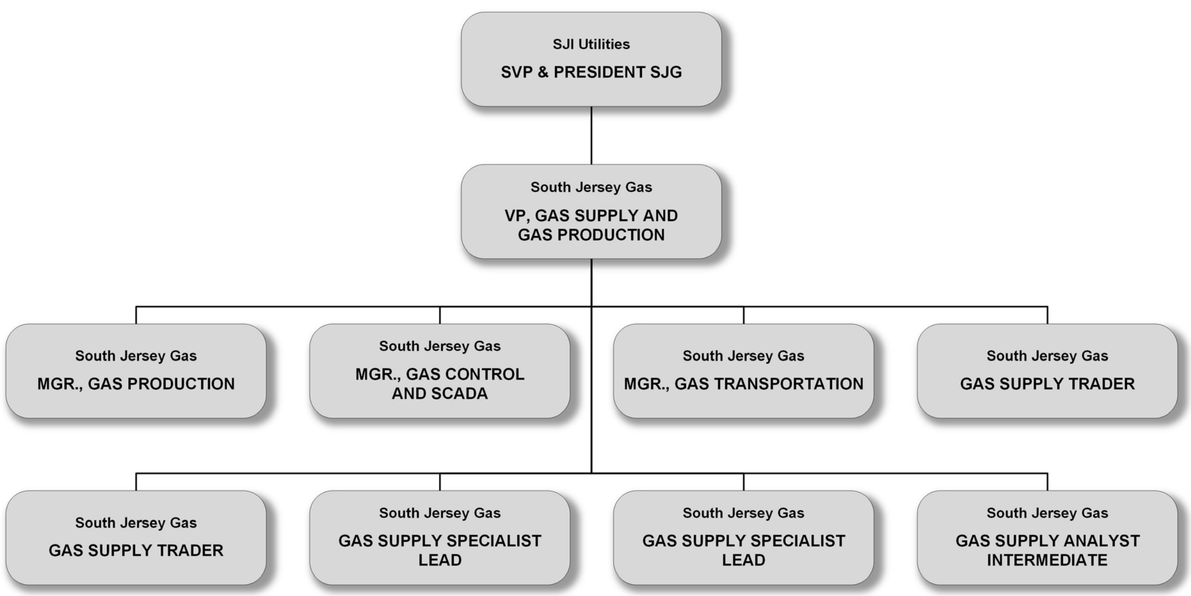
Gas Control monitors line pressures through its Supervisory Control and Data Acquisition System (SCADA). If a line pressure exceeds operating parameters, an alarm is activated. Gas Control initiates immediate actions to protect the natural gas system or, at least, to minimize potential damage. Gas Control is responsible for controlling the primary regulator valve which manages or restrains the receipt of gas supplies into the system. All secondary control monitors are set in the field and cannot be changed remotely but must be manually changed by field personnel. The SCADA system was recently upgraded starting in 2019 and completed in 2020.

This system was designed to ensure that SJG's distribution system cannot be accidentally over-pressurized by ten percent or more due to an unforeseen event (e.g., a cybersecurity incident, operator mistake). This design also guarantees that if there is a failure of one valve, the secondary backup run will take over to protect against under-pressurization. Gas control staff also have the ability to close remote shutoff valves if, due to an emergency, a segment of pipe needs to be isolated. In these situations, field presence is required to re-open the valves.

Additionally, Gas Control monitors alarms for SJG, Elizabethtown Gas Company (ETG), and the two liquified natural gas (LNG) plants when they are unmanned. Gas Control is not responsible for, nor does it have the ability, to control any field equipment at either of the LNG plants. Their sole responsibility is calling the Duty Supervisor if there is an alarm after hours.

SJG has two separate geographical locations; one in McKee City and the second located in the Millville Divisional Facility in Millville, NJ. Traditionally, the primary facility was McKee City with all Gas Control staff members reporting directly to McKee City. Millville was a backup control center used in emergency situations (e.g., pandemic, fire, flooding, disaster recovery testing). SJG Gas Control organization is shown in the following exhibit.

SJG Gas Control Organization Structure



In response to the COVID-19 pandemic, the Company separated the staff members into two groups: one group working from the McKee City facility and the other group working from the back-up Gas Control site in Millville. The Company anticipates operating both control facilities for the foreseeable future. The SCADA systems used in McKee City and Millville are identical. Gas Controllers at both facilities have the ability to see the same signals and data at the same time. The two Gas Control facilities combined have the responsibility to monitor ETG and SJG utilities.

Because of the critical nature of this responsibility, Gas Control operates 24 hours each day, every day of the year. The complete staff consists of seven trained gas controllers, one member in training, and one manager. SJG utilizes one Gas Controller per night shift. Seven of the gas controllers are union employees (i.e., members of the SJG Bargaining Unit). Gas Controllers undergo a 120-day training period; their performance is evaluated at the 30, 60, and 120-day points by Gas Control Management before final approval. SJG has no minimum educational or training requirement to become a gas controller.

Current SCADA security plans prevent entry of unauthorized personnel to either Gas Control facility. Both locations have badge-only access. Staff have their own SCADA credentials which are monitored and audited internally by the Information Technology (IT) Department. Operator qualification is required to make any changes to the SCADA system. All field equipment is kept in a locked combination box, and critical sites are monitored internally using security cameras.

If the primary and backup SCADA systems both become inoperable, Pipeline Field Measurement Technicians will deploy to SJG transfer custody transfer stations and any other locations deemed critical. All field technicians are equipped with company cell phones and truck radios. Gas control is equipped with an emergency cell phone, backup dispatch radio center, and a satellite phone to be utilized during an emergency. The Gas Control department has all the necessary media devices to communicate with field personnel in the event the SCADA systems become inoperable.

SJG has extensive natural gas infrastructure including city gates, transmission and distribution pipes and regulator stations, an LNG plant, and customer service lines and meters. It also has multiple facilities including South Jersey Industries, Inc. (SJI) and SJI Utilities, Inc. (SJIU) and SJG headquarters, five division work centers, payment centers, and a pipeline work center. All are vulnerable to security incidents such as terrorist attacks, property damage, and theft. The SCADA System provides video surveillance of 16 transmission and distribution stations with a few cameras on each station. Should intruders be detected, Gas Control notifies the affected division and/or the standby supervisor.

There is a separate security function at the SJI level serving SJI and its regulated and unregulated subsidiaries. Like most support functions, security is largely performed by contractors. The head of security, the Security Specialist Lead, reports to the SJI Vice President, Shared Services. The Security Specialist Lead has two direct reports, a half-time Project Assistant, and a Senior Security Specialist.

In 2019 and 2020 there were a total of 14 instances of armed guard dispatches half of which were related to employee terminations and the remainder were due to suspicious circumstances that did not rise to involvement with law enforcement. A contractor provides uniformed, unarmed guards at the Atlantic City, Folsom, and Union Headquarters. No other sites are staffed with guards, including division work centers, payment centers, and satellite offices. The contractor also provides for the dispatch of armed security for ad hoc reasons, such as a hostile employee, site surveillance, or suspicious circumstances. Emergency situations are referred to the local police.

The number of instances over a two-year period is reasonable. A contractor provides alarm, access control, and video installation and maintenance. The contractor also does alarm monitoring for SJI and SJG, but not ETG, at eight facility sites. The contractor refers calls to the Utility Services dispatchers who refer them to the call out list from SJG operations.

Two different contractors develop and implement security exercises. For example, one of the contractors provided a simulated intruder exercise for an SJG division and the other provided a security exercise at a transmission pipeline regulator station. A third contractor does security assessments and plans as needed.

SJI has an incident tracking system that is shared with the Environmental and Safety departments that allows employees to enter a security incident which is then automatically routed to Security for review and investigation. However, Security relies on a spreadsheet with manual inputs for incident tracking.

SJI's Physical Security Committee meets quarterly. Agendas are sent with the email invitations. Formal presentations are prepared, and minutes are kept.

SJI and SJG have a formal, current, confidential Physical Security Plan. It follows the Transportation Security Administration (TSA) Guidelines for natural gas pipeline security plans. The plan calls for a wide variety of security measures including fences, locked gates, locked valves, security lighting, video surveillance, 24-hour monitoring, door alarms, warning signs, and back-up power supplies. Important facilities and critical above-ground stations are identified for enhanced security. The plan also specifies responsibilities, responses to security incidents, directions related to police involvement, and the approach or steps to be taken if terrorist activity is suspected.

SJI also has formal, current, confidential security policies and procedures covering anti-violence, contractor background, vehicle transmitter gate access, and identification badges/key cards.

The SCADA system suffered cybersecurity breaches during the past seven years. To manage the cybersecurity issue long term, SJI created a new function called IT Protect to continue focusing on and maturing the cybersecurity function. The team continues to grow. Many steps have been taken to identify, protect, detect, and respond to these types of incidents. Listed below are some of the steps taken:

- Implemented a Security information and event management solution. The solution is managed and supported by a third-party Managed Security Operations Center operating 24 hours a day, seven days a week.
- Implemented a cybersecurity training and awareness program that includes simulated phishing exercises and tests. Additionally, role-based training is provided to staff members with access to SCADA.
- Implemented a strategy to segment the SCADA network from the corporate network and the internet.
- Partnered with SCADA software vendor to provide patching services.
- Engaged a third party to perform a yearly cybersecurity risk assessment on SJI from 2016–2018 and 2020.

- Implemented a best-in-class Secure Email Gateway.
- Implemented a NextGen Intrusion Prevention System (IPS).
- Developed a cyber incident policy and plan.
- Engaged in information sharing practices with federal and state agencies, as well as trade associations and peers.

The SCADA system houses historic weather data together with wind factors and current forecasts on an hourly/average estimate basis. A utility curve file is maintained where, as part of a large set of data, the historic set of utility factors per degree day is evaluated for a similar weather scenario and included in the work in progress calculation sheet. The near-term gas procurement function depends on advice and guidance for the near-term gas planning associated with volumes required to meet upcoming demand. Knowing the weather conditions that are expected and the historic consumption experienced in the past under such degree-day scenarios is the foundation for a reliable procurement plan.

SJG holds firm transportation capacity on the interstate pipelines Transcontinental Pipeline (Transco) and Columbia Gas Transmission (TCO). Both Transco and TCO own their own gas measurement meters that measure the gas they deliver to SJG. SJG has its own gas measurement meters controlled by Gas Control. A comparison of SJG's measurement to the measurement data provided by the interstate pipelines is performed. Comparison reports are completed daily for the purpose of checking the accuracy of meters. If the results exceed +/-2%, a measurement staff member investigates and takes the appropriate action to resolve the faulty measurement. Point-to-point verifications are performed any time a system point is added or changed. Upon review of annual measurement data, the difference between both sets of measurement is generally less than one half of one percent.

SJG's Gas Control is responsible for not only receiving the volumes from each pipeline on a daily basis, but also, for receiving the correct volumes. Generally Operational Balancing Agreements (OBA) are in place with each interconnecting pipeline, upstream and downstream on both pipeline systems. This is a common practice between pipelines because of the inability of control equipment to flow rates that are a perfect match to expected volumes. In an ideal operating world, running balances are resolved between the pipes and are not passed through to any other party (i.e., supplier or end-use customer). This practice allows both pipelines, upstream and downstream alike, to rely on the scheduled volumes that are confirmed daily by the Gas Procurement Group.

B. LOAD FORECASTING

THIRD-PARTY SUPPLIERS IMPACT THE GAS LOAD

End-use customers within SJG's territory can choose a third-party supplier (TPS). SJG must calculate its own system supply load and must also consider the migration of customers to TPSs and the ever-changing customer base.

The process for a natural gas TPS who wants to serve residential, commercial, and industrial customers in SJG's service territory begins with their agreement to operate in compliance with the New Jersey Board of Public Utilities' (NJBPU) TPS Standards and rules. When the licensing process with the NJBPU is complete, the TPS must begin the

SJG utility eligibility process. The SJG Gas Supply Department coordinates the application and initiation process for a new TPS to serve customers on SJG's system. This process includes the application, submission, and execution of forms and agreements. The completed documents are reviewed by SJG's Legal, Risk, and Executive teams prior to final approval as a new marketer.

Once the TPS is approved; the TPS can enter into agreements with individual or groups of SJG customers and enroll them with the SJG utility system. For residential and commercial customers, enrollment is done via electronic data interchange (EDI). The TPS policies and procedures are not the same for all customer rate classes because SJG offers a special type of administrative assistance to TPSs serving commercial and residential rate class customers; therefore, the application has additional paperwork.

Through December 2019, 46 TPSs were active in SJG's territory.

Types of End-Use Customers:

There is a mix of customers within every local distribution company's (LDC) footprint and various types of services are available to fit the needs of all customers which are billed at various rates. SJG's customers are separated into various groups based on the type of service provided by SJG and other factors, as discussed below.

SJG has approximately 100 large industrial customers. All 100 are large consumers that purchase from independent TPSs.

There are approximately 160 customers who qualify as General Service Gas (GSG) customers; 40 of those customers elected to stay with SJG.

Residential and very small commercial customers are on the low end of consumption. As of October 2020, approximately 15,000 residential and small commercial customers were purchasing from TPSs.

Essential customers, such as hospitals, prisons, and industry types necessary to the community, are considered more important than some other industries. Although they may have chosen to use a TPS; SJG is considered the supplier of last resort and must be able to serve them if the TPS fails to deliver.

Fuel switchable customers are in a separate classification because they are not 100% dependent on natural gas. These types generally stay with Interruptible Transportation Service (ITS) on SJG. The nature of ITS is such that SJG can, at its sole reasonable discretion, deem sufficient gas supplies to be available for said service. Service may be interrupted or curtailed at the sole option of the Company after not less than three hours advanced notice by telephone or otherwise. ITS customers are not required to maintain alternate fuel capability. However, all ITS customers must file a Certification with SJG indicating either the customer's alternate fuel or the customer's agreement to discontinue operations during an interruption of Rate Schedule ITS service. Currently, there are asphalt customers and apartment buildings using ITS. If the TPS fails to deliver the gas or SJG interrupts or curtails, SJG is not obligated to step in as the last resort supplier.

Customers who choose a TPS are obligated to negotiate the terms and conditions of their supply arrangement. SJG does not release or assign any of its firm transportation capacity to a TPS for delivery to its city gate on behalf of SJG's end-user customers. It is the obligation of each TPS to find its own transportation and to nominate the gas to SJG's city gate.

After the TPS delivers the commodity to SJG's city gate SJG will accept the gas and deliver it to the end-use customers.

Larger consumers are generally industrial loads, and the smaller loads are mostly small commercial and residential types that qualify for a CHOICE Program. A TPS, although not obligated, can create a pool that aggregates all other customers that the TPS serves excluding those customers that qualify for a CHOICE program. For the purpose of supply and nominations, pooling reduces the administrative tasks. However, single/individual nominations are permitted for those customers who choose to manage their own accounts or for TPSs who choose not to aggregate. The process allows a TPS to have a pool for its Choice customers, a pool for larger customers, and to nominate for individual customers separately.

Some of the larger customers have electronic measurement capability, therefore the TPS has the ability to see the consumption of the commercial/industrial customer on an hourly/daily basis and provide accurate supply so that imbalances are eliminated as soon as created or shortly thereafter. If an imbalance exists at the end of the month, it will be cashed out in accordance with SJG's tariff provisions. Cash-out means that SJG will purchase the over-delivered volumes or sell the under-delivered volumes to the customer.

CHOICE Programs:

NJBPU permits all natural gas utilities in their state permission to offer residential customers and other small natural gas consumers a choice of gas suppliers referred to as the CHOICE Program. SJG allows the residential customers in their geographical footprint a CHOICE Program that offers the small energy customer the option to purchase their natural gas from a TPS. SJG will accept the supply from the TPS at the SJG's city gate and deliver the gas through its distribution system to the residential customer and SJG will continue to provide the same reliable service, read the meter, perform safety checks, and respond to emergencies. TPSs are required to execute an Aggregator/Marketer Agreement (AMA) with SJG. The AMA provides a pooling concept

where the TPS pools or accumulates all the small natural gas consumers that the TPS has contracted with. Special AMA features are discussed below.

Unlike services offered to larger customers, SJG offers a valuable billing service that incorporates the invoice for the TPS on the SJG invoice. Customers can receive a single bill from SJG that includes both charges from SJG and from their TPS. This is known as utility consolidated billing. The consolidated billing costs approximately 90 cents per invoice in addition to all other costs from SJG and the TPS. TPSs are not obligated to use the consolidated billing option. Dual billing is also an option.

All TPSs on SJG's system that serve CHOICE customers have chosen consolidated billing services, which requires a billing service agreement. This agreement is the legal document that allows SJG to be the billing agent. The agreement outlines the following items:

- Bi-monthly reimbursement for the total amount all customers were billed.
- Fees associated with the billing services and adjustments made to all customer bills.
- Presentation of the TPS's commodity charges and SJG's distribution charges on one bill.
- Electronic enrollment, changes, or discontinuance of service and customer information.
- Communication of the monthly meter reading schedule to ensure marketers know when each cycle is billed.
- Communication and resolution of customer disputes.

Unlike services offered to larger customers, SJG offers an agreement for the Purchase of Receivables (POR) associated with all customers under the CHOICE option. Features are as follows:

- SJG provides an additional option to TPSs – an offer is made at 100% of its face value. Marketers receive payment for the dollar amount each customer is billed. Any shortages are absorbed by SJG via the terms of the billing services fee.
- SJG assumes the risk for the receivable due from a transportation customer under the CHOICE POR option.
- Imbalances applicable to the smaller energy consumers participating under the CHOICE programs are resolved after the winter season is over.

SYSTEM LOAD

This section addresses the load forecasting processes and objectives SJG uses to estimate its natural gas requirements for distribution. The gas load being served by TPS must be known so that SJG may accurately estimate the load that remains for SJG to serve.

Purpose

The purpose of forecasting the volumetric requirements for any distribution company is to ensure that the correct volumes are estimated for transportation capacity and procurement intentions. Firm transportation is contracted to provide for a design day (a design day is the coldest day possible); supply is committed for months or possibly years into the future, as well as monthly and daily. Firm transportation capacity to support the firm delivery obligations must be reserved and committed to in advance, and such contracts often extend for as many as 15 or 20 years into the future.

Additionally, the volumetric load must be separated into geographic segments. It is necessary for supply to enter SJG's territory at different points so that gas can be effectively distributed to the appropriate geographic locations. Pipelines are selected based on many variables, but the various routes they travel are primary and fundamental. The natural gas supplies must be purchased independently of the transportation component; therefore, accurate volumetric estimates are necessary to support the needs of the consumers.

The forecasting process is based on the volumetric requirements for a “design day.” The simplest definition of a design day is one that is determined by the coldest day and the highest consumption day experienced by SJG during the recent ten-year period. The study adjusts for changes in SJG’s end-user base between the coldest day selected from the past and the current portfolio of end-use customers. Anticipated growth or decline expected in the future is also taken into consideration. More specifically, the design day is the coldest day on which the highest amount of natural gas was consumed, adjusted for changes in load growth or decline. As with any distribution company, SJG is expected to perform regardless of weather conditions. As such, an appropriate amount of assets must be contracted for to meet that obligation. Pipeline transportation, storage, local and long-haul supply, and peaking services are based on the design day model.

SJG’s load forecasting process is supported by a third-party consulting firm. This group performs analytical work to base a forecast for a 10-year period of system load at normal and design day weather.

The inputs for this modeling process include SJG’s own system load with actual consumption data broken by class, 24-hour weather and wind data from the closest locations to SJG’s Atlantic City and Philadelphia stations, and a set of thirty Moody’s macroeconomic and demographic variables. A multiple regression-based statistical analysis supported by the Forecast Pro modeling system is used. For the 2010–2020 period, a normalized Peak day set at 20 degrees was established. A two-degree second study was also performed that used a normalized Peak day set at two degrees for the period based on the top five peaks days between 2017–2020 design days. Natural gas utilities are expected to provide natural gas to customers on an extreme cold weather day called the design day. Therefore, SJG must be able to transport gas supplies from the well head to the city gate on a guaranteed basis known as Firm Transportation Service (FTS). Interstate pipelines warrant that they will make Firm Transportation Services available on every day of the contract unless prevented by an act of Force Majeure. SJG will experience many winter days that are not categorized as a design day and may vary from 2 to 20 degrees leaving SJG with unused transportation assets. Daily usage projections for lesser temperature days are developed based on studies of historic usage on such days.

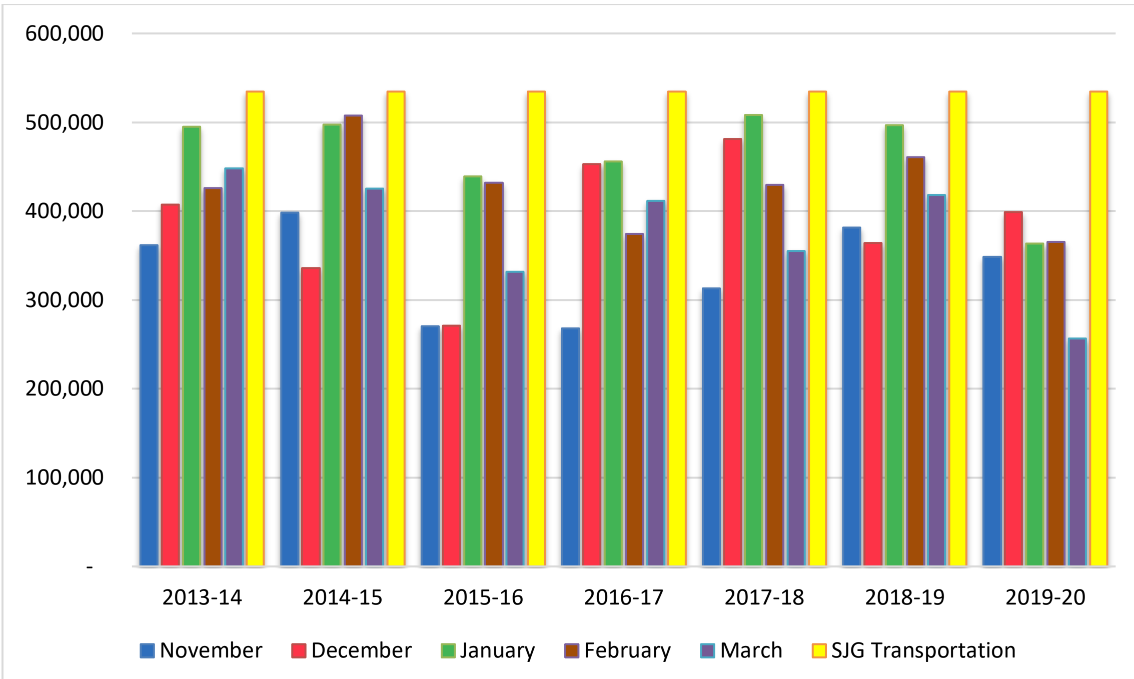
The third-party consulting firm projected the Sales Forecast to have a Compound Annual Growth Rate (CAGR) of 1.75% between 2020 and 2029. This load growth equates to 8,251 Dths in added load from 2019 to 2029. Temporary and potential longer-term gas consumption has been significantly influenced by local weather and economic factors. The current pandemic also influenced historical sales. Over-all, New Jersey is experiencing warmer weather patterns. The impact will become more evident over time. Using pre-COVID-19 model structures will begin to offer insights into how the ultimate recovery and acceleration is occurring.

Activities that Impact Volumetric Load:

SJG Distribution System’s gas load changes over time due to the loss of industrial loads and energy conservation initiatives. These initiatives include customers installing energy efficient appliances and the work completed in SJG’s Conservation Incentive Program. Many of SJG’s pipelines were replaced, and replacements are anticipated to continue well into the future. SJG evaluates each proposed project, predicated on long-term load forecasts, to anticipate what the surrounding area might look like in the foreseeable future.

While SJG prepares for a design day, such conditions will not be experienced regularly. Therefore, more average and colder-than-average conditions are anticipated. A comparison of transportation assets to actual monthly consumption is reflected in the following exhibit.

Comparison of SJG Transportation Assets to Actual Consumption



SJG Single Highest Day Burner Tip Sendout Volumes (Dths) November–March for 2013–2020							
	2013–14	**2014–15**	**2015–16**	**2016–17**	**2017–18**	**2018–19**	**2019–20**
November	361,369	398,412	270,403	268,006	313,248	381,224	348,407
December	407,412	335,583	270,897	452,605	480,820	364,296	398,944
January	495,056	497,275	439,055	456,072	508,397	496,589	363,304
February	425,805	507,219	431,864	374,140	429,363	460,746	365,512
March	448,091	425,264	331,517	411,725	54,833	417,767	256,279
SJG Transportation*	534,360	534,360	534,360	534,360	534,360	534,360	534,360

* In addition to the volumes stated in this chart, SJG has Peaking Services for deliveries of 20,000 Dths per day for ten days and a second Peaking Service for a gross annual volume of 363,000 Dths.

FIRM TRANSPORTATION SERVICES

Transportation is the vehicle that moves the gas from the receipt point in the supply areas to SJG's city gate. The method of transportation must be the most dependable and secure that is available in the marketplace. The nature of Firm Transportation Service (FTS) is that SJG pays a reservation charge to the interstate pipeline to reserve space on that pipeline every month so that SJG can then call upon that space, as necessary. The FTS contract specifies a specific volume of gas at a particular geographic receipt point to be delivered to SJG's city gate for a specified period of time. At the onset of each month or each day, SJG must place a shipping order with the pipeline that instructs it as to who the supplier is and other particulars so that the pipeline can effectively accept the supply and deliver the gas to SJG. FTS contracts are made to ensure that SJG has gas deliveries to its city gate on a guaranteed basis every day. SJG contracts that fit the FTS grouping are as follows:

- Transco 128,651 Dths per day long-haul from receipt point CS65 to SJG
- Transco 2,264 Dths daily long-haul from receipt point CS65 to SJG
- Transco 41,608 Dths daily long-haul from receipt point Leidy Zone 6 to SJG
- Transco 3,002 Dths daily long-haul from receipt point CS65 to SJG
- Transco 17,433 Dths daily long-haul from receipt point Leidy Zone 6 to SJG
- Transco 105,000 Dths daily long-haul from receipt point CS 210 Zone 6 to SJG
- Columbia 22.511 Dths daily from Col Gulf in KY to SJG
- Tennessee 78,000 Dths daily from Gibson in Pa to Milford in PA
- Columbia 70,000 Dths daily from Milford in PA to SJG
- Columbia 9,000 Dths Daily from Milford in PA to SJG
- Dominion 10,000 Dths daily from South Pool to Transco Leidy

Besides FTS, there are two other types of firm services as follows:

Firm Storage Service (FSS) where gas is injected into storage effective April 1 through October 31 of each year and withdrawals are effective November 1 through March 31 of each winter season.

- Columbia FSS provides for withdrawal of a maximum of 52,891 Dths effective November 1 through March 31 of each winter season.
- Transco storages provide for city gate withdrawals of a maximum of 72,584 Dths per day effective November 1 through March 31 of each winter season.

Notice Transportation Service (NTS) does not allow customers to receive gas on demand to meet peak service needs without paying daily balancing and scheduling penalties or having supply in place to support the service. This type of service assists with surprise weather conditions where all the FTS is scheduled and the burner-tip demand is elevated. The supply can be replaced at a later date. NTS has the same type of reservation monthly charges and is more expensive than FTS. SJG contracted for 22,511 Dths daily of NTS service on TCO to be delivered to SJG's city gate.

LIQUIFIED NATURAL GAS

Liquified Natural Gas (LNG) is available to SJG as a Peaking Service. This service is available when called upon for a certain number of days and has a monthly reservation charge. LNG is intended to service the coldest days during the winter season.

The liquefaction process takes place at the end of the summer period so that winter can be approached with a full tank. However, liquefaction can take place during the winter season, if necessary.

Technically the SJG LNG facility could deliver 110,000 thousand cubic feet (MCF) for approximately 3.3 consecutive days. Historically, the highest delivery for any one day was approximately 70,000 MCF. In practice, withdrawals are closer to 30,000 – 35,000 MCF when called upon for a day. In order to convert MCF to Dths a BTU factor of 1.085 is used for SJG's LNG facility. Example, 30,000 MCF becomes 32,550 Dths.

A second LNG Peaking Service is available to SJG referenced as Tioga LNG. Technically the Tioga LNG facility could deliver 20,000 MCF for approximately ten consecutive or individual days. The gross capacity available to SJG is 200,000 MCF.

CREDIT

Dependable natural gas suppliers that own sufficient natural gas assets are fundamental for the procurement of natural gas. It is the policy of South Jersey Industries, Inc. (SJI) and its subsidiaries to develop credit guidelines in order to extend credit to customers and counterparties involved in the purchase and sale of natural gas at the retail and wholesale level. Credit is evaluated for all suppliers/vendors of physical gas. The credit evaluation does not discriminate between those suppliers who may be selling to SJG as opposed to entities that SJG may sell to. An investigation into the financial health/wealth of each supplier includes the following:

- Audited financial with balance sheets, cash flow statements, inventory turnover rates, debt structure, management performance, market conditions, and similar data is presented to SJG by the supplier.
- All financial instruments and evaluation tools available in the marketplace are used. Dunn & Bradstreet, S&P Global, and Fitch Tools provide forward-looking insights as well as in-depth information. These tools and products allow risks to be identified, credit trends understood, and data leveraged for success in today's complex markets.
- An upper credit limit is established for all SJG entities purchasing requirements, and the Credit limit is entered into SJG's computer system, ENDUR.
- A contract will not be routed for approvals and executed until credit is approved. Once there is a fully executed North American Energy Standards Board (NAESB) contract, the Risk Group enters the contract into ENDUR.
- When SJG prepares a request for proposal (RFP) to solicit bids from suppliers for a volumetric period of months or multi-months, the first step is to forward to Risk Management the list of suppliers to recheck their credit.
- Once the responses to the RFP are reviewed and winner(s) are established, the Risk Department may ask for additional credit assurance, but the benefit of the pre-approval process means that credit requirements are immediately known.
- The Risk Department uses Mark-to-Market accounting to value the multi-month strip of gas. The basic principle here is that the NYMEX is an ever-moving vehicle of pricing; on-going credit evaluations continues.

- All suppliers are reviewed on a daily basis to evaluate the effect of additional purchases.
- If a situation occurs where a supplier has reached his upper limits and more than one SJ entity has commitments in place, the upper limit credit is pro-rated between the parties based on volumetric load.
- A monthly review of all receivables examines existing counterparties to ensure that SJI is compliant with the credit standards established by the Risk Committee.

C. INFRASTRUCTURE REQUIRED TO INITIATE THE PROCUREMENT FUNCTION

As in any business, the Front Office, Middle Office, and Back Office functions must be in place with descriptions as follows:

- The Front Office function is the responsibility of the VP, Gas Supply Operations who will ensure SJG's representatives comply with the SJI Utilities Hedging Programs Risk Management Policy (RMP) and the procedures that support their enforcement if a non-compliance event occurs. The Front Office must address tools, resources, and preparations required prior to buying the physical gas commodity and the related financial products. Typically, a front office is the face of the company and the first introduction to clients. Additional duties include appointments, calendars, meetings, sorts of daily deliveries and deals with mail couriers, assists the Human Resources team in exit and joining formalities and maintains administrative and operation records.
- The Middle Office function is performed by the Risk Management Department and is tasked with monitoring the risk associated with physical natural gas trading and with financial hedging activities. The middle office is the department that operates between the front and back office. It typically manages risk and calculates profits and losses. It is generally in charge of information technology (IT) as well.
- The Back Office functions are the responsibility of the VP of Accounting, SJI Utilities. The reconciliation analyst function reports under the direction of the VP of Accounting. The back office is the portion of a company made up of administration and support personnel who are not client-facing. Back-office functions include settlements, clearances, record maintenance, regulatory compliance, accounting, and IT services.

PRICING TOOLS

SJG contributes to and has download capabilities to all available pricing tools. S&P Global Platts is a provider of energy and commodities information and a source of benchmark price assessments in the physical commodity markets. SJG subscribes to the "Platts Gas Daily" (GD) electronic bulletin and the Inside FERC (IF) electronic bulletin. Both are Platts publications and contain market fundamental data including index close information, NYMEX strip, bid week information, preliminary price report, and different market intelligence data on a daily and monthly basis. The S&P Global Platts provides SJG the published index prices. The index may be a daily index, such as Platt's GD, or a monthly index, such as the IF. Both indexes allow for the selection of the specific physical location for the transfer of title [e.g., at Henry Hub, (the NYMEX equivalent locational point), a pooling point, or a gated point (e.g., SJG's city gate)]. A download of pricing data linked to SJG's energy trading and software computer system (ENDUR) provides a complete picture and automated processing of physical and financial gas transactions.

SJG has a subscription to SNL Financial/S&P Global Market Intelligence (now known as S&P Global, with website, SNL.com). This is a comprehensive website that offers a wide range of financial analytic data (e.g., index information, national storage reports, pipeline filings, and different key factors influencing the market). Additionally, SJG uses Planalytics, a web-based application that prompts the user for a "buy" at the most optimal time/price for the user to purchase a future month, whether it be a financial product or physical gas.

CONTRACTS

The North American Energy Standards Board (NAESB) is an industry-led effort to develop business practice standards—including standard contracts such as the NAESB Contract, communications, and e-commerce protocols for the natural gas industry. NAESB includes the wholesale and retail gas and electric sectors of the energy industry.

All SJG contracts, including NAESB contracts, must be entered into the secure and independent central electronic system, Application Xtender, which routes the contract through Legal, Risk Management, Tax, Insurance, Treasury, Accounting, and IT. Legal may add amendments to the master contract to address areas of concern. All contracts must be credit approved and must be executed by an officer of SJG. South Jersey Resources Gas (SJRG) and ETG each have their own NAESB agreements.

Daily or first-of-the-month deal sheets are generated by the ENDUR computer system for emailing or faxing directly to counterparties or brokers. The gas traders must monitor the deal sheets with the counterparty; deal sheets amend the master agreement. ENDUR will permit gas to be scheduled without a fully executed deal sheet if the master NAESB agreement has been entered into ENDUR's deal capture system. Traders depend on email traffic as confirmations of the recent trades until an executed deal sheet is returned. A summary version of the contract approval process is as follows:

- Pre-approved contract templates (i.e., NAESB with amendments) are available for SJG staff in the Xtender system.
- The staff member who submits the contract must respond to questions required by the Xtender flowchart. Based on the answers to the questions, a rating system is assigned to each contract.
- Contracts that score either a zero or one require only the Legal Department review; contracts scored between two and five require a review by the Legal, Risk Management, and Insurance Departments; contracts that score a six or above require review from the Legal, Risk Management, Insurance, Tax, Accounting, and Treasury Departments.
- Email notification includes the contract status (approved, approved with revisions, or rejected) and the comments that were made from each of the required approvers according to the weight factor that was indicated during the flowchart questions in Xtender.

- Contracts that commit supply for a term in excess of two years require Risk Management Committee approval.

Contracts being worked outside of Xtender follow all approval steps but are routed through email due to the confidentiality and/or complexity these contracts involve. These types of contracts typically require extensive negotiations and involve the services of outside counsel and/or multiple parties. The contract and relevant support data are loaded into Xtender when the agreement is executed.

THE RFP PROCESS

Requests for proposals (RFP**)** seek natural gas suppliers to respond and offer supply based on the conditions listed in the proposal. The proposal includes the price, terms, and conditions under which SJG is willing to purchase natural gas supplies at the specified receipt point(s). Typically, SJG issues an RFP to all potential suppliers with whom SJG has a NASEB agreement and are still credit approved. When the RFP response deadline has expired, all proposals are analyzed, and a transaction is awarded based on the best value offer.

SJG did issue RFPs to solicit gas suppliers interested in Asset Management Arrangements (AMA). AMAs were executed every year for the term of this audit. Additionally, RFPs are issued to solicit suppliers interested in the assumption of SJG’s excess transportation capacity. SJG used the results to determine the best offer for transportation capacity and then entered pre-arranged capacity deals prior to posting the deal on the pipeline’s bulletin board.

INFORMATION TECHNOLOGY

The complete Openlink ENDUR Platform has ten components. SJG initially purchased the Risk Management component in 2013 to manage financial hedges in their portfolios. During 2016–2017, other components were added including the physical gas component. It took one year to implement the physical gas component and successfully operate it independently. The ENDUR Platform is shared by South Jersey Resources Group, LLC (SJRG), SJG, and ETG with SJRG owning the majority share. There was an upfront investment of $11,166,316 and an annual licensing fee of $169,578. SJG upgraded to version 17 in the year 2016 at a cost of $1.62 million and discussions are underway to upgrade again in 2021 with an anticipated cost of $314,000. A reduction in the upgrade cost is due to improved knowledge and capability of SJG’s staff with the implementation process.

ENDUR’s Physical Gas Supply Capabilities

ENDUR’s capabilities to manage physical gas supply are as follows:

- Provide contract support and contract management. For example, master contracts with transactional deals entered as purchases or sales are made as adds to the master agreement.
- Generate daily deal sheets or statements for emailing or faxing directly to counterparties or brokers. The gas traders must monitor the agreement with the counterparty in the case of a daily deal sheet. ENDUR will permit gas to be

scheduled without a fully executed deal sheet entered if the master NAESB agreement is in the ENDUR system.

- Track the amount of firm transportation capacity released to marketers and others. ENDUR does not manually adjust the original SJG firm transportation capacity contract downward to reflect revised contract quantities. The reduction must be entered manually. ENDUR does not currently flag the aggregate of nominations when firm transportation capacity contract quantities are exceeded. Reports are generated and must be reviewed by gas supply staff. SJG expects that this feature will be provided by the new upgrade.
- Capture physical deals, including internal transactions for inter-book and inter-company deals as well as physical exchange deals.
- Capture outstanding imbalances and path the route from supply to delivery.
- Finalize deals. The final stage of transactions is cash disbursements and collaboration with vendors through receipt of invoices and generation of invoices as appropriate. ENDUR is an end-to-end system; it will identify, quantify, and manage a transaction from beginning to end.

Nominations must be entered into the pipeline Bulletin Board scheduling system. There is no transfer mechanism from the Bulletin Board to ENDUR or from ENDUR to the pipeline Bulletin Boards.

The afternoon confirmation of supply requires manually checking pipeline Bulletin Boards to determine if the supply that supports the nominations are confirmed. The confirmation is followed by the manual entry of the reduced volume, if appropriate, into ENDUR to reduce the acting deal sheet with the counter party. Again, a transfer mechanism from the Bulletin Board to ENDUR does not exist.

The process to query the ENDUR system requires an expert from Information Technology to assist. ENDUR can generate multiple reports whether standard or customized, and reports are structured by the IT group and generated at planned intervals. The key report generated by most systems like ENDUR is the Daily Activity Report which is sorted in various ways and circulated to various departments.

ENDUR cannot transform unstructured instant message trading chats into structured over the counter (OTC) market and or trade data like other systems can.

ENDUR does not enable brokers' intraday bid/offer price quotes to be used in analyzing current market trends against a trader's current portfolio. For example, other systems read instant messages as received, parse the data into readable elements, and record the information on their systems intraday price board. In addition to the data received via instant messaging, all incoming data from external price feeds are recorded in the system's price value table.

ENDUR's Ability to Track Financial Hedges

ENDUR's capabilities to track financial hedges include the following:

- Delivers web services with connectivity to external data sources, including pricing sources, [i.e., Platts and commodity exchanges like New York Mercantile Exchange (NYMEX) and Intercontinental Exchange (ICE)].
- GD pricing for the most recent day's gas trades is loaded into ENDUR both late at night and early morning. That data is available to traders when the morning gas day begins.
- Pricing data from electronic exchanges are automatically transferred into the ENDUR environment.
- ENDUR does not provide live NYMEX or ICE data in real time.
- The SJI financial people manually enter credit maximums on a supplier basis into ENDUR.
- ENDUR provides a report at the end of each day that reflects credit limits on a vendor basis and does not have a signal generated during deal capture or execution. The bells and whistles that would prevent gas from being scheduled when credit limits are exceeded are not there. Monitoring and comparing newly scheduled volumes to established credit limits is a function performed manually by the gas schedulers and the Risk Department. SJG buys the majority of its gas supplies on a daily basis, therefore the credit risk is limited to one daily purchase from one supplier.
- ENDUR generates and analyzes accruals and monitors receipt and payment to vendor invoices.
- ENDUR finalizes deals. The final stage of transactions is cash disbursements and collaboration with vendors through receipt of invoices and generation of invoices, as appropriate. ENDUR is an end-to-end system; it will identify, quantify, and manage a transaction from beginning to end.
- ENDUR's Market Module provides and saves all forward curve definitions and data.
- ENDUR's Risk Module provides real time monitoring of market risk exposure.
- ENDUR's hedge component supports compliance with the most recent global regulatory accounting standards.
- ENDUR provides advanced tools for analysis and reporting to alleviate the complexity and risk associated with hedge accounting and fair value disclosure requirements.
- ENDUR can perform prospective and retrospective analysis of hedges. ENDUR gives customers the control, accuracy, timeliness, and security to certify financial reports with confidence.
- Financial instrument management provided by the hedge component of ENDUR manages related accounting and reporting for even the most complex scenarios, ensuring proper valuation, settlement, and compliance.
- ENDUR's Accounting Module captures trades, credit, and settlements, and offers support of mark-to-market and accruals.

OTHER DATABASES WITHIN GAS SUPPLY:

Nominations must be entered into the pipeline Bulletin Board's scheduling system. There is no transfer mechanism from the Bulletin Board to ENDUR or from ENDUR to the pipeline Bulletin Board. An in-house spreadsheet system was developed to capture nominations.

The afternoon confirmation of supply requires manually checking pipeline Bulletin Boards to determine if the supply that supports the nominations are confirmed. This is followed by the manual entry of the reduced volume, if appropriate, into ENDUR to reduce the acting deal sheet with the counter party.

D. RELIABILITY

Historic reliability of natural gas due to operational characteristics: the physical operations of natural gas production, transmission, and distribution make the system inherently dependable and resilient. Disruptions to natural gas service are rare. When they do happen, a disruption of the system does not necessarily result in an interruption to scheduled deliveries of natural gas supply because the natural gas system has many ways of offsetting the impact of disruptions.

FIRM CONTRACTUAL ARRANGEMENTS ENSURE RELIABILITY OF SERVICE.

The physical operations of pipelines provide an elevated level of reliability in terms of their physical operations and ability to physically deliver to their customers. Yet, to benefit from this reliability, large-volume customers (e.g., industrial users, electric generators, commercial customers, LDCs) must do their part to ensure continuity of service by contracting for both firm transportation and firm storage services to meet their own or their customers' obligations. Absent customers purchasing pipeline capacity on a firm basis, pipelines may not have spare transportation capacity available on their systems, or a higher priority firm transportation customer may bump the non-firm customers' service for reasons unrelated to physical gas or transportation disruptions. On the coldest days (known as "peak days"), when weather-sensitive firm transportation customers are using their full contractual entitlements, there may be no interruptible transportation capacity left over for interruptible customers.

To use its firm transportation and firm storage services, the LDC must have volumes of gas committed under supply contracts with suppliers. Transportation vehicles and storage resources are not beneficial if there is not a product to transport or store. Historically, the major risk from not having fixed volume contracts was limited to the winter period, and then only the exceptionally cold days. In more recent years, weather patterns have changed; hurricanes do not follow previous pattens. Suppliers of natural gas are only obligated to sell gas to a particular entity if they are obligated to do so by contract. When critical weather scenarios occur, not only will prices soar but there can be freeze offs where suppliers may prefer to protect their gas wells rather than flow gas to make money. Under SJG's purchasing strategy for the period of this audit, most gas supplies were purchased on a day-to-day basis; therefore, suppliers did not have an obligation to sell gas to SJG.

STORAGE WITHDRAWALS

The only way to bridge the enormous gap between supply and demand during winter is gas storage. Storage is critical to the way the market functions and to price formation. Enough natural gas can be stored underground to meet an average state's residential natural gas consumption for more than 20 years. Approximately 20% of all-natural gas consumed during the winter is supplied by underground storage.

Functionally, physical storage provides for reliable and safe access to affordable natural gas supplies that serve residential and commercial consumers. The nature of LDC-owned storage is that injections occur during the summer period typically effective in April and continuing through October of each year. The stored gas is then available for withdrawal during the winter period starting in November and continuing on a monthly basis through the following March. During periods of low consumption, such as the seven months from April through October, excess supply can be injected into storage. During periods of elevated consumption, such as the five months from November through March, gas is withdrawn from storage to meet demand. Thus, storage is a time arbitrage – buy today to sell a certain number of months from now. Purchases during the summer period are generally not subject to the price spikes experienced during the winter period.

Specifics of Storage

Certain interstate pipelines that operate storage facilities require storage withdrawals to be on a timetable (i.e., certain levels of withdrawals must be reached by a certain date). This ensures that storage has the space to accept the injections expected to begin in April. If withdrawals are not achieved in accordance with the levels set forth by the established dates, the excess gas in the marketplace compels futures contracts to fall as early as January. The reverse is also true – injections during the period April through October have ratchet levels (i.e., a certain percentage of injections must be reached by certain dates). In an extreme situation, any gas above those levels is subject to "ratchets" or injection limitations; excess gas cannot be injected and is therefore dumped onto the spot market at whatever price the market will pay. Ratchets result in distressed gas, and, when there is distressed gas in the marketplace, futures contracts may start to fall as early as August.

Gas must be received in the supply areas and moved into the storage facilities owned by the interstate pipeline; firm transportation is required to inject, and the delivery point is limited to the specific storage facility. Firm transportation is required to withdraw from storage and move the gas to the LDC's city gate. The firm transportation withdrawal contract is specific to storage as a receipt point and the LDC's city gate as a delivery point. Interstate pipelines will calculate both legs of the firm transportation to match the permitted storage injection and withdrawal volumes.

The following exhibit illustrates the need for firm transportation to be coupled with the storage facility. It reflects an Eminence Storage Service (ESS) storage account that SJG has with Transco Pipeline that does not have firm transportation attached specific to the storage account. This ESS storage is available for injection or withdrawal on any day (e.g., seasonal limitations do not apply). The ability to inject gas into the ESS storage is limited to 2,321 Dths per day and maximum withdrawals are limited to 27,814 Dths per day.

SJG can use their long-haul firm transportation contracts to withdraw from this storage account. However, using firm transportation that was intended to move gas from daily purchased gas means that the purchased gas is displaced by storage. This stranded gas in the ESS storage account is relevant when daily purchase prices are elevated. Displacing flowing gas on such days can create a significant gas cost savings. Note that this storage account was not filled to its maximum capacity at the beginning of each winter period and was not withdrawn to its maximum potential at the end of each period.

ESS Storage Account on Transco

Storage Withdrawal Begin	Max Storage Inventory (Dths)	ESS Balance Start (Dths)	Beginning MSQ%[1]	Storage Withdrawal End	ESS Balance End	Ending MSQ%
Nov. 2013	232,314	219,023	94.28	Mar. 2014	232,314	100.00
Nov. 2014	232,314	229,881	98.95	Mar. 2015	209,685	90.26
Nov. 2015	232,314	228,812	98.49	Mar. 2016	228,246	98.25
Nov. 2016	232,314	171,984	74.03	Mar. 2017	210,612	90.66
Nov. 2017	232,314	162,660	70.02	Mar. 2018	164,062	70.62
Nov. 2018	232,314	217,730	93.72	Mar. 2019	167,045	71.90
Nov. 2019	232,314	223,990	96.42	Mar. 2020	192,611	82.91
[1] Maximum Storage Quantity Percentage						

SJG has rented storage capacity on Transco Pipeline for a total withdrawal of 4,707,438 Dths over the winter period. This storage capacity is distributed across five independent storage rate schedules, each with their own terms and conditions. These storage rate schedules are identified as General Storage Service (GSS), SS-2 Storage Service (SS-2), Leidy Storage Service (LSS), S-2 Storage Service (S-2), and ESS. The following exhibit shows the maximum capacities available to SJG on Transco's pipeline for these five schedules from 2013 through the end of 2019. Not all storage accounts had inventory levels at 100%.

Summary of Transco Five Storage Accounts

Storage Withdrawal Begin	GSS Max Capacity (Dths)	MSQ %	SS-2 Max Capacity (Dths)	MSQ %	LSS Max Capacity (Dths)	MSQ %	S-2 Max Capacity (Dths)	MSQ %	ESS Max Capacity (Dths)	MSQ %	Total Transco Storage Capacity
Nov. 2013	1,346,482	94.88	1,764,675	100	1,224,000	100.00	139,967	100	232,314	94.28	4,707,438
Nov. 2014	1,346,482	89.90	1,764,675	99	1,224,000	99.00	139,967	100	232,314	98.95	4,707,438
Nov. 2015	1,346,482	91.71	1,764,675	100	1,224,000	100.00	139,967	100	232,314	98.49	4,707,438
Nov. 2016	1,346,482	88.53	1,764,675	100	1,224,000	99.13	139,967	100	232,314	74.03	4,707,438
Nov. 2017	1,346,482	85.39	1,764,675	100	1,224,000	100.00	139,967	100	232,314	70.02	4,707,438
Nov. 2018	1,346,482	85.16	1,764,675	100	1,224,000	100.00	139,967	100	232,314	93.72	4,707,438
Nov. 2019	1,346,482	88.00	1,764,675	100	1,224,000	100.00	139,967	100	232,314	96.42	4,707,438

GSS is a bundled service that consists of storage up to the maximum storage withdrawal volumes on any day and delivered to the designated delivery point(s). Maximum storage capacity volumes and delivery point(s) are set forth in the shipper's service agreement. Included in the previous exhibit is the GSS schedule. The following exhibit provides more detailed information that outlines unused capacity (e.g., 100% of injections were not achieved and 100% of the gas that was injected into storage was not withdrawn).

GSS Storage Service

Storage Withdrawal Begin	Gross Capacity (Dths)	Begin GSS Balance (Dths)	MSQ%	Unused Storage Capacity (Dths)	Balance Remaining in March (Dths)	MSQ%
Nov. 2013	1,346,482	1,277,539	94.88	68,943	179,074	14.02
Nov. 2014	1,346,482	1,210,531	89.90	135,951	115,223	9.52
Nov. 2015	1,346,482	1,234,871	91.71	111,611	163,243	13.22
Nov. 2016	1,346,482	1,191,984	88.53	154,498	191,466	16.06
Nov. 2017	1,346,482	1,149,813	85.39	196,669	79,593	6.92
Nov. 2018	1,346,482	1,146,720	85.16	199,762	224,709	19.60
Nov. 2019	1,346,482	1,184,861	88.00	161,621	71,201	6.01

SJG has rented storage capacity on Columbia Gas Transmission (TCO) pipeline for a total withdrawal of 3,470,167 Dths over the winter period. The storage rate schedule is identified as Firm Storage Service (FSS). FSS is season specific (e.g., injections during the summer period and withdrawals during the winter period). SJG released from this storage to its affiliate SJRG a total of 1,246,750 Dths for the period of this audit up to November 2019 when the capacity returned to SJG. The following exhibit shows the maximum capacities available to SJG effective 2013 through the end of 2019. It also shows that SJG did not fill storage to its maximum capacity and left an ending balance in storage at the end of each year that ranged between 12% and 19%.

Columbia FSS Storage

Storage Withdrawal Begin	Max Storage Capacity (Dths)	FSS Balance Start (Dths)	MSQ%	Unused Storage Capacity	FSS Balance in Mar. (Dths)	MSQ%
Nov. 2013	2,223,561.69	2,103,267	94.59	120,295	248,737	12.00
Nov. 2014	2,223,411.74	2,079,557	93.53	143,855	85,271	4.00
Nov. 2015	2,223,404.00	2,013,737	90.57	209,667	267,133	13.00
Nov. 2016	2,223,471.51	1,861,268	83.71	362,204	402,451	19.00
Nov. 2017	2,223,479.84	1,902,187	85.55	321,293	173,068	8.00
Nov. 2018	2,223,415.99	1,963,721	88.32	259,695	340,312	16.00
Nov. 2019	3,470,166.67	3,227,255	93.00	242,912	251,890	12.00

Risk Management Policies and Procedures (RMP)

The policy provides authorization, if operationally available, for gas in storage to be used to accommodate off-system sales (OSS) or additional withdrawals for system supply. It appears that the underlying intentions behind the RMP are: (1) to permit the sale of storage volumes through OSS due to warmer than normal winter periods and (2) to withdraw higher than normal storage volumes when future winter months can be purchased at lower-than-expected prices to inject back into storage.

A review of SJG's storage accounts revealed modest or conservative withdrawals during the early part of the winter with the heavier withdrawals beginning in mid-January and continuing through the end of February. This behavior follows weather patterns and therefore it appears SJG used their storage for its intended purpose.

OFF-SYSTEM SALES

Off-System Sales (OSS) is a term associated with energy distribution/utility companies that means the sale of energy to wholesale or retail customers located outside the distribution companies' service territory. Utility companies frequently find that they have excess product not otherwise required to serve the core utility load available for sale. When considering excess product eligible for resale, a utility must consider the following:

- All sales made to wholesale or retail customers within its service territory are part of the utility's' core utility load and must be made subject to the utility's natural gas tariff. To have excess product, the utility will have provided the full load requirements to its wholesale and retail customers.
- The utility can sell excess product to a TPS that serves wholesale or retail customers within the utility's service territory. TPSs are not regulated entities and act independent of the utility.
- The utility can sell excess product to TPSs that serve wholesale or retail customers outside the utility's service territory, and the utility can sell directly to wholesale or retail customers outside the utility's service territory.

The product can be gas commodity in the supply areas or a bundled product at a delivery point. The bundled product attaches firm capacity transportation to the gas commodity and ships the bundled product to the destination point. Unlike the gas commodity, firm capacity transportation, on a standalone basis, is subject to FERC rules and regulations. FERC requires that firm capacity be released/sold on an open access, non-discriminatory basis using processes and pricing guidelines approved by the FERC and implemented by the pipelines. To the extent that firm capacity is not needed by the owner, the owner can release it. The owner does not have the ability to give firm capacity to whomever they want to. All external entities must have a chance to bid, up to the maximum tariff rates, to buy the firm capacity. Selling the bundled product at a delivery point allows the owner of the firm capacity to obtain market rates. During winter months, delivery point sales provide greater returns on the transportation portion of the product than releasing the firm capacity through the pipeline capacity release mechanism because capacity release regulations limit the owner to maximum natural gas tariff rates.

The underlying policy behind the FERC capacity release rules is that the entity that signs up for the interstate pipeline capacity must be the one that uses the capacity when transporting gas (i.e., the owner of the firm transportation capacity must also be the owner of the gas commodity). To summarize, a utility can sell the unbundled gas commodity at any physical point to any entity of their choosing but cannot sell unbundled firm transportation capacity to any entity of their choosing. However, a utility can bundle the gas commodity that it owns with firm transportation capacity that it owns and sell the bundled product to any entity of its choosing.

SJG purchases the majority of its gas commodity daily and therefore does not have excess gas commodity. SJG does have excess firm transportation capacity, and they purchase additional gas commodity to attach to the excess firm transportation capacity so that they can sell a bundled product. Firm transportation capacity can be delivered to other delivery points that are in the path of the original delivery points or within the same pipeline zone on the firm contracts to provide the owners of firm capacity transportation additional flexibility.

The following exhibit shows the total SJG OSS volumes and revenues on an annual basis from January 2013 through December 2019. Total volumes are then separated into those sales made for one month or more with the remaining volumes made on a day-to-day basis.

Off System Gross Sales Versus Delivery Point Sales

Year	Off System Sales Gross Annual (SJG Sales to Various Entities)		Delivery Point Sales (Bundled Product of Commodity Plus Transportation)					
	Volume (Dths)	Revenue	Monthly[1] (Dths)	Monthly Revenue	Long-Term Percent of Gross	Day-to-Day (Dths)	Day-to-Day Revenue	Day-to-Day Percent of Gross
2013	9,684,601	$37,016,220	3,447,682	$12,854,322	36%	6,236,919	$24,161,898	64%
2014	9,410,579	$47,601,660	3,964,985	$20,774,954	42%	5,445,594	$26,826,706	58%
2015	14,602,862	$47,966,725	5,375,250	$20,585,372	37%	9,227,612	$27,381,353	63%
2016	16,525,714	$44,302,980	8,240,000	$29,039,838	50%	8,285,714	$15,263,143	50%
2017	25,560,075	$87,204,169	18,424,983	$68,201,470	72%	7,135,092	$19,002,699	28%
2018	13,582,135	$55,675,590	11,210,727	$47,808,314	83%	2,371,408	$7,867,276	17%
2019	14,730,625	$49,386,245	12,666,160	$44,567,814	86%	2,064,465	$4,818,431	14%
Totals	**104,096,591**	**$369,153,590**	**63,329,787**	**$243,832,084**	61%	**40,766,804**	**$125,321,506**	39%

A portion of SJG's OSS was sold to its affiliate SJRG. The following exhibit again shows SJG OSS volumes and revenues on an annual basis from January 2013 through December 2019 along with the portions sold to SJRG. It also shows the calculated percentage of total OSS annual volumes sold to SJRG. The percentage varies from one year to the next; however, the over-all percentage for the entire seven-year period is approximately 3.5%.

Off System Sales to Affiliate SJRG

Year	Gross Annual Off System Sales		SJG Sales to Affiliate SJRG			
	Volume (Dths)	Revenue	SJRG Annual Volume from SJG (Dths)	SJRG Annual Sales to SJG	SJRG Average Unit Price	SJRG Percent of Gross OSS Sales
2013	9,684,601	$37,016,220	65,900	$256,068	$3.89	0.68%
2014	9,410,579	$47,601,660	62,249	$175,185	$2.81	0.66%
2015	14,602,862	$47,966,725	923,200	$3,360,764	$3.64	6.32%
2016	16,525,714	$44,302,980	1,114,320	$3,912,228	$3.51	6.74%
2017	25,560,075	$87,204,169	34,238	$87,245	$2.55	0.13%
2018	13,582,135	$55,675,590	1,024,691	$2,983,035	$2.91	7.54%
2019	14,730,625	$49,386,245	416,800	$1,038,222	$2.49	2.83%
Totals	**104,096,591**	**$369,153,590**	**3,641,398**	**$11,812,746**		3.50%

E. GAS PROCUREMENT STRATEGY AND PLAN

This chapter addresses the purchase and sale of the physical gas supply moving the gas to South Jersey Gas Company's (SJG) city gate referred to as "nominating," the confirmation process that verifies that the purchased commodity is ready to flow into the pipelines and the associated financial products commonly referred to as hedging.

BACKGROUND AND PERSPECTIVE

The Gas Procurement Administration (GPA) function manages and controls activities in the procurement and delivery of natural gas to customers. Currently, the purchase of gas supplies is one day in advance, SJG may find itself in a position to sell small quantities of gas from time to time. The GPA has responsibilities for RFPs, contracting, transportation and release of excess transportation, pricing tools, computer systems and other infrastructure items required to operate a Gas Procurement Department. GPA must also coordinate supplies delivered by TPSs on behalf of customers who exercised their right to choose an alternate supplier.

Critical to the GSA function is the best estimate of gas supplies required for the next month, next week, and next day; this estimate is provided by the Load Forecast with additional input for near-term projections based on weather from Gas Control. GSA works and coordinates with both departments.

PHYSICAL GAS PROCUREMENT

The Financial and Physical Natural Gas Transactions Risk Management Policy and Procedure (RMP) developed by SJI Utilities; Inc. (SJI) reduces the impact of price volatility by smoothing prices for SJG's gas supply purchases. The RMP provides instruction on many elements; however, the primary components fall into three distinct areas: (1) the purchase of physical gas, (2) the purchase of gas to be injected into storage during the summer as a physical hedge, and (3) financial instruments to flatten prices.

It is the policy of SJG to follow the Gas Procurement Strategy and Plan as described in the RMP. The written policy identifies many risk items that are not allowed and when interpreting the policy, if the element or component of concern is not listed as a practice that is prohibited in the policy one can interpret that the transaction of concern is allowed.

The Gas Procurement Strategy and Plan as described in the RMP has specific objectives for purchasing gas as follows:

- Ensure that any actions taken to manage gas costs are not detrimental to gas supply reliability.
- Reduce the risk of upward gas commodity price volatility.
- Preserve opportunities to capture the benefit of price declines.
- To meet the "best value" considerations described above.

The RMP divides the commodity load into the following groups:

- Storage injections between April 1st and October 31st each year. SJG has storage on Transco, Columbia Gas Transmission (TCO) and LNG peaking services. In all three cases SJG can withdraw from storage effective November and ending on March 31 of the following year. SJG always sets the monthly price based on the close of NYMEX for the first day of the near month. SJG does not use the flexibilities associated with "future" contracts which is the option to trigger prices prior to the close of NYMEX for the next month. An attractive feature of "futures" is the ability to purchase a future contract(s) up to 18 months in advance of that month using NYMEX and then monitoring NYMEX prices for that month on an ongoing basis. When the price for a future month(s) is attractive, SJG has an absolute right to commit to that price for that particular month (i.e., triggering the price).
- Conservative monthly base-load volumes of gas are determined using historic consumption. Pricing is always based on NYMEX close and the option to trigger prices is never exercised.
- Swing gas is determined for the near month and is usually estimated based on weather.
- As the month gets underway, it may be necessary to purchase more volumes or to sell off volumes.
- The storage and base load volumes go through the RFP process to solicit suppliers. The suppliers offering the best value are selected. Pricing is always based on first-of-the-month Inside FERC (IF) index pricing. Swing gas and daily modifications do not go through the RFP process. Instant messaging is the tool used to communicate with suppliers. Again, IF index pricing is used and for daily adjustments Gas Daily prices are used.

The RMP guidelines require base load gas to be purchased at the monthly index price and only swing gas to be purchased in the daily market. However, some gas purchases may be made on the daily spot market. These will generally be limited to quantities needed to handle short-term increases in gas demand that may not be readily managed with adjustments to storage injections or withdrawals. The policy has an exception: if first-of-the-month prices in bid week are rather high, the Gas Supply can make an exception and buy more of its load at Gas Daily Prices.

The RMP has defined pricing instructions for the purchase of physical gas. The quantities of gas purchases necessary to serve the demands of the customers served by SJG that are not covered with financial hedges will be purchased at the time they are needed at market prices. One of the primary responsibilities of GPA is to analyze demand requirements for natural gas on an annual, seasonal, monthly, and daily basis.

Firm gas supplies are acquired in these time frames on a “best value” basis. “Best value” considerations include, but are not limited to, price, security of supply, diversity of supply, availability, and counterparty credit risk.

Prior to the beginning of any month the GPA scrutinizes consumption history, expected transportation volumes, on a receipt and delivered basis, and the volume of gas in storage. The need to purchase additional gas is determined based on this analysis. If additional purchases are deemed necessary, during “bid week” (the period consisting of the last five days of trading on the NYMEX for the next month) a variety of suppliers are investigated for supply availability and price. During bid week, the natural gas buyer purchases all base load natural gas requirements not yet under contract with a supplier for the near month. Activity includes all financial positions being closed out and the financial positions serving as hedges for physical natural gas transactions are converted into physical supplies.

At the beginning of each gas day, a determination is made as to whether any adjustment in supplies is required for the current gas day. Changes are made on an intra-day basis. The process continues to evaluate the next day. Additional gas can be procured or sold at this time based on projected weather, storage levels, or other mitigating factors. These purchases are also made with the best value methodology in mind.

The RMP allows the purchase of physical gas to be accomplished through fixed price, monthly index, and/or daily index prices. GPA agrees that the RMP provides for fixed price contracts. A fixed price is gas contracted at a definite price for a specific term, usually multi-months or years. The advantage of fixed pricing is it allows the buyer to eliminate upside price risk in a rising market. The disadvantage is that the buyer is locked into a purchase price and will not benefit from falling prices. Usually, buyers purchase a derivative product to compensate the buyer if prices fall.

SJG entered into a long-term firm supply agreement with Antero Resources Corporation effective October 2011 and terminated November 1, 2019, for various volumes during the summer months and 25,000 Dekatherms (Dths) per day during the five winter months. SJG had the option to select either Gas Daily or IF monthly prices for gas purchases. SJG chose Gas Daily in every instance.

SJG entered into a second long-term firm supply agreement with Cabot Oil & Gas effective November 2018 and continuing for ten years into the future. The summer months are committed to various volumes and winter volumes are contracted for 70,000 Dths per day. The price is a monthly index price based on NYMEX last day settle.

Neither of these supply contracts are fixed priced contracts; the volumes are fixed in both contracts at market prices with a minus to the screen that compensates SJG for the volume commitment.

SJG has storage contracts that provide the ability to purchase and store gas in the summer; the stored gas contributes to the significant supplies needed to meet winter requirements. Storage contracts inherently provide the ability to physically hedge prices by injecting gas into storage between April and November. Historically, gas prices have been lower in the non-winter months while the winter prices have been higher. The historical pricing has changed in recent years and the price variances between summer and winter are more level than in the past.

SJG has firm storage on Transcontinental Gas Pipeline (Transco) and Columbia Gas Transmission Pipelines (TCO) that permits storage withdrawals up to a maximum of 124,891 Dths daily during the winter periods of November 1 through March 31. The maximum storage withdrawal represents approximately 40% of an average winter day or 30% of a colder than average winter day.

SJG has a liquid natural gas (LNG) facility that provides a Peaking Service as needed. Technically the LNG facility could deliver 110,000 MCF for approximately 3.3 consecutive days for a maximum tank capacity of 363,000 MCF. In practice, the highest delivery for any one day was approximately 70,000 MCF. SJG is not obligated to any quantity. SJG secures the gas commodity as needed and transports the gas through their distribution system to the LNG facility for liquefaction. A liquefication run is scheduled to begin at the end of summer or into the fall season so that the LNG tank is at or near 100% full as SJG enters the winter heating season. The liquefaction process can take place during the winter season if needed and did take place during the winters of 2016, 2017, and 2018 in significant quantities. SJG purchased all its LNG gas to be liquified at this facility at Gas Daily Index prices.

SJG has an additional LNG Peaking Service referenced as “TIOGA” geographically located on Transco Pipeline. The features and design of the TIOGA LNG service are much the same as the LNG owned by SJG. The maximum capacity is 200,000 MCF delivered over the winter season with a maximum daily delivery of 20,000 MCF.

Audits or Price Reviews:

There is no SJG internal audit process that compares First-of-the-Month Inside FERC prices to Gas Daily Prices on a monthly/annual basis.

The GPA does not provide the SJG Risk Management Committee (RMC) data to measure and or monitor prices related to physical natural gas transactions.

The GPA group does not audit themselves or spot check the previous month to review price performance.

Quarterly reports are filed with the New Jersey Board of Public Utilities (BPU) in accordance with their guidelines. An estimated gas cost based on the NYMEX strip is required for the near three months. Once the individual months are actualized, the actual costs are filed with the BPU. These filings are available to everyone and the comparisons of first-of-the-month prices vs daily spot prices are captured in these filings. GPA did not receive inquires or complaints from the BPU.

Nomination and Confirmation of Gas Volumes

Nominations. When SJG's trader closes a purchase deal and then formalizes the deal with the supplier, two things immediately happen:

2. The deal is entered into ENDUR as a contract with a specific supplier so that the supplier can be paid for the gas. Supplier name, date range, volumes per day, and price are the essential elements for ENDUR.
3. The deal is communicated to the nominations group through Intercontinental Exchange (ICE) chat. Shipping orders, or nominations, scheduling the gas require certain elements for the interstate pipeline to accept the nomination and move the gas to SJG's city gate. Interstate pipelines are not interested in the price paid but all other elements are important.

A. Transactional information must include the following at a minimum:

- Schedulers will reach out to the suppliers back-office staff to obtain transactional detail not known to the traders at the time the deal was executed.
- Schedulers review relevant communication from the pipelines for information related to maintenance projects or pipeline constraints. Because SJG owns firm transportation capacity, SJG would have been notified in advance if their firm transportation were affected due to repairs or replacements. SJG does not expect last minute pipeline interruptions for their system supply.
- Nominations must include supplier name, supplier upstream contract(s) upstream pipelines, receipt point, and volume.
- Nominations must include delivery location, gas day and/or a date range that the gas is intended to flow, SJG's transportation agreement(s) used to move the gas, and volumes with the type of transport specified.
- Schedulers enter the nomination directly into the pipeline websites for Columbia, Tennessee, and Dominion, when applicable. Each pipeline has its own scheduling web-based portal.
- Schedulers must stay within the maximum capacity transportation contract limits when placing shipping orders with pipelines.

Nominations must be submitted by deadlines. The deadlines for all pipelines subject to FERC regulation are the same and are as follows:

- Timely Cycle: The nomination period closes at 2:00 pm (ET) during the current day for the next business day.
- Evening Nomination Cycle: Nominations are received after 2:00 PM (ET) on the current gas day for the next day's business. The nomination period closes at 7:00 PM (ET) on the current gas day for the next business day.
- Intraday 1 Nominations Cycle: Nominations are received after 7:00 PM (ET) on the current gas day for the next day's business. The nomination period closes on 11:00 AM (ET) on the next day.
- Intraday 2 Nomination Cycle: Nominations are received after 11:00 AM (ET) on the current gas day. The nomination period closes on 3:30 PM (ET) on the current gas day.

- Intraday 3 Nomination Cycle: Nominations are received after 3:30 PM (ET) on the current gas day. The nomination period closes on 8:00 PM (ET) on the current gas day.
- Post Nomination Cycle: Nominations are received after 8:00 PM (ET) on the current gas day. The nomination period closes at 11:00 AM (ET) the next day for yesterday's business.

Confirmations. SJG purchased supply, therefore shipping orders/nominations are placed with the appropriate interstate pipeline to move that gas from the supply area to SJG. SJG then contacts, electronically, the pipelines and confirms that the suppliers have the supply ready to flow and that all the particulars match-up. For SJG to pay the supplier invoice, SJG must have substantiation that the supply is delivered. SJG is not only concerned with their own system gas, but SJG must also know how much gas will be delivered by any TPS.

Prior to November 2019, the SJG Gas Transportation Services Department, through its nominations group, managed the gas confirmation process for the TPS gas that was delivered to the SJG city gate on behalf of their customers as well as confirmation of SJG's system supply. A Gas Supply Confirmation Group was established in November 2019. Subsequently, Gas Confirmation Analysts were hired to fill the new established positions between November 2019 and March 2020.

Originally this new group focused on TPS deliveries on behalf of end-use customers acting independently of SJG and were not involved with system supply gas. Their duties were limited to monitoring pools and imbalances, in addition to the confirmation process. However, since the new group is continuously active on the pipeline bulletin boards, it made sense for them to perform confirmations for the system supply.

The confirmation process is automated with the pipelines so that entities shipping gas and attempting to verify that supplies are in place can access the pipeline bulletin boards and follow certain links. There are drill down features so that additional support data can be accessed. Proof of identity to gain access is required and there are three main links:

- Main Reporting Locations and Links
- Daily Confirmation Report
- Mid-Day Confirmation Report

Additionally, the Storage Report is a fundamental and useful report available as a drill down item.

Pipeline reports reflect the volumes of gas nominated and the volume of gas confirmed. Any variance or difference will be demonstrated. There are various drill down reports that capture the entire package with every level of detail. If there is a mismatch in contract numbers or similar transactional items, it will be reflected in this detail. Perhaps the discrepancy can be corrected but if not, the variance must be accepted. If it relates to SJG's own purchases as opposed to a TPS, SJG corrects the volume using ENDUR. Suppliers must be paid based on the gas they successfully flowed.

If there appears to be a deficiency in the volume of gas put into the individual pipelines by TPS for redelivery to end-use consumers, the confirmation group contacts the TPS to see if they can correct the situation. A failure on the part of a TPS to correct the volume can cause penalties for SJG. Therefore, immediate attention to variances in confirmations is critical. If imbalances are caused by customer-owned gas deliveries (TPS), it is the responsibility of the confirmation group to initiate, correct, and manage any imbalance in a manner that minimizes the risk for penalties to SJG. If an imbalance still exists at the end of the month for customers other than CHOICE customers, it will be cashed out in accordance with the BPU's tariff provisions. Cash-out means that if a TPS under delivered, the TPS must purchase from SJG the volume that was under delivered. If a TPS over delivered, the TPS must sell to SJG the volume that was over delivered. CHOICE customers are balanced after the winter season is over.

Reports Generated. Because the nomination and confirmation groups are active with the interstate pipelines, Operational Flow Order (OFO) information is available to them. Bottlenecks on the pipelines, critical day for storage injections/withdrawals, and inferior transportation cuts are evident when monitoring the bulletin boards. This information is critical to Gas Control as well as other volumetric data including:

- Pipelines critical day, OFO, and capacity restraints
- Volumetric reports at the end of each cycle that have gone through the confirmation process
- A revised report is provided if changes that affect the gate supply are made which include supply additions or reductions
- A report to include the most current updates on customer owned gas coming to the city gate from TPSs

These reports identify total deliveries at SJG's city gate and delivered gas on different contracts.

After the gas day has started, the next step is to run another set of reports and to detect discrepancies due to cuts to the gate supply or changes in customer-owned gas (contract or pipeline). If a discrepancy is found, schedulers can correct the issue with an intra-day nomination. Regardless of who is at fault for an under-delivery, SJG is the supplier of last resort and to protect itself from withdrawing from storage more volumes than its storage contract allows, SJG will bring on more supply on an intraday basis.

Penalties

SJG has storage capabilities on both TCO and Transco pipelines. Associated with storage are maximum contract limits and violations of contract limits which can cause SJG to be penalized. For example, withdrawals in excess of contract limits on TCO will cause SJG to buy the excess volumes from TCO at $50.00 per Dths. SJG has been in penalty on TCO as demonstrated by the four instances shown in the following exhibit:

Pipeline Penalties Invoices to SJG

Pipeline/Month	Penalty Charge	Penalty Reduction
TCO Feb 2014	$9,390.47	
TCO Mar 2014	$66,048.18	
TCO Feb 2015	$1,463,788.52	
TCO Mar 2019	$45,546.5	
TCO Apr 2019		$(22,773.26)

Penalty Explanations

- February 2014 – A volumetric measurement discrepancy between the SJG and Columbia pipeline occurred in February 2014 and was resolved in favor of Columbia pipeline. The volume in question was 523 Dths.
- March 2014 – The SJG balance in TCO's Firm Storage Service was 16,600 Dths. SJG reflected a balance of 21,580 Dths to be available. The difference triggered the penalty.
- February 2015 – During the very cold weather of February 2015, Transco's inlet pressure to the South Jersey system became so low that during periods of extreme winter weather, SJG could not hydraulically flow Transco's total daily entitlements into the SJG transmission system. It became necessary to flow supplies in excess of entitlements from the TCO storage system, creating a penalty during that month.
- During February 2015, the lack of sufficient inlet pressure from Transco became so low that to support the integrity of the SJG transmission and distribution system it became necessary to flow supplies in excess of entitlements of approximately 30,000 Dths from the Columbia system, creating a penalty during that month. SJG addressed the pressure issue with Transco multiple times during the winter season, and while Transco acknowledged that the pressure was below historic operating parameters, Transco indicated they were making every effort to provide maximum pressure.

  Additionally, during February 2015, Transco implemented an OFO on the Marcus Hook lateral which serves South Jersey. The OFO eliminated secondary deliveries on the lateral. While all SJG's deliveries were primary and unaffected by the OFO, TPSs were cut due to the OFO. To the extent the TPSs under-delivered for customers they serviced, the TPSs were subject to penalties under the SJG tariff. The total penalty charge collected from TPSs for under deliveries for February 2015 was $444,871.48 and credited to ratepayers.

  SJG did pay their suppliers in full because the suppliers put the supply into Transco's pipeline. Transco delivered the forfeited gas later. SJG paid 100% of the reservation charges to Transco even though Transco failed to meet its obligation.
- March/April 2019 -- SJG inadvertently exceeded their storage maximum daily withdrawal quantity, creating a penalty. SJG appealed the penalty based on their compliance with other constraints/restrictions that might have otherwise provided operational flexibility to avoid the penalty. TCO agreed in part and refunded one half of the penalty paid.

Pre-determined Allocation (PDA)

There is an additional scheduling process related to PDAs. PDA means an operator's expectation that is submitted in advance of gas flow that tells the transporter how much, in what order to allocate, and to whom the allocation is applied.

Depending on the season (injection/withdrawal) these PDAs are critical to managing demand swing volumes in high and or low burn scenarios and are a critical component for managing storage activity and overall system balancing. SJG continuously watches for critical notices to make sure the PDA imbalance nomination complies with the allowed storage limits. The balancing of gas received versus gas consumed is the balancing act that transpires every day once the gas day is under way.

All LDCs will suffer with days where consumption is higher than expected (high burn) and with days where consumption is lower than expected (low burn). Gas was shipped based on the best estimate of requirements for the following day and when the day does not match exactly to consumption, the differences must be addressed. SJG manages the gas-in and gas-out daily balancing as follows:

- Excess gas at the city gate is directed into storage, if possible. Storage contracts have maximum daily injection quantity levels. SJG leaves itself some room in anticipation of this situation. If storage is not available to carry the excess volumes, the gas is left on the firm transportation contract as an imbalance to be dealt with at a later date.
- On a high burn day more gas is required at SJG's city gate, so intra-day purchases can be made. Once the intra-day shipping order is in place, any minor difference can be addressed with an injection into storage.

SJG assured Sage that there is zero stranded supply where SJG paid for supplies and could not find a home for that supply.

Tools that Assist in Triggering Gas Purchases

SJG contributes to and is supported by Planalytics, a web-based tool that prompts the user for a "buy" when the proprietary algorithm identifies the optimal time and price for the user to purchase a futures contract. The ENDUR system delivers web services with connectivity to external data sources, including pricing sources such as Platts and commodity exchanges like New York Mercantile Exchange (NYMEX) and Intercontinental Exchange (ICE). ENDUR has the capability to develop pricing scenarios. The principle used to purchase a "futures" contract is the same principle used to buy physical gas. Planalytics and ENDUR require the appropriate query input to their systems as follows:

- The key component or ingredient for a fixed price physical contract or when buying "futures" is the lowest possible price. Minor programming (i.e., a query or mechanism) must be created and made a part of the ENDUR and Planalytics systems to generate available low prices reflected on NYMEX for individual future months.
- The key component or ingredient when using financial price swaps is the opposite of a fixed price physical contract or when buying "futures." SJG wishes to buy at the highest possible price when buying a price swap. The query or mechanism

must be designed to have ENDUR and or Planalytics systems generate available high prices reflected on NYMEX for individual future months.

F. FINANCIAL HEDGING PRODUCTS

SJI developed a Risk Management Committee (RMC) who developed and implemented a Risk Management Policy (RMP) that addresses authorized financial hedging products. SJG is expected to operate its hedging program within the guidelines set forth in the RMP.

BACKGROUND AND PERSPECTIVE

The purpose of a financial hedge is to avoid or limit the risk of adverse market moves resulting in major losses. Natural gas hedging involves establishing a position in a financial instrument that is, ideally, very similar if not identical, to the company's exposure in the physical natural gas market. Hedging can keep costs down and can protect buyers against the risk of unexpected price surges and can lock in prices for future purchases to help meet — or surpass — financial goals.

Energy hedging can pay off handsomely for companies — or not. This should not be a surprise; energy prices are inherently volatile, fluctuating with supply and demand, political tension, storms, and even ruptured pipelines. A rise in U.S. shale gas production and the growth of the global liquefied natural gas (LNG) trade has created a glut of supplies, causing prices to bottom out in 2016. This has deflated gas pricing volatility and hedging activity.

Energy Trade and Risk Management (ETRM) and Commodity Trading and Risk Management (CTRM) are names used for a range of software solutions which support the trading and risk management of commodities. As the gas and energy market becomes more complex, ETRM systems are becoming the flight deck from which firms pilot their entire business activity.

AUTHORIZED FINANCIAL INSTRUMENTS

The RMP focuses on the management of price risk in the purchase of gas, and it realizes that price risk can be managed through financial instruments such as NYMEX futures, swaps, options, and basis trading. All NYMEX futures, swaps, options, and basis trading will be matched with physical purchases. The following describes the financial tools and the pros and cons associated with each.

Futures

NYMEX Futures There is an exchange clearinghouse available electronically for the purchase and sale of natural gas that is traded for future delivery. A futures contract design is for packages of 10,000 Dths and is purchased off the NYMEX. The NYMEX provides financial backing in the unlikely event that a clearing-house defaults on a transaction. Consumer-type mathematics is applied: if prices increase, the owner of the future contract gains money and if prices decrease, the owner loses money.

Futures can be bought and sold throughout the life of the futures contract. The RMP states that on some occasions, when there is a reasonable possibility that the price will drop below the current price of hedged supplies, management may use financial instruments to attempt to reduce the cost of supplies previously hedged. The factual basis and objectives of all such transactions should be documented at the time of each transaction and approved by the RMC prior to deal execution.

- Pro: Allows buyer to eliminate upside price risk in a rising market by making a commitment to a fixed price. Futures can be bought and sold throughout the life of the contract; an owner does not have an obligation to hold the contract through its entire life span. Strategies that provide for the purchase of futures approximately two years in advance provide the opportunity to sell the future contract and take profits at any time. As the market moves in a favorable direction, a buyer can buy back into the futures market and wait for more profits. The owner of the future contract can take physical delivery of the gas commodity at the supply point known as the Henry Hub in Louisiana.
- Con: Buyer is locked into the purchase price and will not benefit from falling prices.

Price Swaps

The most common type of natural gas swap is when one party, such as a large natural gas producer, agrees to pay a fixed price for natural gas on specific dates to a counterparty who, in turn, agrees to pay a floating price for natural gas that references a published price, such as the NYMEX natural gas futures. Consumer type mathematics do not apply here: as prices go up, the owner of the fixed price loses money and if prices decrease below the fixed price, the owner of the fixed price gains money.

- Pro: A price swap is perfect for the owner of a physical commodity. For example, a natural gas producer enters a swap arrangement and seeks a fixed price for its gas commodity. The producer can now prepare a budget and plan future business strategies. If prices fall below the fixed price, the producer sells its production at market rates and the counterparty to the swap pays the producer the difference between current prices and the fixed price reflected in the swap agreement. Assuming that market prices are higher than the fixed price, the producer must pay the counterparty. The producer owns the gas in the ground; the sale of the commodity at the elevated price will pay the producer market prices so that the producer is not out-of-pocket when paying the counterparty.
- Con: SJG is not a producer and does not own gas in the ground. Since swaps are highly customized and not easily standardized, the swap market is considered an over the counter (OTC) market, meaning that swap contracts cannot typically be easily traded on an exchange. The flexibility to sell and buy in-and-out of swaps is more limited in comparison to the flexibility associated with futures. Therefore, if prices surge, SJG will be out-of-pocket. Understanding that swaps are purchased many months in advance—in the case of SJG, eighteen months in advance—and price surges continue for many months in an up-market, SJG would be greatly at risk.

Options

An option contract gives the holder the right to buy a specified commodity from the writer of the option for a specified volume at a specified price (strike price) on or before a specific date. A “Call Option” contract gives the holder the right to *buy* a specified commodity, from the writer of the option for a specified volume at a specified price (strike price) at or before a specific date. A "Put Option" contract gives the holder the right to *sell* a specified commodity, security, or asset to the writer of the option for a specified volume at a specified price (strike price) at or before a specific date.

Collars place a band around the price (i.e., generally ten percent more or less than the strike price). The simultaneous selling (or buying) of a Put (floor) and buying (or selling) of a Call (ceiling) locks in a range of values and lowers the cost of insurance. The premium from selling the put reduces the cost of purchasing the call.

- Pros: An option requires a lower upfront financial commitment than purchasing the commodity. The premium price of buying an option plus the trading commission is less than what an investor would have to pay to purchase a futures contract or the physical commodity. If the trade goes their way, they'll benefit just as much percentagewise as the investor who invested in the commodity purchase.
- There is limited downside for option buyers. When you buy a put or call option, you are not obligated to follow through on the trade. If your assumptions about the time frame and direction of the commodity's trajectory are incorrect, your losses are limited to whatever you paid for the contract and trading fees.
- Options offer built-in flexibility for traders. Before an options contract expires, investors have several strategic moves they can deploy, including:
  - Exercise the option and buy the commodity.
  - Sell the "in the money" options contract to another investor.
  - Potentially make back some of the money spent on an "out of the money" option by selling the contract to another investor before it expires.
- Cons: As an options holder, you risk the entire amount of the premium you pay. There is limited time for the investing thesis to bear out. The very nature of options is short term. Options investors are looking to capitalize on a near-term price movement, which must take place within days, weeks, or months for the trade/contract to pay off. That requires making two correct assumptions: (1) picking the right time to buy the option contract and (2) deciding exactly when to exercise, sell, or walk away before the option expires.

Basis Trading

With natural gas, basis is the contractual cost of delivering natural gas to SJG's city gate from the NYMEX natural gas trading point at Henry Hub. SJG has firm transportation contracts to deliver its gas requirements from the production area to its city gate. Therefore, SJG's risk is mostly limited to the production area basis. (Transco Station 65 is not the same as the Henry Hub where the NYMEX settles). The basis price movement in the gulf supply area has historically been minimal. In previous years, SJG required some gas in the Appalachian supply area for city gate delivery and did not have one hundred percent firm transportation to move the supply to its city gate. The basis on such volumes is volatile but may be limited by the utilization of a Basis Lock-In. In November 2018, SJG committed to firm transportation for 78,000 per day that picks up shale gas in Pennsylvania that is ultimately moved to SJG's city gate. Because of the new firm, a basis Lock-in is no longer required.

- Pro: Allows Buyer to eliminate upside Basis risk in a rising market. Capacity Transportation is FERC regulated and therefore the original entity who contracted for the firm capacity transportation, SJG, is not at risk for fluctuation in prices. However, the capacity transportation bundled with the gas commodity during winter months is greatly elevated. Example February 2014 at the Henry Hub supply area the price was $6.00 per Dths while delivered prices at SJG's city gate were $16.62.
- Con: Buyer is locked into a basis price and will not benefit from falling basis prices.

THE RMP IMPLEMENTATION FOR SJG'S GAS PURCHASES AND FINANCIAL INSTRUMENTS

The VP, Gas Supply and Gas Production, is responsible for the management of the RMP. An operating team, consisting of representatives with skills in gas supply analysis, risk assessment, gas market analysis, gas procurement, and financial hedging implement the plan. The VP, Gas Supply, reports to the RMC on progress in implementing the RMP throughout the year and seeks approval from the RMC for any changes to the RMP.

The Gas Supply Department prepares and distributes, on a quarterly basis, a detailed report of hedging positions for the current and prospective BGSS years. The reports are presented to and, reviewed by the, RMC and are provided to the BPU as required. The reports contain the details of each hedging strategy and a summary of all hedging strategies, including the percentage of BGSS send out currently hedged.

The intent of the hedging program and strategies is to provide commodity price stabilization at the lowest reasonable cost. South Jersey's hedging program consists of the following four hedging strategies:

- A Financial Non-Discretionary Strategy, as in price swaps
- The Financial Planalytics Strategy is related to futures, options, and basis.
- The Financial and Physical Storage Incentive Mechanism ("SIM") Strategy using futures.
- The Financial and Physical Discretionary Strategy.

DISCRETIONARY AND NON-DISCRETIONARY HEDGES

A discretionary account is one in which a broker makes trades, buying or selling financial instruments for SJG's account with consent and instruction from SJG at the beginning of the relationship. Discretionary portfolio management does not involve SJG's active participation; the broker manager makes all the decisions on SJG's behalf. Under discretionary portfolios, the trader can actually buy and sell the financial instrument directly without SJG's consent for each trade. The consent is given at the beginning in the form of written instruction or a Power of Attorney.

A non-discretionary account involves SJG at every step of the gas portfolio management. Under non-discretionary portfolio management, the broker or the investment manager only act as a broker following SJG's instructions for the execution of trades. The broker can also be an advisor, but the final decision comes from SJG.

External Brokers, Agents, and Banks

For the purpose of advising on a particular hedge strategy and for the purpose of placing hedges the following resources are in place:

- Midstream Energy was contracted in 2006 and acts as a broker and consultant.
- JP Morgan Asset Management is the financial institution that accepts and places the hedges.

Electronic Hedging Tools

SJG uses the following tools to determine when the market is right to buy for a particular future month:

- Planalytics signals SJG to buy a particular month. Planalytics is a web-based tool that prompts the user for a "buy" when the proprietary algorithm identifies the optimal time/price for the user to purchase a futures contract. Additionally, Planalytics provides live pricing data and other helpful tools that allow SJG to input volumetric goals and prices.
- SJG communicates the advice recommended by Planalytics to Midstream Energy, and Midstream Energy offers its opinion to SJG. SJG makes the final decision, and Midstream Energy is the entity that contacts JP Morgan to place the hedge.
- As with all "futures" that go to the month of settlement, the owner can take title to the gas or sell the gas and take cash. SJG sells and takes cash.

RMC Hedging Policy

The RMC's financial hedging policy states that 50% of the Company's projected annual gas purchases to serve firm sales customers subject to the BGSS will be purchased. SJG sets monthly targets for the volume of financial hedge instruments, which should reflect the estimated monthly send out. Each month is on a stand-alone basis and the financial hedge is expected to be 50% of each month's consumption.

A summary of the RMP hedging policy includes:

- Non-Discretionary Hedges: SJG purchases two financial futures and contracts (25,000 Dths) per month for the 18-month period beginning with the seventh month and continuing through the twenty-fourth month of the current NYMEX strip.
- Storage Incentive Mechanism (SIM) Hedges is also a non-discretionary hedge. SJG purchases futures contracts for the summer injection period to establish a benchmark and then manages the physical injections to improve on the benchmark. To minimize gas price volatility in purchasing the physical injections into storage, SJG will lock in prices for the storage injections. The hedges need to be completed by the end of March of the current year. Non-discretionary hedges represent approximately 20% of the SJG's annual requirements.
- Discretionary Hedges: SJG may exercise managerial discretion to utilize futures, options, and/or other financial instruments when deemed appropriate. Discretionary hedges represent approximately 30% of annual requirements and Price Swaps is the financial instrument used. Documentation of all discretionary hedges is required to provide the basis for entering the hedges.

- Planalytics, is a web-based hedging and risk management application designed for natural gas purchasing and hedging decisions; Planalytics provides recommendations and assists with discretionary hedges. SJG purchases financial price swaps and futures contracts based on suggestions from Planalytics.

G. FINDINGS

10-1 SJG Security has quickly implemented or improved its security practices.

Enhanced security practices include:

- Physical Security Committee and Security Plan
- Security Policies and Procedures
- Security Training for Employees
- Enhanced physical security measures
- Security Drills and Exercises
- Facility and Station inspections

10-2 SJI and SJG have a formal, current, and appropriate Physical Security Plan.

The SJI/SJG Physical Security Plan follows the Transportation Security Administration (TSA) Guidelines for natural gas pipeline security. Important facilities and critical above ground stations are identified for enhanced security. Responsibilities and responses to security incidents are specified.

10-3 Security is not involved in the response to SJG alarms.

Currently, the SJG alarm response has a three-step approach beginning with (1) SJG alarm monitoring contractor receives an alarm, (2) the contractor calls the Utility Services Dispatch unit, and (3) the dispatchers forward the alarm to the designated call out personnel in the relevant division. Security is only notified in serious situations and the incidents do not appear in the Security tracking system.

10-4 There is no Security Operations Center.

The three-tier approach of having a contractor monitor alarms and alert Utility Services Dispatch who then relays the information to the stand-by supervisor is highly economical and seems to be effective. However, it adds an extra link in the chain from alarm to response.

10-5 Differences between confirmed volumes, performed by the Procurement Group, and measured volumes from the pipelines, monitored by the Gas Control Group, are not compensated for by the pipelines. Instead, those differences are booked to the "Lost & Unaccounted For" account.

The proper use of the "Last and Unaccounted For" instrument would be variations between SJG's electronic measurement to electronic measurement owned by the pipelines.

Discrepancies between purchased/confirmed volumes and gas measured and received from the pipelines are not reconciled with each individual pipeline. Under deliveries by pipelines means SJG is paying suppliers for gas that SJG is not receiving and over deliveries have an impact on storage, PDA mechanisms and storage penalties.

10-6 SJG pays for supplies based on the volumes confirmed by the Gas Supply Group without knowing if they received all the supplies or not.

The supply cost is paid based on the confirmed volumes in the ENDUR computer system. That supply cost is passed on to the rate payers. The physical gas is received from both Transco Pipeline and TCO Pipeline at SJG's city gate. SJG's Gas Control is responsible for the measurement equipment and readings. Gas Control compares the meter readings to determine the accuracy of the meter equipment. Because of the inability of control equipment to flow rates that are a perfect match to expected volumes (volumes confirmed by Gas Transportation) there will always be minor variances. Because the confirmed supplies are not compared to the gas measurement data, SJG does not know whether they are receiving accurate quantities form the pipelines or not.

10-7 The Gas Control Center is not manned at certain times by more than one Gas Controller.

The Gas Control Center is currently staffed with less than two gas controllers on every shift. Gas Controllers work on a 12-hour shift basis. The night shift begins at 6:00 p.m. and ends at 6:00 a.m. and is generally covered with one gas controller.

10-8 Gas Controllers are not required to have any specific background.

Gas controllers are not required to have any specific background or training as a prerequisite to perform their job. Gas Controllers undergo a 120-day training period; their performance is evaluated on a 30, 60, and 120-day basis by Gas Control Management for final approval. Gas Controllers are members of the SJG Bargaining Unit.

10-9 Labor cost for Gas Control may be excessive.

SJG's Gas Control operates with twelve-hour shifts and, since the gas controllers are union employees, the additional four hours worked past a normal eight-hour shift are paid at elevated rates.

10-10 Succession Planning for Gas Controllers is not evident.

As employees begin retiring, the overall experience level in almost every organization declines. Companies face the very real possibility that critical skills and knowledge could walk out the door along with the retiring employees. To address this problem, the organization must act in advance of the employees' retirement to facilitate the knowledge transfer. Best practices for the replacement of retiring employees should include provisions to transfer knowledge to the replacement. There is a time investment to train Gas Controllers; most LDCs' require that a trainee has experienced two full Winter periods prior to working on a stand-alone basis. The chart below reflects four gas controllers eligible to retire in the very near term with a fifth eligible to retire October 2022, a sixth gas controller eligible to retire in April 2023, and the seventh eligible to retire June 2025.

Retirement Dates for Gas Controllers

Employee Group	Date of Hire	Eligible to Retire
SJG Local 76	2/3/1986	Currently
SJG Local 76	5/31/2005	6/1/2025
SJG Local 76	10/27/1980	Currently
Non-Union	11/13/2017	2049
SJG Local 76	11/25/1991	10/1/2022
SJG Local 76	9/12/1988	Currently
SJG Local 76	2/13/1991	4/1/2023
SJG Local 76	1/21/1991	Currently

10-11 The administration and management of the larger category of customers that migrated to a TPS are treated in much the same way as other LDCs treat similar customers on their systems.

SJG does not release or assign any of its firm transportation capacity to a TPS for delivery to its city gate on behalf of SJG's end-user customers. The larger end-use customers are treated as independent entities who can make their own natural gas decisions. SJG does not appear to be doing anything that might impede their ability to buy gas.

10-12 The features of the SJG CHOICE Program have the foundation and many similarities to CHOICE programs offered by other LDCs.

Differences between the SJG CHOICE program and other LDC CHOICE programs are as follows:

- The purchase of receivables (POR) option is very attractive for a TPS; it offers 100% payment based on the face value of the receivable and bi-monthly reimbursement to the TPS for the total amount of all customers' billings. Without the POR option, the TPS would have to wait ninety days for payments in addition to collection efforts for slow payments or payments in default.
- SJG does not release or assign FTS capacity for CHOICE customers who migrate to a TPS. Originally SJG contracted for FTS capacity based on 100% of its residential load. This category of customer now has the option to buy from others, but SJG retains the capacity to support deliveries for those small customers. LDCs in other states (i.e., Ohio, New York, Pennsylvania, and New Mexico) assign FTS capacity to CHOICE customers for the entire twelve months at maximum reservation rates. The assignment of capacity releases the LDC from carrying the excess transportation during summer months when residential customers are not burning much gas. The concept here is that the FTS capacity follows the residential customer to the TPS as they migrate and back to the LDC as the customer returns to the LDC.

10-13 There is active competition within SJG's geographic footprint.

The billing options provided by SJG in addition to the POR option provide significant flexibilities to TPS. There are more than sixty TPSs currently active in SJG's territory, some of which may not be interested in residential size loads. However, there are more than fifty TPSs who have provided gas under the CHOICE program.

10-14 The gas forecasting process is comprehensive and considered relevant aspects to provide accurate results in a pre-Covid-19 environment.

This study was performed using pre-Covid-19 data; therefore, the study cannot address the upcoming two winter seasons. The study can be used as a handbook for design days, recognizing that demand has changed drastically.

10-15 SJG has dependable transportation that enables the movement of gas supply from the production areas to its city gates on the coldest days.

The mix of transportation is impressive because it allows for a mix of supplies from different supply areas plus Storage and Peaking services as follows:

- Tennessee Pipeline takes 78,000 Dths per day of shale gas in Pennsylvania and delivers it through to a point where Columbia Gas Transmission (TCO) picks it up and takes it to SJG. The price index for Tennessee receipt point gas is more attractive than other indexes.
- Transco receives approximately 164,000 Dths per day of shale gas in Zone 6 Pennsylvania for delivery to SJG.
- TCO receives gas in Kentucky and delivers it to SJG. Additionally, TCO can take gas from the TCO pool for deliveries to SJG. The TCO index is attractive.
- Transco picks up supply in the gulf and transports it on a long-haul basis to SJG.

10-16 SJG performs meticulous and comprehensive credit reviews on suppliers.

Because the NYMEX is an ever-moving vehicle of pricing, credit exposure changes without a change in volume occurring. Mark-to-Market accounting is used that captures the moving prices. Credit reviews are on-going and regular. Once the credit evaluation is performed and a TPS is approved for credit worthiness, the TPS can then serve any category of customer as well as selling directly to SJG for their system supply.

10-17 SJG did not fill all of its storage facilities to the maximum in any given year from 2013 through 2019.

Storage is valuable and provides reliability and security. It is difficult to understand why storage is not filled completely or within one or two percent of maximum. As shown in the Summary of Transco Five Storage Accounts and the Columbia FSS Storage exhibits, effective November 1 of each year in this audit period, inventory levels were below the maximum capacity levels.

10-18 SJG did not withdraw all of its storage gas and left a balance at the end of March of every year.

Withdrawals, because they result from variable demand, are more difficult to manage than scheduled injections. During the winter period, daily weather conditions are not as predictable and the difference between actual consumption and estimated consumption can be harder to assess. However, the balances left in storage were significantly more than expected.

10-19 SJG's Transco ESS storage account had little activity over the past seven years.

It is a small account with maximum storage capacity of 232,314 Dths and injections into ESS are limited to 2,321 Dths per day. ESS has the flexibility of injecting or withdrawing any and all days of the year.

10-20 SJG released 1,246,751 or 36% of its total firm storage capacity on Columbia.

The release to affiliate SJRG was in place for the period of this audit up to November 2019 when the capacity was returned to SJG. The associated firm transportation that injects into storage and the firm transportation that withdraws from storage were also released for the same time period.

10-21 SJG has the necessary pricing tools in place to facilitate gas procurement.

The pricing tools discussed above for gas commodities information and a source of benchmark price assessments in the physical commodity markets are common tools used in the gas industry. There are other sources available with the same information; however, SJG is using the most reliable benchmark prices for commodity markets recognized around the world.

10-22 The contracting process is comprehensive, accurate, and meticulous.

The rating system applied to contract requests clearly defines the risk exposure to SJG. The routing process brings every department into the loop and mandates their participation. The process is thorough and integrated. Only credit-worthy entities are offered a final contract and the contract must be approved and executed by SJG's upper management.

10-23 The RFP process is satisfactory. SJG understands the elements necessary to include in the RFP, and they understand how to evaluate the responses.

The RFP process is only suitable for services with an effective date at least several days in the future. Daily purchases are more near-term and often preclude the type of advance notice associated with traditional RFP processes. Since SJG does virtually all their gas purchasing in the daily market, it does not issue a large number of RFPs.

10-24 The ENDUR system delivers web services with connectivity to external data sources, including pricing sources such as GD, IF, and NYMEX.

Traders enter trades into ENDUR and list the abbreviation GD in the pricing field. Data is loaded overnight and is available the following morning. ENDUR populates the pricing field appropriately once the data is available in ENDUR.

Many LDC customers rely on the manual entry of index pricing into spreadsheets in order to maintain historic pricing that might be required in the future. ENDUR, through its connectivity to external data sources, captures the relevant index prices and houses those prices for future use. ENDUR's capability to populate the pricing field in the physical gas procurement database based on a code entered by the traders is a good feature. Price population based on a computer program provides accuracy and consistency. Both features save a considerable amount of time as opposed to manual entry.

10-25 The ENDUR system captures trades, credit, and settlements to update the ledger, providing a full solution for limits, monitoring, market, and credit risk management.

The ENDUR Computer system has always been a leader in the financial side of physical gas procurement and financial hedging products. Monitoring of exposures against credit limits through standard and user-defined credit calculations are reported in real time. Financial hedging activities such as futures, swaps, and options are captured, and ENDUR will prompt when future months reported by NYMEX are ideally priced to buy. Sub-ledger functionality and invoice processing and payment information can be tracked for real-time monitoring. Mark to market and accruals are both supported. The financial component of ENDUR is an end-to-end system; it will identify, quantify, and manage a transaction from beginning to end.

10-26 ENDUR, as currently configured, has weak physical gas commodity management capabilities.

ENDUR captures all contracts (i.e., both NAESB and capacity transportation, physical gas purchase, and sale deals) and it has the mathematical ability to calculate volumes and the like on a per contract basis or per supplier, but it does not provide comprehensive data in all areas.

Natural gas businesses face a constantly growing number of challenges in today's volatile and uncertain market. Coping with imbalances to avoid potential pipeline penalties, capacity limitations, and other factors add to the difficulties natural gas professionals face every day. ENDUR does not empower SJG's gas trading professionals with a comprehensive view of pipeline capacities, the available gas volumes per pipeline receipt point, or pipeline notifications posted on pipeline Bulletin Boards.

Because of its design, ENDUR cannot provide the capabilities common to other commercial off-the-shelf (COTS) gas computer systems. For example, capacity transportation contracts are captured in ENDUR while individual purchases are entered into ENDUR; however, the individual deals do not recognize the capacity transportation agreement that will move the gas. ENDUR cannot calculate if capacity transportation is exceeded or not. Also, nominations and confirmations of gas reside in a separate spreadsheet system. Therefore, ENDUR cannot associate the individual transactions to either supplier contract limits or capacity transportation contract limits.

10-27 SJG did not enter fixed volume supply contracts that feed their transportation agreements.

SJG did not have traditional supply commitments in place with suppliers for 90% of their supplies for the period January 2013 through October 31, 2018. From November 1, 2018, to the current time, SJG committed additional volumes under contract at market prices. The one previous commitment in place terminated October 31, 2019. Therefore, supplies for approximately 70% of SJG's volumetric load are not in place to support transportation contracts.

SJG put in place AMAs to support as much as 60% of daily requirements and dropping back to approximately 30% in the years 2019 and 2020. The attractive feature of the AMA vehicle is that SJG can call upon the volume on any given day or not as the need arises. This vehicle of support guarantees supplies on those peak days or design days when supply may be very scarce. A prudent use of the AMA vehicle is to only use it for swing volumes (25% of daily winter loads) and peaking days at the top of demand spikes. AMAs should not replace the purchase of sensible daily winter loads to attach to FTS capacity contracts. The unattractive feature is that SJG pays daily market rates for the gas that they choose to call upon. However, swing gas represents approximately 25% of daily winter loads and would be purchased at daily market rates without AMAs.

Absent a contractual obligation, a supplier is not committed to serve SJG. The natural gas market moves just like any other commodity market and suppliers move in accordance with that market. SJG has valuable firm transportation that is expensive but guarantees reliability because the capacity is reserved on the appropriate pipelines to move supplies to SJG's city gate. However, those capacity transportation contracts are receipt point specific (i.e., volumes of gas must be available at those specific receipt points for the capacity transportation contracts to be mobilized). The capacity transportation contracts must be activated in order to have value and without supply in place activation is not possible.

On critical days customers will pay elevated prices that may be ten, twenty, or one hundred times the normal price. Even at elevated prices, SJG has no guarantee that supply will be available at the receipt points essential for SJG's capacity transportation. In some circumstances, this translates into SJG buying delivered gas—if SJG can find sufficient volumes on a zero-degree day—at extremely high cost. Simultaneously, SJG is paying 100% of costs associated with their capacity transportation that cannot be used. There are five elements fundamental to reliability. These have been discussed above and in the Gas Control and Load Forecasting Sections and are summarized as follows:

- A Gas Control Group that makes safety a priority and contributes in a major way to reliability of the commodity.
- A load forecasting effort that provides for as accurate a forecast of volumes as is possible furthering reliability.
- A credit review and contracting process that is comprehensive and meticulous and adds to reliability.
- Capacity transportation that ensures gas will be moved from production areas to SJG and guarantees reliable volumes will be delivered to SJG.
- The lack of guaranteed supply commitments pledged to feed the capacity transportation vehicle makes the entire process wholly unreliable.
- It appears that SJG's Gas Procurement department was so focused on capturing downward trends in the gas daily market that it lost sight of the fact that such actions were detrimental to gas supply reliability.

It appears that SJG's Gas Procurement department is focused on capturing downward trends in the gas daily market.

The following exhibit shows gas volumes based on SJG's actual Send-Out Data for five winter months effective January 2013 through March 2015 and again through the winter period of November 2019 through March 2020. The exhibit shows monthly consumption data, volumes delivered by TPS for customers who have migrated from SJG, actual storage withdrawals, base load supply committed to supply contracts, and volumes possible under AMAs. Base load commitments did not increase until the end of the year 2018. Because of peaking and LNG capabilities (not outlined in this exhibit) in addition to AMA options, SJG now meets their daily supply winter loads.

Winter Month Volume Shortage Comparison 2013–2015 vs 2019–2020

Month/Year	A. Gross Sendout Data	B. TPS Volume	C. Actual Storage Withdrawals	D. Monthly Vol 1st of Mon/IF	E. AMA Monthly Vol Possible	Total of Columns A through E	Monthly Volume Short
Jan 2013	8,504,660	3,434,087	1,739,038	465,000	620,000	6,258,125	2,246,535
Feb 2013	8,091,187	3,052,112	1,471,118	430,000	560,000	5,513,230	2,577,957
Mar 2013	7,824,480	2,734,975	494,278	475,000	620,000	4,324,253	3,500,227
Nov 2013	6,307,515	2,536,980	1,197,112	450,000	1,950,000	6,134,092	173,423
Dec 2013	8,388,434	3,165,844	1,545,433	465,000	2,015,000	7,191,277	1,197,157
Jan 2014	10,575,486	3,812,132	1,919,520	475,000	2,015,000	8,221,652	2,353,834
Feb 2014	9,233,958	3,226,888	3,375,092	420,000	1,820,000	8,841,980	391,978
Mar 2014	8,500,050	2,936,196	1,110,398	465,000	1,550,000	6,061,594	2,438,456
Nov 2014	6,526,257	2,524,230	940,560	420,000	1,500,000	5,384,790	1,141,467
Dec 2014	7,737,260	2,891,246	1,439,904	465,000	1,500,000	6,296,150	1,441,110
Jan 2015	10,288,167	3,080,687	1,849,129	465,000	1,550,000	6,944,816	3,343,351
Feb 2015	10,334,667	2,980,684	1,700,130	410,529	1,400,000	6,491,343	3,843,324
Mar 2105	8,033,309	2,978,604	1,218,786	476,500	1,550,000	6,223,890	1,809,419
Nov 2019	6,222,769	1,878,360	1,369,665	3,456,630	900,000	7,604,655	(1,381,886)
Dec 2019	7,652,284	2,385,543	1,828,627	3,230,851	930,000	8,375,021	(722,737)
Jan 2020	7,822,144	2,561,778	2,081,507	2,170,000	930,000	7,743,285	78,859
Feb 2020	6,899,981	2,419,528	1,514,521	2,732,409	840,000	7,506,458	(606,477)
Mar 2020	5,280,928	2,232,930	1,677,283	2,325,000	930,000	7,165,213	(1,884,285)

10-28 SJG did not enter fixed price contracts.

The RMP provides the flexibility for SJG to enter fixed price contracts for physical gas, but it is not a requirement.

The risk associated with a fixed price contract is that there is no benefit from falling prices. Fixed price contracts can be covered by a "PUT" option. This is a popular strategy for covering a percentage of the load. SJG did enter two contracts that committed to fixed volumes, not to be confused with fixed prices. The price structure, where volumes were committed, was based on at-the-market based prices.

10-29 Base load volumes were not purchased at first-of-the-month prices.

In accordance with RMP written guidelines, only swing gas could be purchased in the daily gas market. Effective November 2018 and continuing for ten years, SJG did enter first-of-the-month indexed pricing for approximately 17% of its winter load. This specific supply contract has lesser volumes committed between April through October than is committed to during the winter months. This appears to be the only supply agreement for 2013–2019 that was priced at something other than daily prices.

The interpretation of the RMP is that all volumes not committed to a defined price should be purchased at the time they are needed at market prices. For a significant portion of the total demand, these quantities should be purchased at monthly indexed prices. However, some gas purchases may be made on the daily spot market.

10-30 SJG ignored RMP purchasing policy and therefore spent a great deal more money than if it had followed the policy.

Swing gas volumes are volumes required to handle short-term increases in consumption generally due to weather that occurs during the winter period. Swing Gas is the opposite of Base Load Gas that is delivered daily and represents the average daily historical consumption during a given month.

The RMP purchasing policy speaks to volumes of gas to be purchased at monthly indexed prices with the understanding that some gas purchases may be made on the daily spot market. The RMP purchasing policy defines swing gas as those short-term increases in demand that cannot be managed by storage injections or withdrawals. SJG purchased the majority of its gas on a daily basis and ignored the RMP purchasing policy that described daily purchases as short-term increases in daily demand.

The following exhibit reflects SJG's purchasing expenses over the seven years of this audit effective January 2013 through 2019 plus 7 months of the year 2020. A comparison of First-of-the-Month prices published in Inside FERC (IF) Index to Gas Daily (GD) Index prices was made. The results are that GD prices were higher than IF by $149,174,767 for the aggregate of the period of this audit. There were individual months where GD was less expensive than IF and totaled $32,245,537. The net effect is that SJG may have spent up to $116,929,230 more by buying its supply in the daily market. It is recognized that SJG needed to purchase some volumes of daily gas as recognized by the RMP purchasing policy, therefore, as shown in the exhibit, the $116,929,230 amount is reduced by 25% to $87,696,922.61.

Annual Difference Between Using Gas Daily vs Monthly

Year	Gas Daily Less than IF	Gas Daily Higher than IF	Net $$$ GD vs IF	Reduced by 25% Daily Swings[1]
2013	$657,809.00	$(7,114,273.00)	$(6,456,464.00)	$(4,842,348.00)
2014	$17,871,303.00	$(50,384,562.00)	$(32,513,259.00)	$(24,384,944.25)
2015, Jan-Apr	$2,233,832.00	$21,197,461.00)	$(18,963,629.00)	$(14,222,721.75)
2015, May-Dec	$458,522.08	$(727,013.54)	$(268,491.46)	$(201,368.60)
2016	$1,876,747.00	$(6,424,618.00)	$(4,547,871.00)	$(3,410,903.25)
2017	$5,544,623.00	$(8,914,966.00)	$(3,370,343.00)	$(2,527,757.25)
2018	$1,197,920.51	$(51,553,370.19)	$(50,355,449.68)	$(37,766,587.26)
2019	1,880,795.00	$(1,587,590.00)	$293,205.00	$219,903.75
2020, Jan-Jul	$523,986.00	$(1,270,914.00)	$(746,928.00)	$(560,196.00)
Totals	**$32,245,537.59**	**$(149,174,767.73)**	**$(116,929,230.14)**	**$(87,696,922.61)**

[1] Swing Gas is unanticipated weather conditions that cause an increase in consumption

10-31 SJG used a diverse group of suppliers.

The mix of suppliers can access different supply areas and can support supply for all SJG's capacity transportation. Seventy-one suppliers sold to SJG during the seven-year period examined in the audit, though not all were active during each of the seven years.

The most important feature when selecting or evaluating a gas supplier is their financial strength. Credit evaluations are performed on suppliers that sell to any SJI company. The credit approved supplier is then able to enter supply arrangements with any SJI company both as a seller, a buyer, and a TPS. The credit evaluation appears to be complete and thorough. The credit review discovers if the supplier owns gas reserves (i.e., gas in the ground), and if the potential supplier is a gas producer as well as a gas marketer. Traders will then establish the geographic region or location where the supplier owns gas supplies, other areas that the supplier may have access to natural gas supplies, and if the supplier will enter long term-gas commitments. Many producers enter financial price swaps, so the supply subject to the swap cannot be committed to sales on a forward basis. The following exhibit reflects all suppliers and their associated volumes for the period of this audit.

Suppliers with Associated Volumes 2013–2019

External Business Unit	Gross Volume 2013–2019 (1)	Gas Daily Total Invoiced	End of Month IF Index Price	Difference	Percent of Total
UTIL SJRG - BU	30,730,457	$89,673,104.00	$69,229,620.00	$20,443,484	17.60%
SJRG	10,490,878	$49,516,298.00	$40,045,474.00	$9,470,824	8.15%
UTIL NJR ENERGY SERVICES - BU	1,203,187	$5,603,929.00	$4,190,605.00	$1,413,324	1.22%
NJR	268,680	$2,502,820.00	$1,337,399.00	$1,165,421	1.00%
NET	5,406,016	$51,371,961.00	$30,592,690.00	$20,779,272	17.89%
UTIL PACIFIC SUMMIT ENERGY - BU	975,676	$18,130,717.00	$3,602,312.00	$14,528,405	12.50%
Macquarie Energy	2,521,419	$23,739,747.00	$12,293,509.00	$11,446,238	9.85%
UTIL DTE ENERGY - BU	8,621,210	$36,885,676.00	$26,658,766.00	$10,226,910	8.80%
ConocoPhillips	10,471,664	$46,240,028.00	$38,006,645.00	$8,233,383	7.09%
UTIL EXELON - BU	5,726,434	$20,438,338.00	$16,175,342.00	$4,262,996	3.67%

External Business Unit	Gross Volume 2013–2019 (1)	Gas Daily Total Invoiced	End of Month IF Index Price	Difference	Percent of Total
JP Morgan	3,982,504	$18,478,813.00	$14,935,451.00	$3,543,362	3.05%
Sequent	6,892,799	$29,376,798.00	$25,842,682.00	$3,534,117	3.04%
Noble	1,029,398	$8,186,463.00	$4,672,200.00	$3,514,263	3.02%
UTIL TENASKA MARKETING - BU	22,350,994	$71,087,218.00	$68,214,082.00	$2,873,136	2.47%
Chevron	8,924,376	$32,626,396.00	$29,770,307.00	$2,856,089	2.46%
UTIL MERCURIA AMERICA - BU	6,964,562	$18,984,219.00	$17,095,228.00	$1,888,991	1.63%
Pacific Summit	528,141	$3,739,337.00	$1,930,750.00	$1,808,587	1.56%
UTIL SEQUENT ENERGY - BU	8,238,720	$22,535,519.00	$20,790,798.00	$1,744,721	1.50%
Exelon	1,583,168	$7,609,469.00	$5,966,454.00	$1,643,015	1.41%
Equitable	339,283	$3,191,391.00	$1,688,457.00	$1,502,934	1.29%
UTIL RANGE RESOURCES - BU	10,544,967	$23,267,036.00	$22,020,725.00	$1,246,311	1.07%
Total	4,267,373	$16,481,012.00	$15,412,766.00	$1,068,246	0.92%
Shell	905,000	$4,287,025.00	$3,674,600.00	$612,425	0.53%
Colonial	99,239	$1,030,982.00	$437,461.00	$593,521	0.51%
PPL	69,999	$856,084.00	$299,495.00	$556,588	0.48%
UTIL CONOCOPHILLIPS - BU	15,766,224	$44,290,967.00	$43,747,618.00	$543,349	0.47%
Occidental	3,774,906	$14,475,942.00	$13,970,943.00	$505,000	0.43%
BP Energy	2,075,160	$7,825,740.00	$8,460,758.00	$464,982	0.40%
UTIL EQT ENERGY - BU	1,341,725	$5,088,029.00	$4,638,726.00	$449,303	0.39%
UTIL BIOURJA - BU	5,658,005	$15,808,574.00	$15,475,733.00	$332,841	0.29%
Direct Energy	25,887	$339,726.00	$40,836.00	$298,890	0.26%
Antero	17,259,999	$60,356,337.00	$60,065,528.00	$290,809	0.25%
Cargill	99,190	$647,242.00	$365,267.00	$281,975	0.24%
WPX	589,036	$2,859,309.00	$2,688,540.00	$170,770	0.15%
Southwestern	1,060,894	$4,224,715.12	$4,093,047.43	$131,668	0.11%
UTIL TWIN EAGLE - BU	1,122,772	$2,622,777.00	$2,491,459.00	$131,319	0.11%
UTIL MACQUARIE ENERGY - BU	6,630,899	$16,352,312.00	$16,247,131.00	$105,181	0.09%
UTIL BG ENERGY - BU	3,660,402	$7,377,747.00	$7,305,826.00	$71,921	0.06%
UTIL SOUTHWESTERN ENERGY - BU	1,715,563	$3,932,536.00	$3,871,644.00	$60,892	0.05%
Pacific	90,000	$375,900.00	$318,300.00	$57,600	0.05%
UTIL DIRECT ENERGY - BU	352,358	$688,284.00	$638,016.00	$50,268	0.04%
UTIL SHELL ENERGY - BU	2,877,699	$9,986,833.00	$9,941,888.00	$44,946	0.04%
Constellation	105,928	$449,059.00	$414,540.00	$34,519	0.03%
UTIL JP MORGAN VENTURES - BU	114,002	$324,911.00	$297,224.00	$27,688	0.02%
Anadarko	360,520	$871,329.21	$847,238.90	$24,090	0.02%
BNP Paribas	114,201	$475,252.00	$457,981.00	$17,270	0.01%
UTIL DELMARVA - BU	21,500	$93,820.00	$77,945.00	$15,875	0.01%
Hess	34,925	$134,461.25	$122,936.00	$11,525	0.01%
UTIL KM VENTURES - BU	54,961	$75,208.00	$66,467.00	$8,741	0.01%
UTIL SPIRE MARKETING INC - BU	1,298,552	$2,737,228.00	$2,732,873.00	$4,355	0.00%
UTIL EDF TRADING - BU	56,037	$128,421.00	$125,046.00	$3,375	0.00%
UTIL ANADARKO - BU	343,815	$415,721.00	$412,638.00	$3,083	0.00%
UTIL CLEARWATER ENTERPRISES LLC - BU	2,210	$5,525.00	$4,862.00	$663	0.00%
UTIL ANTERO RESOURCES - BU	34,933,236	$68,467,740.00	$68,467,740.00	$–	0.00%
Amerada Hess	12,500	$42,475.00	$43,000.00	$(525)	0.00%
UTIL SEI - BU	5,800	$6,620.00	$7,278.00	$(658)	0.00%
UTIL OCCIDENTAL ENERGY - BU	6,009,250	$16,649,976.00	$16,661,981.00	$(12,005)	−0.01%
UTIL TOTAL GAS - BU	381,883	$933,779.00	$946,330.00	$(12,551)	−0.01%
UTIL CABOT - BU	23,102,100	$51,963,610.00	$51,976,710.00	$(13,100)	−0.01%
UTIL COLONIAL ENERGY - BU	106,100	$231,985.00	$265,417.00	$(33,432)	−0.03%
UTIL BP ENERGY - BU	12,502,877	$30,217,053.00	$30,257,512.00	$(40,459)	−0.03%
UTIL NOBLE AMERICAS - BU	740,211	$2,045,294.00	$2,130,593.00	$(85,299)	−0.07%
BG Energy Merchants	974,095	$4,206,549.00	$4,335,540.00	$(128,991)	−0.11%
UTIL CHEVRONTEXACO - BU	5,394,302	$13,041,665.00	$13,237,059.00	$(195,395)	−0.17%
WGL Midstream	1,621,498	$5,456,415.00	$5,728,051.00	$(271,636)	−0.23%
UTIL CARGILL - BU	1,377,409	$2,424,023.00	$2,730,021.00	$(305,999)	−0.26%
Delmarva	155,000	$2,115,480.00	$2,422,400.00	$(306,920)	−0.26%
UTIL TALEN - BU	2,620,000	$5,214,586.00	$7,013,830.00	$(1,799,244)	−1.55%
DTE	2,308,357	$10,349,603.00	$12,662,724.00	$(2,313,121)	−1.99%
Tenaska	14,133,074	$58,020,331.00	$62,701,422.00	$(4,681,091)	−4.03%
Energy of America	4,991,417	$21,886,718.00	$30,583,446.00	$(8,716,728)	−7.50%

10-32 SJG has the tools in place to make pricing decisions for future months.

Both the ENDUR and Planalytics electronic systems have the capabilities to provide pricing recommendations. Those recommendations coupled with advice from SJG's outside consultant are sufficient to make intelligent pricing choices.

10-33 The RMC is responsible for establishing a framework for measuring and monitoring all gas transactions.

It is the RMC's responsibility to establish a general framework for measuring and monitoring both financial and physical natural gas transactions. The RMC should approve all transactions that fall outside of specified risk management guidelines. The RMC is supposed to ensure that objective and independent controls are in place.

The VP, Gas Supply Operations is a member of the RMC. In accordance with the RMP, the Front Office function is the responsibility of the VP, Gas Supply Operations who will ensure the department's representatives comply with the SJI RMP and will support the enforcement of the Policy if a non-compliance event occurs. Additionally, signed certifications of the Annual Compliance Statement are required from all traders stating that RMC policies have been received. Granted, the signed certificate does not require the trader to state if the policy is being followed; however, it would be reasonable to expect a trader to voice an opinion as to the non-compliance.

10-34 The RMC did not fulfill its responsibility concerning the physical supply procurement function.

The RMC has an annual assessment of their policies and procedures, and a reasonable expectation would be to involve the VP of Gas Supply Operations and inquire about the physical supply procurement function. The RMC assumes responsibility for active oversight of the Company's natural gas hedging strategies and activities including an annual review and approval of the Company's hedging plan to be implemented for the forthcoming gas supply year. Physical hedges and physical purchases fall into this category. The RMC reviews quarterly, or as needed, the BGSS rate filings; gas cost is an element of that filing.

10-35 There have been no internal or outside audits that addressed the purchase and sale of physical natural gas.

The RMP is intended to be a control document that sets forth the guidelines for gas procurement and financial instruments. The RMP's guidelines set controls whenever compliance to rules and regulations are required. There were no internal audits conducted during the 2013 through 2019 time period that addressed the purchase and sale of the physical natural gas. If there had been it would have evaluated compliance with the RMP's guidelines and reported that there were deviations from those standards (such as purchasing such elevated quantities of gas commodities in the day market).

10-36 Gas is scheduled in accordance with pipeline guidelines.

Gas is properly nominated so that the pipelines accept the shipping instructions in a timely manner avoiding gas deliveries falling behind and allowing SJG to move forward to the next step.

10-37 The confirmation process is standard in the gas industry and appears efficient and effective.

Without an effective confirmation process, shortfalls in supply would not be captured, suppliers would be overpaid, and Gas Control would have false expectations regarding daily volumes from the pipelines. While penalties can be a strong indication of a weak confirmation process, there were other reasons for SJG penalties, as previously discussed. There is no evidence that the confirmation process is anything other than solid.

10-38 Reports are generated regularly and provided to Gas Control to notify them of confirmed expected volumes.

Gas Control is the authority that determines how much gas is required and is the source for advice on whether more or less gas is required. The Nomination and Confirmation groups report the expected volumes so that Gas Control can request intraday changes. Through the reports, Gas Control is informed of all gas being delivered to SJG, including TPS gas. It is essential that reports show purchased volumes reflected in the confirmed volumes that are made to gas received from the pipelines at the city gate.

10-39 SJG paid for firm capacity transportation to Transco without receiving the full benefit.

The line pressure provided by Transco was low during February 2015. Transco's inlet pressure met the contractual minimum of 350 PSIG as stated in their natural gas tariff approved by the Federal Energy Regulatory Commission (FERC), therefore SJG did not have recourse to require Transco to compensate SJG. SJG did not have mechanical abilities to correct the situation on their end. This caused a ripple effect which led to SJG being forced to draw gas from an alternate pipeline, TCO's storage, which then placed them in considerable penalty.

10-40 SJG sells a portion of its excess capacity transportation bundled with gas commodity at delivery points daily.

All distribution utility companies find that they have excess capacity transportation on a daily basis. However, it is a cumbersome process to release the excess daily capacity on a daily basis because of the time constraint. Capacity is required to be posted on pipeline bulletin boards to solicit bidders, contracts must be generated, and the gas must be nominated by a specific time. It is difficult to successfully jump all the hurdles within a few hours to execute transportation release for one day.

10-41 SJG sells a portion of its excess capacity transportation bundled with gas commodity at delivery points for longer periods (i.e., for one full month and for the periods of April through October and November through the end of the following March).

Cold weather causes higher gas consumption, so to prepare for the coldest possible day, SJG acquires sufficient transportation capacity to move gas from the receipt point in the supply areas to SJG's city gate. FTS capacity transportation contracts ensure that SJG has gas deliveries to its city gate on a guaranteed basis every day. The period of April through October of any year does not have critical cold days. Therefore, an OSS commitment of a reasonable amount of transportation capacity for one whole month or multi-months effective April through October will not compromise SJG. However, an OSS commitment of any amount of transportation capacity, for one whole month or multi-months effective November through the following March will compromise SJG. The winter period is subject to critical cold weather.

10-42 SJG does not take advantage of the flexibilities available to the owner of a futures contract.

SJG enters into futures as authorized by the RMP; however, SJG does not take advantage of the flexibilities available to the owner of a futures contract. SJG allows its futures to go to the settlement month without interference. The basic concept always is to buy low and sell high. Suggestions are made by Planalytics, the web-based hedging and risk management application. It is expected to interpret the market to recommend low prices necessary for a successful hedge using futures. As prices rise for any given month that SJG owns futures, SJG can sell and take profits. SJG can then wait and buy back in as prices fall. SJG was profitable for the average of all seven years of this audit. However, they suffered losses during some years that amounted to $2,053,700.

10-43 SJG does not enter into Basis financial instruments.

“Basis” is the cost of transporting natural gas from a trading hub to the desired delivery point. With natural gas, basis is the contractual cost of delivering natural gas to the local utility company from the NYMEX natural gas trading point at Henry Hub. SJG is under contract for firm transportation with the pipelines delivering to its city gate; therefore, the cost of SJG’s transportation is known and measurable and not subject to change.

10-44 SJG does not enter into Options financial instruments.

A natural gas option gives the purchaser the right, but not the obligation, to purchase the underlying futures natural gas contract for a specific time period at a specific price. Generally, it makes sense that SJG is not interested in an “option” to buy. SJG will purchase significant volumes of gas so why risk the entire amount of the premium required to buy an option. However, while straight up options may not be of interest to SJG, the combination strategies offer some risk protection at very low cost.

10-45 There is major risk associated with price swaps as a financial hedging tool for an LDC.

Price swaps are highly customized and not easily standardized. Because of customization, price swap contracts cannot be easily traded on an exchange. Price swaps are a perfect tool for gas producers who own the gas in the ground. Price swaps perform well if SJG can achieve two things: (1) obtain a high fixed price (i.e., a fixed price at the top end of the market), and (2) the actual physical cost of gas at the settlement month is less than the fixed price agreed to with the financial institution. The seven years of this audit experienced falling natural gas prices; lower gas prices in past years caused price swaps to perform well for SJG. There is no guarantee that the physical price of gas will continue to drop or stay at current levels.

The following exhibit reflects price swaps to demonstrate profits and losses on an annual basis effective January 2013 and continuing through December 2019. The totals provided reflect the net effect of all seven years in the individual categories that yielded a gross profit of $10,444,335 in profits.

SJG Price Swaps Gain/Loss ($)

Year	Swaps Profits	Swaps Losses	Net Gain/Loss
2013	1,550,480	(67,520)	1,482,960
2014	470,290	(967,790)	(497,500)
2015	6,186,590	–	6,186,590
2016	4,757,285	(106,275)	4,651,010
2017	250,325	(1,058,575)	(808,250)
2018	706,775	(1,956,050)	(1,249,275)
2019	853,700	(174,900)	678,800
Totals	**14,775,445**	**(4,331,110)**	**10,444,335**

10-46 SJG should investigate other resources similar to Planalytics.

SJG should investigate other resources similar to Planalytics that offer recommendations on purchasing price swaps and or futures. Currently SJG uses Planalytics as the web application to provide intelligence on the right time to buy a futures contract for a particular month in the future. The algorithm programmed into Planalytics should be based on finding future months priced at the bottom of the market. Futures are identical to buying physical gas in that both are successful when the buyer buys low and sells high.

Price swaps are polar opposites of futures in the way they are calculated. A particular investigative computer application that renders a good recommendation for price swaps should have an algorithm programmed to retrieve future months priced at the top of the market.

The evaluation of price comparisons for price swaps to futures should have a wide spread between the prices. The following exhibit compares individual prices paid for price swaps and futures averaged on an annual basis. For example, in 2013, averaged for the year, futures cost $0.62 less than price swaps. This resulted in net difference of $1,492,890 in profits. For 2017, averaged for the year, futures cost $0.252 more than price swaps resulting in $578,610 in losses.

Cost Difference for Swaps Versus Futures Pricing
Averaged on an annual basis ($)

Year	Cost Difference	Swaps	Futures	Net Difference
2013	0.620	1,618,000	(125,110)	1,492,890
2014	(0.157)	(1,438,080)	886,420	(551,660)
2015	1.092	6,186,590	(1,088,750)	5,097,840
2016	1.030	4,863,560	(220,640)	4,642,920
2017	(0.252)	(808,250)	229,640	(578,610)
2018	0.151	(1,312,450)	1,857,310	544,860
2019	(0.110)	1,028,600	(617,170)	411,430
Total		**10,137,970**	**921,700**	

10-47 SJG followed the guidance and policies set forth in the RMP as it related to financial instruments.

SJG implemented the regulations and guidelines associated with financial products outlined in the RMP. SJG stayed within the 50% ration of physical monthly gas to financial products. Additionally, SJG honored the discretionary/non-discretionary rules.

H. RECOMMENDATIONS

10-1 Implement a Security Operations Center. (See Finding 10-4)

SJG should start a Security Operations Center to address security issues. SJG already has a seven-days-per-week, 24-hours-per-day Gas Control Center and a Utility Services Dispatch Center. As the two existing control centers expand and evolve, it may be advantageous to shift the security monitoring to one or the other of these employee-staffed centers. If one of these centers are selected to assist with additional security measures, that control center should also manage the Security Incidents Tracking System. The SCADA System operated by Gas Control is currently monitoring sixteen of SJG's transmission and or distributions pipelines. It is SAGE's understanding that SJG is already considering starting a Security Operations Center.

10-2 Initiate Operational Balancing Agreements or some other balancing mechanism between SJG and Transco and SJG and TCO. (See Finding 10-5)

OBAs are agreements between pipelines and parties at delivery or receipt points whereby the parties agree to specified procedures for balancing discrepancies between the confirmed levels of gas volumes and the actual quantities. However, they are not offered by Transco or TCO at local distribution company delivery points. OBAs are a common practice between pipelines because of the inability of control equipment to flow rates that are a perfect match to expected volumes. Gas Procurement, through its Manager of Gas Transportation, should focus on tracking and confirming the gas supplies being delivered to SJG's city gates. Pipelines are regulated by the FERC and are obligated to deliver accurate volumes of gas supplies. A mechanism is available and should be investigated with FERC if necessary. The five-step process from the purchase of supplies to final measurement of receipts should be as follows:

- SJG purchases the gas from suppliers.
- Shipping orders are put in place with the pipelines, commonly referred to as nominations or scheduling the gas.
- SJG confirms with each delivering pipeline that SJG's suppliers are prepared to flow the gas and that all the pieces are in place between the suppliers and the pipeline for the next day.
- A report with the volumes that are expected to be received is made available by the Gas Transportation Manager to Gas Control daily. This report should include South Jersey's own system supply in addition to TPS volumes. This report must reflect city gate volumes (i.e., calculations made for retainage values, if appropriate).

- Gas Control, armed with the Gas Transportation "confirmed volumes report," should now be able to compare the expected volumes provided by Gas Transportation to the gas measurement readings. Differences should be quantified and reconciled with a reported imbalance.

10-3 Develop a Gas Supply Audit Process. (See Finding 10-6)

SJG should develop an in-house audit to compare confirmed volumes by Gas Transportation to the measured volumes by Gas Control. This could be retroactive for periods for which SJG feels that the pipelines will compensate for shortages with gas in-kind at this late stage. Initially, SJG should consider a comparison of the most recent two years.

10-4 Increase the number of Gas Controllers. (See Finding 10-7)

SJG should add sufficient Gas Controllers to ensure that the Gas Control function is manned by two Gas Controllers; it is not safe to operate with a single Gas Controller. Normal personal breaks taken during a shift would seem to require additional coverage, not even considering emergency or extraordinary situations such as a sudden health problem. A fifteen-minute delay in reacting to an alarm could cause significant damage, impacting health and safety, and resulting in cost to SJG.

10-5 Improve Background Requirements for Gas Controllers. (See Finding 10-8)

Ensure that Gas Controllers have adequate backgrounds and sufficient experience. Additional Gas Controllers should have a background suitable for the Gas Control function. Other LDCs usually require Gas Controllers to have an engineering degree. SJG may have employees with hands-on experience in engineering-type work that may be sufficient.

10-6 Develop Different Work Shifts and a Plan for Retirement of Gas Controllers. (Findings 10-9 and 10-10)

SJG should change its Gas Controller work shifts and also develop a plan in preparation for expected retirements. Suggestions are as follows:

- Current work-shifts can be cut back to eight-hour shifts on a five-day-per-week basis. This would accommodate three shifts per 24-hour day. Currently Gas controllers are working four days with twelve-hour shifts and paid over-time pay for hours in excess of an eight-hour shift. This plan allows an opportunity to trim costs (eliminate planned overtime and train new gas controllers sufficiently prior to the expected retirements).
- A second option might be to place some of SJG's engineering staff in each Gas Control Center, train them to perform Gas Control duties, and have them serve as Gas Control support when needed. Although SAGE is not familiar with the physical space in the Gas Control locations nor if there are engineers that could be expected to conveniently move their office locations, this has been done effectively in other utilities. In these utilities, engineers were placed in Gas Control offices and did, for the most part, still tend to their existing engineering duties. However, they were also trained to perform Gas Control duties and served as support when needed.

10-7 SJG should perform short-term load forecasts to monitor future gas consumption as the impact of the Covid-19 pandemic diminishes. (See Finding 10-14)

SJG has the data and tools available to it in-house to evaluate the winter of November 2020 through March 31, 2021. Based on the consumption history for the recent winter season and determining the number and type of businesses that are no longer active, a revised forecast can be drafted to estimate the need for the winter of 2021–2022.

Repeating the process, once data is available for the year 2021 and the future winter of 2021–2022, another short-time gas forecast should be prepared to determine the gas requirement more accurately for the entire year 2022 including the Winter of 2022–2023.

Further forecast-related analysis should be conducted by Harbourfront Group at such time that SJGs' service territory-specific economic indicators begin to stabilize so that a proper evaluation of key economic indicators can be conducted.

10-8 SJG should fill all of its storage facilities to the 97-98% level effective November 1st of each year. (See Finding 10-17)

A review of the storage accounts reflects that three of SJG's six storage accounts were not filled to the 100% level for the years covered in this audit. A storage asset was paid for and not fully utilized; additionally, firm transportation that injects into storage and withdraws from storage was paid for and not fully utilized. The commodity injected into storage is purchased at a better price than the spiking gas supplies suffered during the winter months. Whether a particular storage facility permits both storage injections and withdrawals during every month of the year, or if the storage facility is limited to seasonal injections and withdrawals, SJG should begin every November 1 with storage filled to the maximum capacity, allowing one or two percent space for injections during the first few days of November.

The following exhibit shows all three accounts and their unused storage capacity. The unused capacity was derived by subtracting the beginning inventory on November 1 of each year from the maximum storage available.

Unused Storage Capacity (Dths)

Storage Withdrawal Begin	Columbia Unused Capacity	Transco GSS Unused Capacity	Transco ESS Unused Capacity	Total Winter Unused Capacity
Nov. 2013	120,295	68,943	13,291	202,529
Nov. 2014	143,855	135,951	2,433	282,239
Nov. 2015	209,667	111,611	3,502	324,780
Nov. 2016	362,204	154,498	60,330	577,032
Nov. 2017	321,293	196,669	69,654	587,616
Nov. 2018	259,695	199,762	14,584	474,041
Nov. 2019	242,912	161,621	8,324	412,857

10-9 SJG should withdraw all its gas from storage, if possible, but at a minimum, obligate itself to leave less than five percent in storage on the accounts with season limitations. (See Finding 10-18)

The gas that was already injected was available throughout the winter period. Many of the years subject to this audit had daily price spikes that were remarkably high. Reasonably priced gas is in storage and is intended to not only provide reliability and security but also to provide for a leveling of prices. Because GSS and ESS rate schedules permit both storage injections and withdrawals on all 365 days of the year, those storage facilities can facilitate daily balancing.

Gas Remaining in Storage at Winter's End (Dths)

Storage Withdrawal Begin	Columbia Left in Storage	Transco GSS Left in Storage	Transco ESS Left in Storage	Total Winter Left in Storage
Nov. 2013	248,737	179,074	232,314	660,125
Nov. 2014	85,271	115,223	209,685	410,179
Nov. 2015	267,133	163,243	228,246	658,622
Nov. 2016	402,451	191,466	210,612	804,529
Nov. 2017	173,068	79,593	164,062	416,723
Nov. 2018	340,312	224,709	167,045	732,066
Nov. 2019	251,890	71,201	192,611	515,702

10-10 The ESS Transco storage account should be used to its best potential every winter period. SJG should use this account to displace flowing gas on days where prices are elevated. (See Finding 10-19)

The ESS storage account that SJG has with Transco Pipeline does not have firm transportation specific to the storage account attached. This stranded storage account is very relevant when daily purchase prices are elevated. Displacing flowing gas on such days can create a significant gas cost savings. SJG can use their long-haul firm transportation contracts to withdraw from this storage account for a maximum of 27,814 Dths per day. However, using firm transportation that was intended to move gas from daily purchased gas means that the purchased gas is displaced by storage. SJG did purchase the majority of its gas load at daily prices and consequently suffered from major price spikes during some months of the winter periods. Displacing flowing gas on such price-spiked days can create a significant gas cost savings, and the ESS account should be used to do this or SJG should explain why it does not do this.

10-11 SJG should not release storage capacity. (See Finding 10-20)

When contracting for storage services during the FERC Order 636 unbundling of services, SJG established storage inventory targets that assured its ability to serve its customers under the worst possible weather conditions. The first role of storage is to provide reliability for SJG's customers during the winter heating season. SJG's system load has not decreased sufficiently to support releasing storage to anyone. Where excess assets exist, FERC has a perfectly suitable mechanism to release capacity on pipeline Bulletin Boards.

10-12 The ENDUR system should connect with external data sources that provide current pipeline capacities, the current available gas volumes per pipeline receipt point, daily pipeline notifications posted on pipeline Bulletin Boards, and current imbalances. (See Finding 10-26)

SJG should investigate whether ENDUR has, or can be upgraded with, the capability to connect to external data sources. It may be as simple as the IT group building a landing data center or dock center for the imported data to be received. This feature could be a time-saver for the Procurement Department trading staff. Currently, the traders and schedulers are monitoring Bulletin Boards to retrieve necessary posting and capacity data. A variety of reports are available on each pipeline's Bulletin Board. The manual access of pipeline Bulletin Boards is very time consuming.

10-13 SJG should always ensure that contractual obligations are in place with suppliers to deliver the base load of their volumetric load on a monthly basis. (See Finding 10-27)

Historically, the major risk from not having fixed volume contracts was limited to the winter period and then only the exceptionally cold days. In more recent years, weather patterns have changed. New Jersey experiences hurricanes more frequently and the hurricanes do not follow previous pattens. SJG must purchase the base load of gas to satisfy system demand. By having commitments in place, SJG would not be caught short if one of the critical weather scenarios occurs. There is no downside to entering into supply contracts where volumes are committed.

10-14 SJG's base load of gas should include fixed price contracts for a portion of their load. Fixed price contracts should be independent contracts and not be comingled with a blended contract. (See Findings 10-28 and 10-29)

Fixed price contracts have an important caveat: projected usage swing. For example, SJG contracts for daily volumes with one partner supplier. The caveat is that SJG must negotiate a ten percent swing to call on up to ten percent more or less gas at the same price. During winter months, depending on how the daily market is performing, SJG should be able to sell into the market or only take 90% of the contract volume and buy the remaining volume at Daily prices. The RFP mechanism should be implemented to solicit bids for all fixed price intentions outlining two prerequisites: (1) to trigger the price and (2) to seek the ten percent up or down mechanism as an obligation.

Blended contracts commit a larger volume of gas to one supply contract and only trigger the price on a portion of the load, allowing the remainder to go to settlement. The ten percent up or down feature is lost in the blended contract scenario; therefore, gas volumes destined to be converted to a fixed price are compelled to be independent contracts and not have volumes that go to settlement.

Understanding that volumes predetermined to be committed to a fixed price will be contracted for separately and independent of volumes that will most probably go to NYMEX settlement, SJG should always include these two prerequisites in the RFP. This will allow SJG the flexibility to trigger additional volumes if prices are increasingly attractive. Any volumes not triggered will automatically go to the NYMEX settlement. A more specific purchasing strategy is suggested below:

Purchasing Strategy

The purchasing strategy for a utility company should be:

- Lock in gas volumes to enhance reliability.
- Eliminate or reduce the risk associated with upward gas commodity price volatility. This may affect short-term opportunities to capture the benefit of declines in prices, but the objective of the strategy is to capture reasonable and stable prices for any entire one-year period.

Term gas strategies for the upcoming winter delivery begin in the prior October/November with contracts executed by December, since SJG requires sufficient time to trigger prices. The recommendation is to enter fixed price contracts for 20% of the individual monthly winter load. The entire base load volumes have already been determined by the Load Forecasting Group, and the entire load should be committed to contracts with suppliers in two parts.

- SJG should calculate 20% of the individual winter months and should then send RFPs to suppliers. The terms of the RFP should require the right to trigger the price and request a ten percent flexibility on the daily volumes. For example, January 2020 purchases averaged 160,109 Dths per day; 20% of this amount equals 32,022 Dths per day.
- The remaining 80% of the winter load should be committed to contracts with suppliers, and pricing, if not triggered, should be limited to first-of-the-month IF pricing. The RFP should request the right to trigger regardless of the fact that a strategy is in place to not trigger prices.

Storage

The injection period for storage injections is between April 1 and October 31 of each year. The gross injections are 8,177,605 Dths. Approximately 70% is subject to a financial hedge; therefore, approximately 30% is available for a physical hedge. It is recommended that an RFP be generated, and supply contracts executed by the previous April for the 30% storage volumes committed where SJG reserves the right to trigger the price. SJG should trigger the price on any or all storage volumes not covered with a financial hedge. The RMP is clear that to minimize gas price volatility, SJG will lock in prices for storage injection volumes not covered with a financial instrument.

The following exhibit reflects the winter storage withdrawal capabilities on both TCO and Transco Pipelines that must be injected into storage over the April through October injection season. It categorizes gross volumes less volumes subject to a financial hedge; the net volumes are subject to a physical hedge. Additionally, the exhibit provides the approximate monthly volumes associated with a physical hedge.

SJG Storage Injections (Dths)

Maximum TCO Winter Storage	Maximum Transco Winter Storage	Gross Winter Storage	Gross Winter Storage Less 70% Hedged	Monthly Approximate Injection Minus Hedge Volume
3,470,167	4,707,438	8,177,605	2,453,282	490,656

Summer System Supply

Summer System supply is defined as volumes consumed by end-use customers who are not served by a TPS but are served exclusively by SJG. During July 2020, during Covid-19, it is estimated that this load was approximately 38,000 Dths per day. The recommendation is to enter fixed price contracts for 5,000 Dths per day of the individual monthly summer load. Follow the RFP process with the perquisites (1) to trigger the price and (2) seek the ten percent up or down mechanism as an obligation. The 5,000 Dths should be contracted for separately. The remainder of this load should be committed to supplier contracts with the objective of going to settlement at IF pricing.

Swing Gas and Peaking Services

Swing gas can be described as those volumes that cannot be quantified in advance because the demand is affected by weather, and often these demand spikes or shortfalls cannot be managed through storage. Such volumes vary from day-to-day, and the only pricing mechanism available is to buy the short-falls and sell the excess based on daily prices. SJG's system LNG does not provide for month-long storage injections and is more suited to single day injections or a few back-to-back injection days. Purchasing for LNG is more suited to daily prices than other buying options. SJG receives LNG from an external source, Tioga. Not knowing the specifics of the contractual injections, SJG must decide the best option. The gross volume is 200,000 Dths and may provide flexibility to select individual days of injection. If so, daily pricing is SJG's best option.

10-15 Exceptions to the monthly purchase plan, as it relates to strong bearish prices in a near month, should only be made through approval by the RMC. (See Finding 10-30)

Bearish prices are defined as the expectation that prices will drop. Realizing that the procurement group is operating during bid-week and within a very short window of time, if the industry intelligence indicates that prices will fall it may be prudent to purchase the uncommitted volumes on a daily basis for the next month. This decision should only be made by the RMC and not at the discretion of the VP of SJG's Gas Supply. If the chairperson of the RMC is not available and has not designated someone other than the Gas Supply Department, then 50% of the members of the RMC would suffice for approval to be granted. All exceptions granted by the RMC must be followed up with a written document that sets forth the higher monthly prices that were avoided and any other relevant factors.

An example of extravagant prices was experienced in February 2014 for delivered gas at SJG's city gate. Those entities without firm capacity transportation were exposed to $16.62 per unit during the bid week period. SJG has its own firm capacity transportation that receives the gas in the supply areas and ships the gas to their city gate, therefore SJG was not exposed to prices that were excessive. In general, gas prices have dropped during the last seven years, so the exposure to overpriced gas if one purchased at the first-of-the-month did not exist. However, future prices are not known, and SJG must have policies to address unknown scenarios that might arise in the future.

10-16 SJG should issue RFPs for all of its base load gas using the purchasing strategy outlined in Recommendation 10-14. (See Finding 10-31)

The concept is for SJG to not limit themselves only to suppliers that they have done business with in the past but to mobilize all suppliers that are credit approved by the parent company. Additionally, SJG should research actual producers who own the gas in the ground and invite those who are not credit approved to submit the necessary financials for approval prior to the initiation of the RFP process. SJG's goal should be to issue RFPs to all credit approved suppliers and build relationships with suppliers selling to their affiliate South Jersey Resources Group, LLC (SJRG).

SJG is a significant and compelling gas buyer and will attract the large wholesale gas sellers who own the gas in the ground. The intent is to eliminate middleman gas marketers and the additional margins they tack on.

10-17 SJG should create an inhouse database of historic pricing for the past ten years organized (1) by point-of-sale and (2) by month. (See Finding 10-32)

An additional tool that assists a buyer to analyze the reasonableness of price recommendations is a database of historic pricing that is sorted by index point or point-of-sale and then by month. For example, SJG could receive a recommendation for a buy for December 2021; the ability to quickly review settlement prices for all Decembers for many years in the past would assist with the decision making. Common sense would have to be applied in this evaluation (i.e., related to historic prices, how have gas prices trended in the past and are current prices trending in the same direction?).

10-18 The RMC should establish a general framework for measuring and monitoring both financial and physical natural gas transactions. (See Finding 10-33)

RMC approval should be required on all transactions that fall outside of specified risk management guidelines. In general, management of physical purchase prices is not difficult. A process should be implemented with reports submitted to the RMC as follows:

- SJG should amend its database(s) to provide for the tagging of fixed price gas and volumes of gas purchased at daily prices.
- SJG should review the quantities of gas purchased at daily prices and establish if the Procurement Department stayed within the RMC's specified parameters.
- SJG should review the quantities of gas committed to a fixed price and establish if the percentage requirement was met.
- SJG should compare the NYMEX settlement and/or relevant index prices to the purchase prices for volumes not committed to a fixed price. The goal is to establish that the remainder of the base load volumes were purchased at first-of the-month index prices.

- Physical Purchase Reports should be generated on a monthly basis and reviewed at the quarterly RMC meetings.

10-19 The RMC should rejuvenate and reinforce non-compliance for employee misconduct, including management, with last and final warnings followed by suspension as the punishment for non-compliance. (See Finding 10-33)

Training is recommended for all employees engaged in the Front Office function to ensure they understand the RMP and will support the enforcement of policy if a non-compliance event occurs. The training should be comprehensive and address all aspects of the RMP. Additionally, the signed certifications of the Annual Compliance Statement required from all traders stating that RMC policies have been received should include a statement that the employee believes that they have complied with the current policy.

10-20 The Internal Audit Department investigation process should confirm that SJG's physical gas purchasing plan is in accordance with the RMP. (See Findings 10-34 and 10-35)

Physical gas purchasing audits should focus on the processes and procedures outlined in the RMP. This should be in addition to the current audit process of SJG's natural gas financial hedging strategies and activities. Investigation and examination by SJG's Internal Audit Department should be independent of the RMC's annual review.

The RMP sets controls with guidelines where compliance to rules and regulations are required. An internal audit should evaluate the implementation of those standards and deviations should be reported. BGSS rate filings are filed with the NJBPU and gas cost is an element of that filing. Gas cost is estimated, and then later actual costs are filed and can be compared to the estimate. Because fixed prices are known and measurable, the base load minus fixed prices is at first-of-the-month prices and only swing gas is priced daily. There should not be a significant difference between the estimate filed with the BPU and the later filing that provides for actual prices.

10-21 SJG should determine if improvements or alterations can be made to the report structure to better enable Gas Control to compare confirmed volumes to the actual measurement of gas received from the pipelines. (See Finding 10-38)

An audit should be performed to compare confirmed volumes to actual measurement of gas volumes received from pipelines. Additionally, an Operational Balancing Agreement (OBA) is recommended if it can be obtained or some other legally binding mechanism to balance with pipelines. To enable both tasks, the gathering of the confirmed volumes may require a change to report formatting or structure. It is suggested that the confirmation group participate and assist with this effort.

10-22 Interstate pipelines should be held accountable for non-performance related to firm capacity transportation. (See Finding 10-39)

SJG pays an enormous amount of money to Transco every month to ensure that Transco ships the firm gas to SJG. Duties and responsibilities are associated with firm contracts; Transco has the obligation to deliver a certain volume of gas, and SJG has the responsibility to pay for that volume of gas.

Pipelines will have operational issues and when deliveries of firm gas are not possible, the pipeline must call for a force majeure, and reservation charges must be reduced in accordance with deliveries actually made. Interstate pipelines are subject to FERC regulation and FERC will hear complaints. In the future, SJG should elicit assistance from FERC when interstate pipelines are not acting in a reasonable manner. Alternatively, SJG should perform a feasibility study to determine the reasonableness and cost of mechanical adjustment to SJG's system.

10-23 SJG should not make non-recallable transportation capacity commitments for more than a few days at a time during the winter period – November through the following March. (See Finding 10-41)

The first role of firm transportation capacity is to provide supply reliability for SJG's core utility load of customers during the winter season. As discussed in Section B, Load Forecasting, the level of firm transportation capacity was established and strengthened with additional Peaking Services. Making commitments where a portion of firm transportation capacity is transferred to others for longer periods of time without recourse defeats the purpose. When a sale of the bundled product is made, a contract is generated, and title is transferred to an outside party. The contract obligates SJG to provide the bundled product regardless of weather conditions; SJG cannot retrieve the transportation capacity to meet its utility load. Gas Control is active with weather forecasts and other pipeline conditions and can predict consumption for a few days into the future. The utilization of short-term OSS that include transportation capacity for a few days is reasonable and acceptable.

The following exhibit reflects winter months only and captures sales made for a minimum of one full month, and sales made for longer periods (i.e., November through the following March). The average daily transportation capacity associated with sales for January, February, and March of the year 2013 is 6,995 Dths and grows to 55,805 Dths for November and December of 2019. A straight release of transportation capacity on pipeline bulletin boards and or Asset Management Agreements (AMA) provides SJG with remedies/options to manage severe weather in the absence of the liberated transportation asset. The transportation asset bundled with gas commodity to facilitate an OSS transaction leaves SJG without access to this capacity.

Off System Sales During Winter Periods

Year	Months	Winter (Dths)	Average Daily (Dths)	Winter Gross Revenue
2013	Jan.–Mar.[1]	629,571	6,995	$2,375,363
2013-2014	Nov.–Mar.[2]	2,904,986	19,238	$14,559,259
2014-2015	Nov.–Mar.	3,869,999	25,629	$19,149,564
2015-2016	Nov.–Mar.	2,313,000	15,318	$8,654,485
2016-2017	Nov.–Mar.	8,247,743	54,621	$36,227,902
2017-2018	Nov.–Mar.	8,464,437	56,056	$34,054,154
2018-2019	Nov.–Mar.	7,888,210	52,240	$37,613,274
2019	Nov.–Dec.[3]	3,404,087	55,805	$12,625,071
Totals		**37,722,033**		**$165,259,073**

[1] Jan.–Mar. 2013 had 90 days.
[2] Nov.–Mar. each winter had 151 days.
[3] Nov.–Dec. 2019 had 61 days.

10-24 SJG should consider taking advantage of the flexibilities associated with futures by selling when an opportunity exists to take profits and buying back in at a later date. (See Finding 10-42)

The arrangement in place with both external advisors should be revised to provide for specific advice related to movement in futures so long as such activity is not speculative. Futures can be bought and sold throughout the life of the futures contract. Professional traders recognize when the price of a gas futures contract 'breaks' above or below a historical level of support - meaning that a breakout trading strategy can be used in both rising and falling markets. The strategy is to off-set all, or a portion of, the individual losses suffered in three of the years of this audit and increase amounts for profitable years.

10-25 SJG should take advantage of the specific option strategy called a Collar. (See Finding 10-44)

A simple definition of a collar is similar to placing a band or choker around a price. A collar is when a call option is sold against a price using the NYMEX for a future month and then the proceeds are used to simultaneously buy a put option. It is an inexpensive way to protect the downside in exchange for capping upside potential. Conversely, a producer collar is the combination of buying a put option and selling a call option. Often, the options are structured in such a way that the premium of the purchased option is completely offset by the premium of the sold option, a structure known as a costless collar. Where the collar has a cost, that cost has been greatly reduced by using this strategy. Sellers of natural gas frequently use this strategy to offer a ten percent up or down on daily volumes to buyers.

The section that addressed the purchase of the physical gas commodity recommended fixed price contracts. With a fixed price contract SJG is not concerned with rising prices, but it may have concern against falling prices. A collar around the price will grant some protection.

A significant portion of physical gas will go to first-of-the-month market prices. Collars can still be used where price was not triggered with the producer and is open. It makes no sense to not take advantage of collars at zero cost or a greatly reduced cost that offers some measure of protection.

10-26 SJG should consider reducing the amount of gas covered with price swaps. (See Finding 10-45)

SJG should increase the amount of gas covered with futures and decrease the amount of gas covered with price swaps. Clearly it is not known to a certainty if natural gas prices will rise or fall in the future. Because price swaps are contracted two years in advance, with eighteen months already committed, SJG could face elevated physical prices for all eighteen months without the same level of flexibility to exit that is associated with futures. Price swaps are profitable for SJG when physical prices are less than the fixed price stated in the derivative contract and SJG is at a loss when physical prices are more than the fixed price stated in the contract.

Prices are expected to rise. The US Energy Information Agency (EIA) projected Henry Hub spot prices would average $3.14/MMBtu for full-year 2021 and $3.16/MMBtu in 2022, compared with the previous month's estimates of $2.95/MMBtu in 2021 and 3.27/MMBtu in 2022.

10-27 SJG should improve the intelligence gathering associated with price swaps and futures. (See Finding 10-46)

In addition to Planalytics, the inhouse ENDUR system delivers web services with connectivity to external data sources, including pricing sources (e.g., Platts and commodity exchanges like NYMEX). ENDUR has the capability and programming to develop pricing scenarios. The principles used to purchase a futures contract are the same used to buy physical gas.

SJG’s in-house tools generate market intelligence that indicates the price and time to accept or act on a particular price. SJG contributes to and is supported by Planalytics, the web-based tool previously discussed used to guide purchasing and hedging decisions. Planalytics and ENDUR require the appropriate algorithm inputs to their systems. One requirement focuses on purchasing price swaps at the highest possible price for a given month, and the second configuration focuses on purchasing futures at the lowest possible price for a given month. Suggestions are as follows:

- The key component or ingredient for a fixed price physical contract or when buying “futures” is that SJG wishes to buy at the lowest possible price. The algorithm must be designed to generate available low prices reflected on NYMEX for individual months. See Finding 1 above and its associated recommendation to further involve external assistance and advisors.
- SJG wishes to buy at the highest possible price when buying a price swap. The algorithm must be designed to generate available high prices reflected on NYMEX for individual months.
- An additional tool that assists a buyer to analyze the reasonableness of price recommendations generated by the electronic systems is a database created

inhouse for historic pricing. SJG has first-of-the-month index pricing for many historic years plus NYMEX settle for many historic years. The database for NYMEX historical prices needs to be organized so that SJG can easily review a given month for the previous ten years. Example, Planalytics prompts a buy for December 2021 at a given price. To determine if the prompt to buy is acceptable, a comparison to historic Decembers can assist. Common sense must be applied in this evaluation (i.e., related to historic prices, how have gas prices trended in the past and are current prices trending in the same direction?).

10-28 The RMP should be revised to allow more flexibility, from a time perspective, to purchase financial instruments. (See Finding 10-47)

The RMP restrains SJG from taking advantage of the market to its fullest potential. It is highly doubtful that purchasing both financial products in the same month could result in both products being successful. SJG purchases two financial futures and two financial swaps (50, 000 Dths) per month for the 18-month period beginning with the seventh month and continuing through the twenty-fourth month of the current NYMEX strip. The electronic applications may not have a strong recommendation for a futures contract and/or a swap contract during any one given month. Allowing more time to make the financial purchases may result in better performing financial instruments. The need to limit the purchase of financial hedge products is understood and the need to spread those purchases equally into the various months is understood; however, this process limits SJG and prevents them from using the flexibilities of the marketplace. For example, the outer months tend to track the near months as far as NYMEX pricing is concerned. A high-priced December will usually show the next six months being elevated and will render prices attractive for price swaps but not so attractive for buying futures. Conversely, when the NYMEX reflects lower prices, buying futures will be attractive but buying swaps in a down market will not render much profit.

11. MARKET CONDITIONS

A. BACKGROUND

Market conditions are the characteristics and factors that influence a particular market at a particular point in time. Defining market conditions includes stating the number of competitors in a particular market, the intensity of competitiveness, the total market available, and the rate at which the market is growing.

The current regulation of transportation pipelines by the Federal Energy Regulatory Commission (FERC) has designated that interstate pipelines can serve only as transporters of natural gas. In the past, interstate pipelines functioned as both a transporter of natural gas, as well as a seller of the commodity, both of which were rolled up into a bundled product and sold for one price. Similar regulation was in place at the state and Local Distribution Company (LDC) level. In the past both interstate pipelines and LDCs had full and sole control over the supply of the natural gas commodity and the transportation in the market (i.e., a monopoly).

The unbundling process in residential markets began in the 1990s and allowed natural gas consumers/customers to choose an independent supplier or remain purchasing from their LDC. If a customer chooses to purchase their gas supplies from a different supplier, the LDC continues to deliver the same reliable service to the customer’s home or business, read the meter, perform safety checks, and respond to emergencies. The role of the LDC has been transformed into a service organization providing transportation services from their city gates to the ultimate consumer.

OPEN ACCESS

The process for a natural gas third party supplier (TPS) who wants to serve residential, commercial, and industrial customers within South Jersey Gas’s (SJG) service territory begins with the TPS agreement to operate in compliance with the New Jersey Board of Public Utilities’ (NJBPU) Standards. When the licensing process with the NJBPU is complete, the TPS must begin the SJG utility eligibility process. SJG coordinates the application and initiation process of a new TPS serving customers on SJG’s system. This process includes the application, submission, and execution of forms and agreements. None of these forms or agreements include fees charged to the TPS to participate.

Once the TPS is approved; the TPS can enter into agreements with individual or groups of SJG customers and enroll those customers on the SJG utility system. A TPS is allowed to aggregate groups of similar type customers into a virtual pool for balancing and purchasing purposes. The end-use customer is not charged a fee to migrate from SJG or migrate from one TPS to another.

SJG offers loans to customers to fund demand-side management projects. Customers that take an Energy Efficiency loan are not obligated to stay with SJG, but they are obligated to pay their loan. Residentials and small commercials are included in the customer base that are offered loans. Residential and small commercials were the last segment of customers to be offered the right to choose their own supplier and are commonly referred as CHOICE Programs.

Other improvements are offered by SJG to all customers. The Energy Efficiency Programs create no obligation on the customer to remain with SJG. Customers that participate in any of the SJG Energy Efficiency Programs have the option to select a TPS.

SJG MARKET SIZE AND COMPETITION

South Jersey Gas, (SJG) delivers natural gas to more than 400,000 residential, commercial, and industrial customers. The mix of customers are made up of the following categories:

- There are 100 large industrial customers, all purchasing from third party suppliers (TPS).
- There are 160 General Service Gas (GSG) customers; 40 GSG customers remain with SJG under a firm sales service contract.
- Fuel switchable customers are in a separate classification because they are not 100% dependent on burning natural gas. These types generally stay with interruptible transportation service on SJG. Currently, there are asphalt customers and apartment buildings using interruptible service. SJG ships for interruptible transport customers on a best-efforts basis. A TPS provides the gas commodity for this load.
- The remaining customers are residentials and small commercial customers that are usually described as lower consumption customers. Pooling arrangements are available to marketers who wish to compete for this segment of business (i.e., CHOICE programs).

The following exhibit reflects the migration of customers participating in the CHOICE program by exercising the right to choose a TPS. In January 2013, 5,049 low volume commercial type customers had migrated to TPS, increasing to 5,152 in December 2019. In January 2013, 40,691 residential customers had exercised their right to choose supply from a TPS, but by the end of December 2019, this number had decreased to only 15,754 customers. As of December 2019, one half of one percent of the total marketplace had chosen an alternate supplier.

Transportation Customer Migration Report
Commercial and Residential Rider J Customers
January 2013 – December 2019

Month/Year	Residential Customers	Variance Nr.	Variance Percent	Commercial Customers	Variance Nr.	Variance Percent	Total Customers	Variance Nr.	Variance Percent
Jan. 2013	40,691	139	0.34%	5,049	104	2.10%	45,740	243	0.53%
Feb. 2013	41,210	519	1.28%	5,108	59	1.17%	46,318	578	1.26%
Mar. 2013	41,076	(134)	(0.33%)	5,109	1	0.02%	46,185	(133)	(0.29%)
Apr. 2013	41,142	66	0.16%	5,129	20	0.39%	46,271	86	0.19%
May 2013	40,600	(542)	(1.32%)	5,145	16	0.31%	45,745	(526)	(1.14%)
Jun. 2013	42,547	1,947	4.80%	5,137	(8)	(0.16%)	47,684	1,939	4.24%
Jul. 2013	42,532	(15)	(0.04%)	5,153	16	0.31%	47,685	1	0.00%
Aug. 2013	43,277	745	1.75%	5,213	60	1.16%	48,490	805	1.69%
Sep. 2013	43,165	(112)	(0.26%)	5,175	(38)	(0.73%)	48,340	(150)	(0.31%)
Oct. 2013	42,883	(282)	(0.65%)	5,175	0	0.00%	48,058	(282)	(0.58%)
Nov. 2013	42,448	(435)	(1.01%)	5,163	(12)	(0.23%)	47,611	(447)	(0.93%)
Dec. 2013	42,111	(337)	(0.79%)	5,193	30	0.58%	47,304	(307)	(0.64%)

Month/Year	Residential Customers	Variance Nr.	Variance Percent	Commercial Customers	Variance Nr.	Variance Percent	Total Customers	Variance Nr.	Variance Percent
Jan. 2014	42,182	71	0.17%	5,265	72	1.39%	47,447	143	0.30%
Feb. 2014	42,411	229	0.54%	5,323	58	1.10%	47,734	287	0.60%
Mar. 2014	41,822	(589)	(1.39%)	5,350	27	0.51%	47,172	(562)	(1.18%)
Apr. 2014	40,367	(1,455)	(3.48%)	5,301	(49)	(0.92%)	45,668	(1,504)	(3.19%)
May 2014	38,476	(1,891)	(4.68%)	5,220	(81)	(1.53%)	43,696	(1,972)	(4.32%)
Jun. 2014	37,569	(907)	(2.36%)	5,217	(3)	(0.06%)	42,786	(910)	(2.08%)
Jul. 2014	36,446	(1,123)	(2.99%)	5,196	(21)	(0.40%)	41,642	(1,144)	(2.67%)
Aug. 2014	35,768	(678)	(1.86%)	5,236	40	0.77%	41,004	(638)	(1.53%)
Sep. 2014	35,753	(15)	(0.04%)	5,428	192	3.67%	41,181	177	0.43%
Oct. 2014	34,380	(1,373)	(3.84%)	5,521	93	1.71%	39,901	(1,280)	(3.11%)
Nov. 2014	33,689	(691)	(2.01%)	4,949	(572)	(10.36%)	38,638	(1,263)	(3.17%)
Dec. 2014	33,184	(505)	(1.50%)	4,949	0	0.00%	38,133	(505)	(1.31%)
Jan. 2015	33,184	0	0.00%	4,947	(2)	(0.04%)	38,131	(2)	(0.01%)
Feb. 2015	32,931	(253)	(0.76%)	5,334	387	7.82%	38,265	134	0.35%
Mar. 2015	32,442	(489)	(1.48%)	5,395	61	1.14%	37,837	(428)	(1.12%)
Apr. 2015	32,403	(39)	(0.12%)	5,375	(20)	(0.37%)	37,778	(59)	(0.16%)
May 2015	31,526	(877)	(2.71%)	5,393	18	0.33%	36,919	(859)	(2.27%)
Jun. 2015	31,118	(408)	(1.29%)	5,428	35	0.65%	36,546	(373)	(1.01%)
Jul. 2015	30,974	(144)	(0.46%)	5,484	56	1.03%	36,458	(88)	(0.24%)
Aug. 2015	30,479	(495)	(1.60%)	5,551	67	1.22%	36,030	(428)	(1.17%)
Sep. 2015	30,177	(302)	(0.99%)	5,667	116	2.09%	35,844	(186)	(0.52%)
Oct. 2015	29,790	(387)	(1.28%)	5,594	(73)	(1.29%)	35,384	(460)	(1.28%)
Nov. 2015	29,373	(417)	(1.40%)	5,608	14	0.25%	34,981	(403)	(1.14%)
Dec. 2015	29,340	(33)	(0.11%)	5,659	51	0.91%	34,999	18	0.05%
Jan. 2016	29,348	8	0.03%	5,719	60	1.06%	35,067	68	0.19%
Feb. 2016	29,154	(194)	(0.66%)	5,763	44	0.77%	34,917	(150)	(0.43%)
Mar. 2016	29,083	(71)	(0.24%)	5,849	86	1.49%	34,932	15	0.04%
Apr. 2016	28,818	(265)	(0.91%)	5,897	48	0.82%	34,715	(217)	(0.62%)
May 2016	27,985	(833)	(2.89%)	5,976	79	1.34%	33,961	(754)	(2.17%)
Jun. 2016	27,873	(112)	(0.40%)	5,984	8	0.13%	33,857	(104)	(0.31%)
Jul. 2016	27,786	(87)	(0.31%)	5,953	(31)	(0.52%)	33,739	(118)	(0.35%)
Aug. 2016	27,480	(306)	(1.10%)	5,963	10	0.17%	33,443	(296)	(0.88%)
Sep. 2016	26,950	(530)	(1.93%)	5,893	(70)	(1.17%)	32,843	(600)	(1.79%)
Oct. 2016	26,754	(196)	(0.73%)	5,409	(484)	(8.21%)	32,163	(680)	(2.07%)
Nov. 2016	26,100	(654)	(2.44%)	5,896	487	9.00%	31,996	(167)	(0.52%)
Dec. 2016	25,905	(195)	(0.75%)	5,733	(163)	(2.76%)	31,638	(358)	(1.12%)
Jan. 2017	25,572	(333)	(1.29%)	5,691	(42)	(0.73%)	31,263	(375)	(1.19%)
Feb. 2017	25,023	(549)	(2.15%)	5,668	(23)	(0.40%)	30,691	(572)	(1.83%)
Mar. 2017	24,678	(345)	(1.38%)	5,839	171	3.02%	30,517	(174)	(0.57%)
Apr. 2017	24,380	(298)	(1.21%)	5,820	(19)	(0.33%)	30,200	(317)	(1.04%)
May 2017	23,937	(443)	(1.82%)	5,812	(8)	(0.14%)	29,749	(451)	(1.49%)
Jun. 2017	23,726	(211)	(0.88%)	5,738	(74)	(1.27%)	29,464	(285)	(0.96%)
Jul. 2017	23,611	(115)	(0.48%)	5,713	(25)	(0.44%)	29,324	(140)	(0.48%)
Aug. 2017	23,346	(265)	(1.12%)	5,712	(1)	(0.02%)	29,058	(266)	(0.91%)
Sep. 2017	22,998	(348)	(1.49%)	5,678	(34)	(0.60%)	28,676	(382)	(1.31%)
Oct. 2017	22,722	(276)	(1.20%)	5,662	(16)	(0.28%)	28,384	(292)	(1.02%)
Nov. 2017	22,592	(130)	(0.57%)	5,647	(15)	(0.26%)	28,239	(145)	(0.51%)
Dec. 2017	22,416	(176)	(0.78%)	5,656	9	0.16%	28,072	(167)	(0.59%)
Jan. 2018	22,115	(301)	(1.34%)	5,646	(10)	(0.18%)	27,761	(311)	(1.11%)
Feb. 2018	21,319	(796)	(3.60%)	5,603	(43)	(0.76%)	26,922	(839)	(3.02%)
Mar. 2018	20,858	(461)	(2.16%)	5,589	(14)	(0.25%)	26,447	(475)	(1.76%)
Apr. 2018	20,178	(680)	(3.26%)	5,572	(17)	(0.30%)	25,750	(697)	(2.64%)
May 2018	19,206	(972)	(4.82%)	5,510	(62)	(1.11%)	24,716	(1,034)	(4.02%)
Jun. 2018	18,378	(828)	(4.31%)	5,435	(75)	(1.36%)	23,813	(903)	(3.65%)

Month/Year	Residential Customers	Variance Nr.	Variance Percent	Commercial Customers	Variance Nr.	Variance Percent	Total Customers	Variance Nr.	Variance Percent
Jul. 2018	18,132	(246)	(1.34%)	5,487	52	0.96%	23,619	(194)	(0.81%)
Aug. 2018	17,847	(285)	(1.57%)	5,499	12	0.22%	23,346	(273)	(1.16%)
Sep. 2018	17,665	(182)	(1.02%)	5,497	(2)	(0.04%)	23,162	(184)	(0.79%)
Oct. 2018	17,478	(187)	(1.06%)	5,464	(33)	(0.60%)	22,942	(220)	(0.95%)
Nov. 2018	17,313	(165)	(0.94%)	5,379	(85)	(1.56%)	22,692	(250)	(1.09%)
Dec. 2018	17,152	(161)	(0.93%)	5,157	(222)	(4.13%)	22,309	(383)	(1.69%)
Jan. 2019	16,932	(220)	(1.28%)	5,085	(72)	(1.40%)	22,017	(292)	(1.31%)
Feb. 2019	16,715	(217)	(1.28%)	5,094	9	0.18%	21,809	(208)	(0.94%)
Mar. 2019	16,460	(255)	(1.53%)	5,155	61	1.20%	21,615	(194)	(0.89%)
Apr. 2019	16,303	(157)	(0.95%)	5,123	(32)	(0.62%)	21,426	(189)	(0.87%)
May 2019	16,185	(118)	(0.72%)	5,118	(5)	(0.10%)	21,303	(123)	(0.57%)
Jun. 2019	16,117	(68)	(0.42%)	5,114	(4)	(0.08%)	21,231	(72)	(0.34%)
Jul. 2019	15,938	(179)	(1.11%)	5,086	(28)	(0.55%)	21,024	(207)	(0.97%)
Aug. 2019	16,011	73	0.46%	5,069	(17)	(0.33%)	21,080	56	0.27%
Sep. 2019	15,967	(44)	(0.27%)	5,080	11	0.22%	21,047	(33)	(0.16%)
Oct. 2019	15,851	(116)	(0.73%)	5,093	13	0.26%	20,944	(103)	(0.49%)
Nov. 2019	15,816	(35)	(0.22%)	5,076	(17)	(0.33%)	20,892	(52)	(0.25%)
Dec. 2019	15,754	(62)	(0.39%)	5,152	76	1.50%	20,906	14	0.07%

SJG has a listing of 46 marketers posted on their website that have been certified to sell natural gas to commercial customers served by SJG. The listing provides contact information for each individual marketer. An additional website exists that reflects 51 suppliers that are interested in serving the residential market. This webpage provides a link where an interested customer can provide data and obtain pricing as well as solicit a return phone call.

As of December 2019, 24 states and the District of Columbia had residential natural gas customer CHOICE programs in place. Many factors affect customer participation, such as the customer's potential to save money and the terms of service. In addition to month-to-month variable rates or fixed rates for longer terms, some marketers offer introductory rates, rebates, budget plans, or capped rates. The potential to earn a profit on natural gas sales influences marketer participation.

The top five states with the highest shares of residential natural gas deliveries by LDCs for other suppliers and other suppliers' share of total natural gas deliveries by LDCs in these states in 2019 are as follows:

- **Georgia 87%**: The State of Georgia Public Service Commission (SGPSC) has Liberty Utilities, Georgia's only LDC that is fully regulated by the SGPSC. Liberty Utilities does not offer its residential customers the right to choose an alternate supplier. Atlanta Gas Light Company (AGLC) is the largest natural gas distributor in the Southeast. It provides delivery service to approximately 1.55 million residential customers. AGLC became a pipes-only gas company in 1998 when it elected to open its territory to competition. Ten certified natural gas marketers now serve customers on AGLC's system. The prices charged by marketers are market-based and not regulated by SGPSC, but rates for AGLC's distribution service are still regulated by the SGPSC. AGLC assigned its firm storage and transportation services to the ten certified natural gas marketers based on their load profile. The firm delivery storage and transportation assets follow the end-use customer as they move between the ten available suppliers.

SGPSC requires certification and in order to be certified, companies were required to meet the SGPSC strict financial, managerial, technical capability and structural guidelines.

AGLC is not a supplier of last resort. The mechanism provides that if any of the ten alternate marketing companies fails to deliver or goes out of business, SGPSC steps in to ensure that service remains uninterrupted, and all customers receive their gas. The assumption is that the failed marketer has the firm assets to deliver, and those assets will be reassigned.

- **Ohio 84%**: Public Utilities Commission Ohio (PUCO) regulates the natural gas utilities in Ohio. The PUCO does not regulate the rates that marketers charge, but PUCO does enforce various consumer protections and hear and resolve consumer complaints against marketers. Alternate suppliers must be certified, and certification requires suppliers to meet the PUCO's tough managerial, technical, and financial standards. Further, the PUCO may take certain actions against suppliers who violate customer protections and rules.

  Ohio law requires the local distribution utility (LDC) to function as a "provider of last resort." This means that if the alternate supplier goes out of business or is otherwise unable to meet its supply commitments, the utility will ensure electricity or natural gas service remains uninterrupted. The LDC will notify the CHOICE customer in writing that service is being provided through the LDC's standard service offer. At that time, the CHOICE customer may decide to enroll with a new supplier, if they so choose, or stay with the LDC's standard service. Firm transportation capacity returns with the customer to the LDC and may be transferred again if the customer chooses a new supplier.

- **Wyoming 30%**: Wyoming Public Utility Service Commission (WPUSC) regulates its natural gas utilities but does not regulate suppliers. Suppliers must meet certain requirements set forth in the specific LDC's Tariff and must be approved by the WPUSC. Customers are allowed a three-week selection period from April 1 —21 of each year to select an alternate supplier. If a selection is not made, the customer will automatically roll over to their current supplier and price option. New construction customers will be provided with a selection packet by mail. If that customer does not select, they will default to the gas cost adjustment (GCA) rate offered by the LDC. Regardless of the selection, the LDC will ensure the safety and reliability of the gas supply needs of residential customers. The LDC is the supplier of last resort and ensures that customers are not without natural gas.

- **Maryland 24%**: Maryland Public Service Commission (MDPSC) lists two gas regulated utilities and does not list alternate gas suppliers as regulated entities. MDPSC requires a retail natural gas supplier to have a MDPSC license number and must register with the appropriate LDC.

  BGE states that in accordance with MDPSC regulations they are the supplier of last resort. If an alternate marketer fails to deliver or goes out of business, the firm transportation asset returns to BGE and BGE ensures that the customer is not interrupted or without natural gas.

- **New York 24%**: Natural Gas Utilities regulated by New York State Public Service Commission (NYSPSC) are listed on NYSPSC's website. Alternate suppliers are not listed as companies that are regulated. NYSPSC does not examine suppliers managerial, technical, or financial standards. Suppliers must comply with specific requirements of the New York State General Business Law and the NYSPSC's Uniform Business Practices when marketing energy services to residential customers and/or through door-to-door sales and when enrolling customers. Alternate suppliers must provide residential customers with the Consumers Bill of Rights.

  A customer may contact the NYSPSC to register a complaint about an alternate supplier. The PSC has the authority to revoke a supplier's eligibility to do business if an excessive number of legitimate complaints against the TPS are received.

  The NYSPSC will ensure that a safe and reliable delivery system exists through continued regulation of this portion of the industry. Furthermore, should an alternate supplier go out of business, the utility will make sure the customer continues to receive natural gas. If the customer decides to switch back to the utility or to a different supplier of choice, there will be no interruption in service.

ADMINISTRATIVE ASSISTANCE PROVIDED BY SJG TO INDEPENDENT MARKETERS

Infrastructure for any entity that serves residential-sized markets must be prepared to gather a large number of transactions accurately. The correct amount must be delivered, invoices for those services must be generated, and payment must be collected. Not only must the entity have industry knowledge and experience, but it must also have the technology and electronic systems to house the data. This requires a significant cash investment. SJG provides the following services to a TPS:

- SJG provides historic daily volumes per residential customer to the TPS entity and outlines the daily volume that the TPS is obligated to deliver daily. SJG delivers to the residential customer the volumes that the customer burns regardless of whether the volumes are more or less than the volume delivered by the TPS. At the end of the winter season, the TPS must balance volumes with SJG. If additional gas is required, the TPS must deliver it; if less gas was required, the TPS must take the excess gas off the system.
- Under New Jersey's energy deregulation law, the cost of supply at the city gate portion of the natural gas bill is separate from the cost to deliver the gas to the customer. SJG provides the TPS the option of including the TPS charges on the SJG invoice, thus providing one invoice to the customer. SJG reimburses the TPS when the invoice is paid. The invoicing process costs less than one dollar per invoice. Purchasing natural gas supplies from a company other than SJG is purely an economic decision; it has no impact on the reliability or safety of the service.
- SJG offers to purchase the receivables (POR) at 98% of the face value of the invoice so that the TPS is guaranteed payment and SJG assumes the risk of non-payment.

COMPETITION BASED ON PRICE

TPSs should be able to beat the delivered city-gate price offered by SJG for the seven years reviewed in this audit. SJG has additional expenses not usually experienced by TPS (i.e., Storage Service, No-Notice Service and Peaking Services that are added to SJG's expenses). Most TPSs manage well with Firm Transportation Service (FTS). See Chapter 10, Procurement and Purchasing, for a discussion of SJG's strategy of purchasing the majority of their supplies in the day market. Market first-of-the-month commodity prices were greatly exceeded, and other more attractive purchasing strategies were not considered. A TPS should be able to easily beat SJG's delivered city-gate price.

BARRIERS TO SUCCESSFUL COMPETITION

SJG, along with the other NJ gas utilities, participated in discussions with the Retail Energy Supply Association (RESA) arranged by the NJBPU. RESA filed a petition with the NJBPU outlining a number of capacity issues and proposed changes to New Jersey's current retail gas market structure. The NJBPU found that RESA did not demonstrate that the proposed changes would benefit New Jersey's gas customers and closed the docket.

A TPS does not have access to firm transportation required to serve the residential load. Transportation is the vehicle that moves the gas from the receipt point in the supply areas to SJG's city gate. The method of transportation must be the most dependable and secure that is available in the marketplace (i.e., non-interruptible transportation referred to as firm).

Prior to 1992, intrastate pipelines operated as a merchant and acquired all gas required by LDCs and then sold that gas to each LDC for resale to serve consumers within the LDC's footprint. The sale by pipelines to the LDC required the LDC to own the transportation on its own pipeline. FERC Order 636 was effective in 1992 and it required intrastate pipelines to unbundle (i.e., separate their sales services from their transportation services). The order further required the intrastate pipeline to offer its transportation assets to the customers (LDCs) who used it prior to Order 636. At this point, LDCs determined the volumes it required to serve its consumers and contracted for transportation and storage assets previously owned by pipelines in its own name. The LDC then owned 100% of transportation and storage to serve all customers within its footprint.

The unbundling process continued at the LDC level, but unlike the FERC unbundling process, the firm transportation and/or storage did not follow the end-use customer. SJG was not obligated to assign the firm transportation asset to the end-user of the firm.

SJG does not assign firm transportation or storage capacity to a TPS to serve industrial, commercial or residential customers.

All LDC customers that have been reviewed by Sage transfer their firm transportation capacity to the CHOICE Programs and, in some instances, firm storage has also been assigned. The global attitude is that firm assets were acquired to support a certain portfolio of customers and as those portfolio customers migrate away from the LDC, the LDC is left with assets that it no longer needs. During summer periods this leaves the LDC paying demand charges that are passed along to existing customers that did not migrate to independent marketers.

SJG'S MANAGEMENT OF EXCESS TRANSPORTATION ASSETS

SJG contracts for sufficient storage and transportation assets to support the worst possible day; such conditions are not experienced regularly. Therefore, more average, and slightly colder-than-average conditions are normally experienced leaving SJG with unused firm assets the majority of days in a year.

SJG utilizes three programs to resell its excess capacity to other parties on a limited term basis as follows:

- Capacity Release
- Asset Management Agreements (AMA)
- Off-System Sales

Capacity Release

The process begins with capacity release programs that allow a customer that holds firm transportation or storage capacity to resell its capacity to another party on either a temporary or permanent basis. FERC mandated interstate pipelines to include in their tariffs a mechanism for firm shippers to release firm capacity by seeking bidders through the pipeline Bulletin Board. Capacity can be released in whole or in part, on a permanent or short-term basis, and with or without restriction on the terms or conditions of the release. The rate charged the replacement shipper for a release of capacity may not exceed the applicable maximum rate paid by the releasor but can be a lesser rate if the owner is agreeable. The original concept was that available capacity be available through pipeline bulletin boards for all public parties to bid for. Once a release of capacity is completed on the pipelines Bulletin Board, the pipeline reduces the original firm contract by the volumes released and generates a new contract. The pipeline then invoices both the original holder for a reduced volume and the new owner for the newly acquired capacity.

The capacity release records provided by SJG reflect the following:

- Effective January 2013 through December 2019 there were 3,440 individual transactions.
- Of those records, 49 reflect the release of capacity at maximum rates for periods greater than 30 days. In fact, the majority of the 49 records reflect entire winter periods and longer and 43 of those 49 records show SJRG as the receiving shipper. SJG confirmed that all capacity releases are subject to being recalled.
- Further, 67 records reflect the release of capacity at less than maximum rates for periods greater than thirty days with many released for the entire winter period. In many cases the rate paid is only pennies per dekatherm (Dth). An assortment of shippers are the receivers in this group. SJG confirmed that all capacity releases are subject to being recalled.
- The remaining 3,324 records represent capacity releases for a few days at a time and most often just one day.

The following exhibit shows 49 transactions where capacity was released by SJG at maximum transportation rates. Each transaction is for multiple months and always includes winter months.

Capacity Release at Maximum Rates

Bidder Name	Delivery Point	Volume (Dths/d)	Start Date	End Date	Recallable
South Jersey Resources Group, LLC	109	14,714	11/1/2009	9/30/2014	Y
South Jersey Resources Group, LLC	1006583	17,433	4/1/2010	9/30/2013	Y
Total Gas & Power North America	1006583	19,900	10/1/2010	9/30/2013	Y
South Jersey Resources Group, LLC	109	7,214	10/1/2011	9/30/2014	Y
South Jersey Resources Group, LLC	109	7,500	10/1/2011	9/30/2014	Y
South Jersey Resources Group, LLC	109	7,214	7/2/2012	9/30/2014	Y
BP Energy Company		20,000	12/1/2013	12/31/2013	Y
South Jersey Resources Group, LLC	1006583	25,565	11/1/2012	9/30/2014	Y
South Jersey Resources Group, LLC	109	6,043	10/1/2013	9/30/2014	Y
Total:		**125,583**			
South Jersey Resources Group, LLC	1006583	6,043	9/1/2013	8/31/2015	Y
South Jersey Resources Group, LLC	1006583	17,433	10/4/2013	9/30/2015	Y
South Jersey Resources Group, LLC	109	9,000	11/1/2014	10/31/2015	Y
Total:		**32,476**			
BG Energy Merchants, LLC	1006583	30,000	4/1/2014	3/31/2016	Y
South Jersey Resources Group, LLC	109	19,029	10/1/2014	9/30/2016	Y
South Jersey Resources Group, LLC	109	8,671	10/1/2014	9/30/2016	Y
South Jersey Resources Group, LLC	1006583	31,608	10/1/2014	9/30/2016	Y
South Jersey Resources Group, LLC	109	9,000	12/1/2016	12/31/2016	Y
Total:		**98,308**			
Tenaska Marketing Ventures		10,000	11/1/2015	3/31/2016	Y
Tenaska Marketing Ventures		10,000	11/1/2015	10/31/2016	Y
South Jersey Resources Group, LLC	1006583	17,433	10/1/2015	9/30/2017	Y
South Jersey Resources Group		10,000	12/1/2015	12/31/2015	Y
BG Energy Merchants, LLC		10,000	11/1/2015	3/31/2016	Y
Total:		**17,433**			
South Jersey Resources Group, LLC	1006583	20,000	10/1/2016	3/31/2018	Y
South Jersey Resources Group, LLC	109	8,671	10/1/2016	9/30/2018	Y
South Jersey Resources Group, LLC	109	19,029	10/1/2016	9/30/2018	Y
South Jersey Resources Group, LLC	1006583	20,000	10/1/2016	9/30/2018	Y
Total:		**67,700**			
South Jersey Resources Group, LLC	1006583	10,000	11/1/2016	9/30/2018	Y
South Jersey Resources Group, LLC	Storage (TCO)	19,029	4/1/2017	9/30/2018	Y
South Jersey Resources Group, LLC	109	6,043	10/1/2016	9/30/2018	Y
South Jersey Resources Group, LLC	1006583	20,000	10/1/2016	9/30/2018	Y
South Jersey Resources Group, LLC	1006583	10,000	10/1/2016	9/30/2018	Y
South Jersey Resources Group, LLC	1006583	7,500	10/1/2016	9/30/2018	Y
South Jersey Resources Group, LLC	109	7,797	11/1/2016	9/30/2018	Y
South Jersey Resources Group, LLC	109	4,703	11/1/2016	9/30/2018	Y

Bidder Name	Delivery Point	Volume (Dths/d)	Start Date	End Date	Recallable
Shell Energy North America, LP		10,000	11/1/2017	3/31/2018	
South Jersey Resources Group, LLC	109	9,000	1/1/2017	9/30/2018	Y
Total:		**104,072**			
South Jersey Resources Group, LLC	1006583	30,000	12/1/2018	1/31/2020	Y
South Jersey Resources Group, LLC	109	19,029	10/1/2018	9/30/2020	Y
South Jersey Resources Group, LLC	109	8,671	10/1/2018	9/30/2020	Y
South Jersey Resources Group, LLC	1006583	20,000	10/1/2018	9/30/2020	Y
South Jersey Resources Group, LLC	1006583	10,000	10/1/2018	9/30/2020	Y
South Jersey Resources Group, LLC	109	7,797	4/1/2019	9/30/2020	Y
South Jersey Resources Group, LLC	109	6,043	11/1/2018	9/30/2020	Y
South Jersey Resources Group, LLC	109	4,703	11/1/2018	9/30/2020	Y
South Jersey Resources Group, LLC	109	9,000	11/1/2018	9/30/2020	Y
South Jersey Resources Group, LLC	420245	8,000	11/10/2018	9/30/2020	Y
Total:		**123,243**			

The following exhibit shows the month of December for all years effective 2013 through 2019 as a sample of releases for 30 days or more at less than maximum rates. This exhibit demonstrates that firm transportation was released at a fraction of the maximum rate.

Capacity Release at Less Than Maximum Rates

Shipper Name	Rate	Volume (Dths/d)	Start Date	End Date	Recallable
South Jersey Resources Group	$0.0050	11,612	11/1/2013	3/31/2014	Y
South Jersey Resources Group	$0.0155	15,278	11/1/2013	3/31/2014	Y
South Jersey Resources Group	$0.0225	10,390	11/1/2013	3/31/2014	Y
Concord Energy, LLC	$0.1000	10,000	12/1/2013	12/31/2013	Y
Macquarie Energy, LLC	$0.1010	10,000	12/1/2013	12/31/2013	Y
Total Daily Volume:		**57,280**			
BG Energy Merchants, LLC	$0.5055	20,000	10/1/2014	3/31/2016	Y
Tenaska Marketing Ventures	$0.0025	15,000	11/1/2014	3/31/2015	Y
WGL Midstream, Inc.	$0.0210	18,744	11/1/2014	3/31/2015	Y
ConocoPhillips Company	$0.0261	24,662	11/1/2014	3/31/2015	Y
WGL Midstream, Inc.	$0.0360	16,771	11/1/2014	3/31/2015	Y
Green Plains Trade Group, LLC	$0.0500	25,000	12/1/2014	12/31/2014	Y
Green Plains Trade Group, LLC	$0.0550	15,000	12/1/2014	12/31/2014	Y
Macquarie Energy, LLC	$0.0550	40,000	12/1/2014	12/31/2014	Y
South Jersey Resources Group	$0.0821	25,000	12/1/2014	12/31/2014	Y
Total Daily Volume:		**200,177**			
BP Energy Company	$0.0110	6,774	11/1/2015	3/31/2016	Y
Cargill Inc.	$0.0121	20,000	11/1/2015	3/31/2016	Y
BP Energy Company	$0.0160	10,206	11/1/2015	3/31/2016	Y
WGL Midstream, Inc.	$0.0262	2,838	11/1/2015	3/31/2016	Y

Shipper Name	Rate	Volume (Dths/d)	Start Date	End Date	Recallable
WGL Midstream, Inc.	$0.0282	17,162	11/1/2015	3/31/2016	Y
Exelon Generation Company	$0.0400	11,671	11/1/2015	3/31/2016	Y
Total Gas & Power North America	$0.0200	10,000	12/1/2015	12/31/2015	Y
WGL Midstream, Inc.	$0.1000	10,000	12/1/2015	12/31/2015	Y
Macquarie Energy, LLC	$0.1500	10,000	12/1/2015	12/31/2015	Y
Macquarie Energy, LLC	$0.1800	10,000	12/1/2015	12/31/2015	Y
South Jersey Resources Group	$0.1800	3,500	12/1/2015	12/31/2015	Y
Total Daily Volume:		**112,151**			
BG Energy Merchants, LLC	$0.4391	10,000	4/1/2016	3/31/2018	Y
Shell Energy North America, LP	$0.4391	10,000	8/1/2016	3/31/2018	Y
Total Gas & Power North America	$0.0050	20,000	11/1/2016	11/30/2016	Y
EDF Trading North America	$0.0150	30,674	11/1/2016	3/31/2017	Y
EDF Trading North America	$0.0250	14,944	11/1/2016	3/31/2017	Y
EDF Trading North America	$0.0260	19,662	11/1/2016	3/31/2017	Y
EDF Trading North America	$0.0300	13,371	11/1/2016	3/31/2017	Y
Cargill Inc.	$0.0050	10,000	12/1/2016	12/31/2016	Y
Total Gas & Power North America	$0.0050	10,000	12/1/2016	12/31/2016	Y
MMGS Inc.	$0.0200	30,000	12/1/2016	12/31/2016	Y
Vitol Inc.	$0.0200	10,000	12/1/2016	12/31/2016	Y
Spotlight Energy, LLC	$0.1100	10,000	12/1/2016	12/31/2016	Y
Total Daily Volume:		**188,651**			
NJR Energy Services	$0.0080	22,874	11/1/2017	3/31/2018	Y
Macquarie Energy, LLC	$0.0150	11,144	11/1/2017	3/31/2018	Y
EDF Trading North America	$0.0300	14,662	11/1/2017	3/31/2018	Y
Macquarie Energy, LLC	$0.0350	9,971	11/1/2017	3/31/2018	Y
NJR Energy Services	$0.0050	15,000	12/1/2017	12/31/2017	Y
South Jersey Resources Group	$0.0050	14,108	12/1/2017	12/31/2017	Y
Spotlight Energy, LLC	$0.0050	20,000	12/1/2017	12/31/2017	Y
Total Gas & Power North America	$0.0050	25,000	12/1/2017	12/31/2017	Y
Total Gas & Power North America	$0.0050	15,000	12/1/2017	12/31/2017	Y
BP Energy Company	$0.0900	1,000	12/1/2017	12/31/2017	Y
Munich RE Trading LLC	$0.0900	10,000	12/1/2017	12/31/2017	Y
Spotlight Energy, LLC	$0.1010	15,000	12/1/2017	12/31/2017	Y
Total Daily Volume:		**173,759**			
Ratio Energy, Inc.	$0.0025	5,200	11/1/2018	3/31/2019	Y
Mercuria Energy America, Inc.	$0.0150	16,844	11/1/2018	3/31/2019	Y
Mercuria Energy America, Inc.	$0.0180	22,162	11/1/2018	3/31/2019	Y
NJR Energy Services	$0.0200	10,000	11/1/2018	3/31/2019	Y
Mercuria Energy America, Inc.	$0.0210	15,071	11/1/2018	3/31/2019	Y
BP Energy Company	$0.0700	1,000	11/1/2018	3/31/2019	Y
South Jersey Resources Group	$0.0025	15,000	12/1/2018	12/31/2018	Y

Shipper Name	Rate	Volume (Dths/d)	Start Date	End Date	Recallable
Clearwater Enterprises, L.L.C.	$0.0050	10,000	12/1/2018	12/31/2018	Y
Total Daily Volume:		**95,277**			
Spire Marketing Inc	$0.0210	22,162	4/1/2019	10/31/2020	y
Ratio Energy, Inc.	$0.0035	25,000	11/1/2019	3/31/2020	Y
BP Energy Company	$0.0110	16,844	11/1/2019	3/31/2020	Y
Citadel Energy Marketing LLC	$0.0300	10,000	11/1/2019	3/31/2020	Y
Spire Marketing Inc	$0.0300	10,000	11/1/2019	3/31/2020	Y
ConocoPhillips Company	$0.0410	15,071	11/1/2019	3/31/2020	Y
UGI Energy Services, LLC	$1.4750	5,000	11/1/2019	3/31/2020	Y
Clearwater Enterprises, L.L.C.	$0.0025	10,000	12/1/2019	12/31/2019	Y
South Jersey Resources Group	$0.0025	10,000	12/1/2019	12/31/2019	Y
Six One Commodities LLC	$0.9000	1,030	12/1/2019	12/31/2019	Y
Total Daily Volume:		**125,107**			

Asset Management Agreements (AMA)

The fundamental element of an AMA is firm transportation services (FTS) and/or firm storage service (FSS) and the various flexibilities afforded by the FERC for these services.

FERC issued Order No. 712, 712 (a) and 712 (b) that revised regulations governing interstate natural gas pipelines to reflect changes in the market for short-term transportation services on pipelines and to improve the efficiency of FERC's capacity release program. The order permitted market-based pricing for short term capacity releases and facilitated AMAs by relaxing FERC's prohibition on its bidding requirements for certain capacity releases. FERC further waived its prohibition on tying and its bidding requirements for capacity releases made as part of state-approved open access programs.

FERC determined that there must be a significant delivery or purchase obligation on the replacement shipper to deliver gas to, or purchase gas from, the releasing shipper to distinguish AMAs from standard capacity releases. Accordingly, FERC required that the release contain a condition that the "releasing shipper may call upon the replacement shipper to deliver to, or purchase, from, the releasing shipper a volume of gas up to 100% of the daily contract demand of the released transportation or storage capacity." That obligation must apply for the greater of five months or five/twelfths of the term of the release.

SJG's AMAs. SJG participated in the FERC-structured AMAs for all the years subject to this audit and by doing so, SJG reduced the expense associated with FTS requirements. The distinction between the capacity release mechanism and the AMA structure is as follows:

- Using regular capacity release, owners of FTS may be able to release the capacity at maximum tariff rates for the five winter months while realizing only a few cents per Dth during the seven summer months. However, LDC owners of FTS contracted for FTS to serve its core customers on severe weather days. Most capacity releases of LDC-owned firm will be subject to recall should those severe weather days happen. In those cases, it is unlikely that the FTS release can yield a return of maximum tariff rates during the five winter months.

- The AMA structure allows for rates greater than tariff maximums for the entire twelve-month period. FERC's requirement that the releasing shipper may call upon the replacement shipper to deliver a volume of gas up to 100% of the daily contract demand for five of the twelve months addresses the severe weather days. The LDC will have the delivered gas that it needs on design severe weather days through the AMA structure.

The following exhibit reflects the SJG AMAs in place during the audit period. Volumes are reflected together with the total dollars paid to SJG in return for its FTS capacity.

Asset Management Agreements (2013-2019)

Begin Date	End Date	External Name	Daily Volume	Amount Paid to SJG	Payment Mechanism
12/1/2010	10/31/2013	South Jersey Resources Group, LLC	90,000	$390,653.56	Sharing
4/1/2012	3/31/2013	BG Energy Merchants, LLC	10,000	$815,296.00	
11/1/2012	10/31/2013	Tenaska Marketing Ventures	10,000	$109,000.00	
4/1/2013	3/31/2014	BG Energy Merchants, LLC	10,000	$1,100,050.00	
4/1/2013	3/31/2014	Energy America, LLC	30,000	$2,004,000.00	
4/1/2013	3/31/2014	BG Energy Merchants, LLC	10,000	$1,100,050.00	
11/1/2013	10/31/2014	Tenaska Marketing Ventures	15,000	$1,478,250.00	
11/1/2014	10/31/2015	Tenaska Marketing Ventures	10,000	$1,606,000.00	
4/1/2014	3/31/2015	Conoco Phillips	10,000	$1,600,000.00	
4/1/2014	3/31/2015	DTE Energy Trad	30,000	$2,000,000.00	
11/1/2015	10/31/2016	SJRG	10,000	$1,253,140.00	
11/1/2015	10/31/2016	BG Energy/Shell	10,000	$2,418,902.00	
11/1/2015	10/31/2016	Mercuria Energy Gas Trading	10,000	$558,012.00	Sharing
4/1/2015	3/31/2016	PPL EnergyPlus, LLC	30,000	$1,000,005.00	
4/1/2015	3/31/2016	Tenaska Marketing Ventures	10,000	$2,450,000.00	
4/1/2016	3/31/2017	Shell Energy North America, LP	30,000	$1,500,000.00	
11/1/2016	10/1/2017	Conoco Phillips	10,000	$1,420,656.00	
11/1/2016	10/31/2017	Talen Energy Marketing	10,000	$2,376,320.00	Sharing
11/1/2016	10/31/2017	South Jersey Resources Group, LLC	10,000	$1,302,155.75	Sharing
11/1/2016	10/31/2017	Tenaska Marketing Ventures	10,000	$1,350,000.00	
4/1/2017	3/31/2018	DTE Energy Trad	30,000	$1,200,000.00	
11/1/2017	10/31/2018	Tenaska Marketing Ventures	10,000	$2,400,000.00	
4/1/2018	3/31/2019	Tenaska Marketing Ventures	30,000	$800,000.00	
4/1/2018	3/1/2019	Conoco Phillips	10,000	$775,540.00	
4/1/2019	3/31/2020	EQT Energy, LLC	30,000	$1,701,900.00	

The following exhibit provides a sample of AMAs that reflect the reservation charge paid to the pipeline by SJG compared to the dollars recovered through the AMA.

Sample AMAs with Reservation Charges.

Begin Date	End Date	External Name	Daily Volume	Amount Paid to SJG	Reservation Paid by SJG	Percent Recovered
11/1/2015	10/31/2016	Mercuria	10,000	$558,012.00	$1,614,600.00	0.346
11/1/2016	10/31/2017	Talen	10,000	$2,376,320.00	$1,614,600.00	1.472
11/1/2015	10/31/2016	SJRG	10,000	$1,253,140.00	$1,614,600.00	0.776
11/1/2016	10/31/2017	SJRG	10,000	$1,302,155.75	$1,614,600.00	0.806

OFF SYSTEM SALES

Off-System Sales means all sales of natural gas to third parties other than system load requirements for SJG's customers within its territory. To have excess product, SJG will have first provided the full load requirements to its own wholesale and retail customers. SJG can sell directly to wholesale or retail customers outside the utility's service territory and to TPSs who are serving within SJG's footprint.

SJG buys its commodity on a day-to-day basis and, therefore, did not have excess commodity; however, SJG did have excess transportation. SJG purchased additional commodity in the marketplace for the purpose of attaching the commodity to its excess transportation and selling a bundled product. Selling the bundled product at a delivery point allows the owner of the firm capacity to obtain market rates. During winter months, delivery point sales provide greater returns than releasing the firm capacity through the pipeline capacity release mechanism because capacity release regulations limit the owner to maximum natural gas tariff rates.

The following OSS exhibit demonstrates the transportation volume bundled with commodity to make sales for November through March of each winter season.

Off System Sales

Year	Months	Winter (Dths)	Average Daily (Dths)	Winter Gross Revenue
2013	Jan.–Mar.[1]	629,571	6,995	$2,375,363
2013-2014	Nov.–Mar.[2]	2,904,986	19,238	$14,559,259
2014-2015	Nov.–Mar.	3,869,999	25,629	$19,149,564
2015-2016	Nov.–Mar.	2,313,000	15,318	$8,654,485
2016-2017	Nov.–Mar.	8,247,743	54,621	$36,227,902
2017-2018	Nov.–Mar.	8,464,437	56,056	$34,054,154
2018-2019	Nov.–Mar.	7,888,210	52,240	$37,613,274
2019	Nov.–Dec.[3]	3,404,087	55,805	$12,625,071
Totals		**37,722,033**		**$165,259,073**

[1] Jan.–Mar. 2013 had 90 days.
[2] Nov.–Mar. each winter had 151 days.
[3] Nov.–Dec. 2019 had 61 days.

The following exhibit demonstrates the annual transportation volume bundled with commodity to make sales for more than one month at a time for the year 2019 and equals 12,666,160 Dths. The annual transportation volume incorporated into a sale on a day-to-day basis was 2,064,465 Dths. The winter months of November through March are included in the annual volume.

OSS Deliver Point Sales

Year	Off System Sales Gross Annual (SJG Sales to Various Entities)		Delivery Point Sales (Bundled Product of Commodity Plus Transportation)					
	Volume (Dths)	Revenue	Monthly[1] (Dths)	Monthly Revenue	Long-Term Percent of Gross	Day-to-Day (Dths)	Day-to-Day Revenue	Day-to-Day Percent of Gross
2013	9,684,601	$37,016,220	3,447,682	$12,854,322	36%	6,236,919	$24,161,898	64%
2014	9,410,579	$47,601,660	3,964,985	$20,774,954	42%	5,445,594	$26,826,706	58%
2015	14,602,862	$47,966,725	5,375,250	$20,585,372	37%	9,227,612	$27,381,353	63%
2016	16,525,714	$44,302,980	8,240,000	$29,039,838	50%	8,285,714	$15,263,143	50%
2017	25,560,075	$87,204,169	18,424,983	$68,201,470	72%	7,135,092	$19,002,699	28%
2018	13,582,135	$55,675,590	11,210,727	$47,808,314	83%	2,371,408	$7,867,276	17%
2019	14,730,625	$49,386,245	12,666,160	$44,567,814	86%	2,064,465	$4,818,431	14%
Totals	**104,096,591**	**$369,153,590**	**63,329,787**	**$243,832,084**	61%	**40,766,804**	**$125,321,506**	39%

B. FINDINGS

11-1 Capacity Release followed the rules and regulations set forth by FERC.

FERC requires that firm capacity be released/sold on an open access, non-discriminatory basis using processes and pricing guidelines approved by the FERC and implemented by the pipelines. To the extent that firm capacity is not needed by the owner, the owner can release it. For certain releases, the owner does not have the ability to transfer firm capacity to whomever they want because a bidding process is required. Entities willing to pay maximum tariff rates do not have to compete because they are willing to pay the maximum. In these situations, a posting to inform the public of the maximum rate transaction is all that is required. For example, SJRG had 38 of their 40 transactions at maximum rates. All capacity releases were subject to be recalled if SJG experienced weather conditions that required the capacity.

11-2 AMA transactions conformed to FERC Order No. 712, 712 (a), and 712 (b).

The FERC Order permitted market-based pricing for the release of capacity and facilitated AMAs as an alternative to the general capacity release mechanism by relaxing the FERC's prohibition on its bidding requirements for certain capacity releases. Transportation is transferred to an outside entity for a particular sum of money. FERC required that the replacement shipper deliver to the releasing shipper a volume of gas up to 100% of the daily contract demand of the released transportation capacity if called upon. SJG provides AMAs for a duration of one year and limits the "Call Period" to the five winter months. Because of the ability to call upon supply delivered to their city gate, SJG will not fall short if severe weather occurs during the release winter period.

11-3 SJG's AMAs yielded 75% or 80% of the annual reservation charge paid by SJG to the pipelines.

Transportation capacity is in high demand during the winter period because residential type loads burn gas during the winter but not during the other seven months. It is difficult to find interested parties to accept the firm asset for the entire 12-month period because the transportation capacity is only necessary during the winter months. AMAs have a term of one year; therefore, the capacity is transferred for one full year. A return of 75% is significant and helps to reduce costs.

11-4 SJG sold directly to wholesale and retail customers outside its service territory and sold to TPSs who were serving within SJG's footprint.

SJG sold a bundled product outside of its utility footprint (referred to as Off-System-Sales). SJG had excess transportation but did not have excess commodity. Therefore, SJG purchased the commodity to attach to the transportation to make the sales.

11-5 End-use customers who migrated to a TPS are paying distribution transportation to SJG.

The BGSS rate schedule incorporates 100% of the cost associated with SJG's transportation and storage on the pipelines. Those customers who migrated to a TPS pay the TPS for the cost of transportation on the interstate pipelines and for the cost of the gas supply prior to gas arriving at the city gate. SJG is obligated to move the TPS gas over its distribution system to the customer's meter. All customers transport using SJG's distribution system to the ultimate burner tip and pay the BGSS costs.

11-6 Currently SJG does not assign any firm assets to TPSs for the purpose of serving residential loads.

Unlike the FERC unbundling process, the LDC unbundling did not obligate the firm transportation and/or storage to follow the end-use customer. SJG is not obligated to assign the firm transportation asset to the end-user of the firm and therefore SJG does not.

11-7 SJG has ample transportation capacity to support the CHOICE programs.

The Retail Energy Supply Association (RESA), through its petition and the various comments and addendums to the petition, speaks to the need for LDCs in the state of New Jersey to enter the marketplace to purchase sufficient capacity to release to TPSs in support of the CHOICE programs.

Both the exhibits titled Capacity Release and the exhibits for OSS provided above demonstrate that SJG has more than sufficient capacity in its current portfolio. The current CHOICE customers in aggregate for residential total 15,754 and 5,152 for small commercial. The volumes of gas to serve both groups is approximately 8,500 Dths per day.

The following exhibit shows daily capacity release for December 2019 with released volumes of 125,107 generating less than maximum rates that could support a conservative 175,150 CHOICE customers paying maximum rates. The exhibit also provides the other categories of capacity release and OSS that would support an aggregate of 349,341 CHOICE customers. SJG serves approximately 400,000 customers including large commercials. It should be reiterated that when residential type customers migrate, SJG's system supply requirements reduce accordingly.

Capacity Release and OSS Volumes

Month/Year	Cap. Release Dths Day Less than Max Rate	Number of CHOICE Customers Possible	Cap. Release Dths Day Vol at Max Rate	Number of CHOICE Customers Possible	OSS Dths Day Vol	Number of CHOICE Customers Possible
Dec. 2019	125,107	175,150	123,243	158,453	55,805	71,748

11-8 SJG missed an opportunity to earn maximum capacity release revenues on the CHOICE volumes over the past seven years of this audit.

At the end of the year 2013 SJG had 45,740 customers participating in the CHOICE programs that would require 18,296 Dths in transportation capacity. There was a gradual reduction down to 20,906 customers in 2019 that would require approximately 8,500 Dths in transportation capacity to serve them. SJG could have received maximum rates for this capacity as opposed to releasing all 208,154 Dths at a discounted rate.

11-9 Transportation capacity assignments to support CHOICE programs will cause additional administration by SJG.

The additional capacity releases required, and the transactional data will increase and cause tracking and balancing increases, in addition to the current workload that SJG currently experiences.

C. RECOMMENDATIONS

11-1 SJG should continue to use the AMA vehicle available to it. (See Findings 11-2 and 11-3)

AMAs have at least a one-year term, which makes AMAs attractive, and the dollar return on demand charges paid by SJG is compelling. The releasing shipper (SJG) may call upon the replacement shipper to deliver a volume of gas up to 100% of the daily contract demand. The basic concept is that if SJG requests additional gas, the replacement shipper is obligated to sell at the city gate those volumes called upon at daily market rates. It is expected that during the five winter months when severe weather days occur, SJG will require additional gas. The LDC has the delivered gas that it needs on design severe weather days through the AMA structure.

11-2 The Off-System-Sales mechanism should not permit transactions for more than a few days at a time. (See Finding 11-4)

Both Capacity Release and AMA regulations provide a mechanism where SJG can either recall its capacity or obligate the replacement shipper to provide and sell supplies at the city gate to SJG, if called upon. Off-System-Sales are final and without recourse. SJG cannot get the transportation returned or void the transaction in any way without being in breach of their contract.

11-3 SJG should release transportation capacity from the supply area to the city gate for residential types that qualify for SJG's CHOICE program. (See Findings 11-5, 11-6, and 11-7)

SJG accepted the assignment of firm transportation and storage assets under FERC Order 636 from the intrastate pipelines to serve their projected BGSS sales. The portfolio of firm assets currently held by SJG was acquired to serve 100% of their BGSS load. There are instances where SJG purchased additional firm transportation; this newly acquired transportation was contracted for the purpose of serving SJG's customers, and the expense was included in the BGSS rate schedule. CHOICE is now available to those BGSS customers and as they migrate to a TPS NJBPU CHOICE Program regulations should be revised, if necessary, to allow the firm transportation to follow the customer for the entire period of their migration or a minimum of a 1-year period. When customers migrate to a TPS and SJG retains the associated capacity, SJG's existing customers are paying for excess capacity in their BGSS rate base.

SJG's current CHOICE procedure for migrating customers is to estimate the customer's consumption based on historical data and provide the estimated volume requirement to the TPS. Firm transportation should then be assigned to serve that estimated load. Capacity release should follow FERC requirements and be posted on the pipeline Bulletin Boards as pre-arranged and, therefore, non-biddable. Once a release of capacity is completed on the pipelines Bulletin Board, the pipeline reduces the original firm contract by the volumes released and generates a new contract. The pipeline then invoices both the original holder for a reduced volume and the new owner for the newly acquired capacity.

Notwithstanding the excess capacity reflected in this chapter, New Jersey regulations should permit the firm transportation to follow the customer for which it was originally intended. When SJG is not serving a customer, SJG does not need the transportation associated with the migrated customer.

The released capacity will generate 100% of the cost for the associated reservation charge paid directly to the interstate pipelines by the TPS, reducing the reservation charge otherwise paid by SJG.

11-4 SJG should not release firm storage capacity for residential types that qualify for SJG's CHOICE program. (See Finding 11-6)

The features of the CHOICE program are that it aggregates residentials and small industrial types. Daily balancing on a gas-in, gas-out basis is impossible at this level of meter readings. Therefore, LDCs provide estimates of consumption and allow TPSs to supply daily to their city gate the estimated volumes recommended. Balancing takes place after the winter season is over when actual consumption is known and measurable with the TPSs providing more gas or taking gas off SJG's system as appropriate.

It must be understood that balancing the CHOICE volumes to zero happens at the end of the winter season. SJG must provide the necessary consumption volumes daily for the

CHOICE programs served by TPSs and because the TPS is providing an estimated volume daily there will be slight daily imbalances. Additionally, if a TPS fails to deliver or goes out of business SJG is the supplier of last resort. SJG needs its storage to provide the balancing service and step into the shoes of the TPS if necessary. SJG should not be expected to release its storage capacity to support its CHOICE program.

11-5 A mix of firm transportation capacity based on price should be released to the TPS. (See Finding 11-6)

Newer capacity has higher reservation charges than capacity acquired subject to FERC Order 636 where the original infrastructure was accessed for cost. BGSS customers now have some of the newer capacity included in their billing. A prorate mathematical formula can be applied. If SJG has original firm that makes up 80% of the whole and newer, higher priced firm transportation at 20% of the whole, SJG can release and assign firm transportation based on these percentages.

11-6 The assignment of firm transportation should be non-recallable for a minimum of one year at maximum tariff rates. (See Finding 11-6)

Capacity can be released in whole or in part, on a permanent or short-term basis, with or without restriction on the terms or conditions of the release. The rate charged the replacement shipper for a release of capacity may not exceed the applicable maximum rate paid by the releasor but can be a lesser rate if the owner is agreeable. The term can be from one day to a long-term assignment.

The capacity follows the intended customer and therefore SJG should not be entitled to call upon that capacity to serve its current customers. A TPS is obligated to deliver daily volume, therefore it must have possession of the firm capacity to do so.

CHOICE customers can be a heating load with all their requirements falling into the winter period and a summer load being non-existent. Regardless, firm transportation must be assigned for the entire twelve-month period to the TPS. SJG accepted the assignment of firm transportation under FERC Order 636 and did not have the option of accepting the assignment for winter months only. SJG was obligated to accept firm transportation for the entire twelve months year after year. In the interest of fairness, the summer capacity should remain with the migrated customer and not be made a part of the expense that goes into the BGSS rate schedule.

11-7 All legs of firm transportation should be assigned to serve the CHOICE program for twelve-month periods at a time. (See Finding 11-6)

SJG has firm capacity on Tennessee Gas Pipeline that delivers gas to Milford where Columbia Gas transmission receives the gas and delivers it to SJG's city gate. If a portion of the Milford firm transportation is assigned, it would be appropriate to release the upstream capacity through Tennessee Pipeline as the feeder into Milford. Firm assets were acquired to support a certain portfolio of customers, and as those portfolio customers migrate away from the LDC, the LDC is left with assets that it no longer needs. During summer periods this leaves the LDC paying demand charges that are passed along to existing customers that did not migrate to independent marketers.

11-8 Should a TPS default on its obligations to serve customers, the firm assigned capacity should revert to SJG. (See Finding 11-6)

Based on implementation of recommendation 11-8, if a TPS goes out of business or otherwise fails to deliver, the capacity should return to SJG. Unless the migrated customer extends its contract with the current TPS or contracts with an alternate TPS, the capacity returns to SJG. The concept here is that the capacity follows the customer to whomever the supplier is.

11-9 SJG should craft a program to streamline tasks for TPSs that serve CHOICE customers. (See Finding 11-6)

The TPS is the marketer and has a workforce to aggregate households into a pool. Most customers should be assembled to begin in October of each year. SJG should require the TPS to submit all paperwork so that assignment of capacity can be done at one time. SJG may be required to accept additions on an ongoing basis, but SJG should not be expected to release transportation for one Dth. A minimum volume for transportation releases should be put in place.

12. HUMAN RESOURCES

A. BACKGROUND

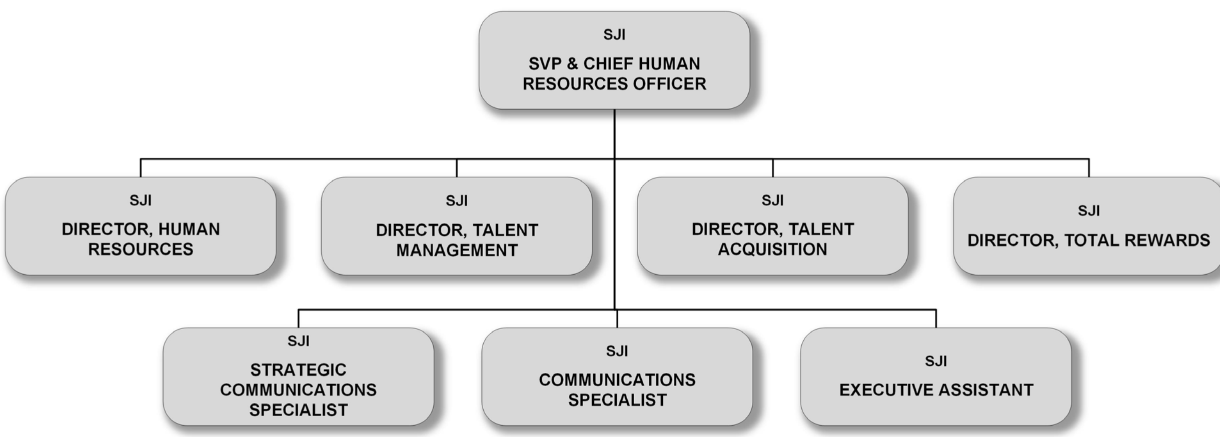
This chapter assesses the typical functions of the SJI Human Resources (HR) department including compensation and benefits; development, training, and evaluation; employee and labor relations; human resource information systems; and affirmative action, and equal opportunity employment practices. SJI provides HR services to SJG and the other SJI affiliates. These functions are addressed via their respective HR departmental units, as identified on the organization chart.

ORGANIZATION AND STAFFING

HR was reorganizing its structure during the SAGE Audit. The organization chart below shows the structure as of the end of 2020. Most of the changes occurred within the four groups led by Directors reporting to the Senior Vice President and Chief Human Resources (SVP & CHR) Officer.

The organization chart shows that the SVP & CHR Officer has seven direct reports, although subsequent changes resulted in five direct reports. These five direct reports are the Talent Acquisition Director, the Employee/Labor Relations Director, Total Rewards Director, Talent Management Director, and a Communications Senior Specialist. HR has 41 employees, including an open position.

SJI Human Resources Structural Organization



The HR capital budget for 2020 was approximately $1.745 million. This included IT support; new benefit vendors who provided integrated software and support; and the addition and modification of the customer information system modules. Most of the 2020 O&M budget of about $27.7 million was comprised of standard benefits payments to employees and retirees (e.g., claims, life insurance, 401K). The remainder is comprised of HR team benefits and salaries. SJI benefits are self-funded.

HUMAN RESOURCE INFORMATION SYSTEM

Workday is the human resources system used by HR and other SJI departments. Human Capital Management (HCM) is the largest module and contains employee profiles, such as personal and work/title/function related data, compensation, absences, and other data.

Workday includes the database for Performance Management Process (PMP). The payroll modification process module is shared with Financial Planning and Analysis (FP&A). Workday was implemented in 2015 and replaced the former Lawson system.

HR uses Workday to manage its functions, including keeping track of the following metrics:

- Workforce Demographics that include the total number of SJG's employees broken down by race and gender.
- Recruiting Statistics that include a breakdown of the total number of new employees hired each year, internal transfers to new roles, and promotions, all broken down by race and gender.
- Turnover Statistics that include the number of employees that left the company either voluntarily, involuntarily for cause, or retirements from the company. This is also broken down by race and gender.
- Labor Union Grievances are organized by date and type of dispute (disciplinary/contractual) and further categorized by types of contractual dispute (e.g., work rule, pay). For further information about grievances, see the Labor Relations section below.

HR also uses a Case Management system (ServiceNow) to manage employee questions and requests, documentation of responses, and a knowledge library that assists employees in a self-service manner. This has been in use since August 2019.

DEVELOPMENT, TRAINING, AND EVALUATION

This section describes HR's role in employee development, training, and evaluation. It includes subsections for Talent Management and Acquisition, Training, Management Succession, and the Performance Management Process.

Talent Management

The Talent Management function comprises employee and leadership development and Diversity and Inclusion responsibilities.

The current Talent Management group had two staff until 2019, when it was expanded to include two additional full-time staff, one of which was an expert in the Workday HR information system platform. Since that time, this function has spent time building on an already established foundation and the team’s core responsibilities. A lack of Workday expertise limited HR's ability to fully exploit the features of Workday. For example, HR was not able to use Workday to identify high performers as part of the talent management process. Instead, SJI used an annual talent review and calibration process. This process facilitates cross-departmental and/or cross-functional feedback from managers on high performing employees.

HR uses a standard PMP evaluation form with the same defined competencies. In addition to the Overall Rating, the form includes: (1) SJI Core Competencies (Leadership Profile, Action Oriented, Customer Focus, Interpersonal Savvy, Cultivates Innovation, Values Differences, and Manager Evaluation) and (2) Business Goals (Financial, Learning and Development, Process, and Customer).

Talent Acquisition

Talent discussions to identify high potential talent, readiness, and development needs occur throughout the year. During year-end talent discussions/calibration sessions, high potential talent is identified and evaluated at the enterprise level. This is an opportunity to receive cross-functional input about the talent pool in a constructive and objective manner. Top talent is measured against core competencies and goals accomplishment against the ongoing needs of the business. At the enterprise level, talent is also evaluated on an ongoing basis during bi-weekly Executive Workforce Committee meetings. This workforce planning process seeks to objectively evaluate requests for new headcount, promotions, and changes to organization structure when needed. It is an opportunity to evaluate requests for new talent, ensure the right talent is moving into new or expanded roles, and ensure changes to organizational structure are consistent with long-term organizational goals and that strategic financial objectives for headcount budgeting are being met.

The Executive Workforce Committee meetings are typically every other week. The participants are the SVP & CHR Officer, Chief Financial Officer, SVP and President SJI Utilities, SVP of SJI and President and Chief Operating Officer SJG, Director of Talent Acquisition, HR Business Partner, Director of Human Resources, and the Executive Compensation Business Partner. Agenda topics include talent acquisition updates, review of process changes or enhancements, review of program changes/enhancements or new program recommendations (and any associated budget implications), requests to add requisitions, and discussions around new hire offer approvals.

Training

SJI has employed a decentralized training model whereby the operations departments handle technical and job-based training, the Safety and Quality Assurance group handles all safety-related training, Information Technology handles all cyber security training, and HR is responsible for professional, leadership development, compliance, and diversity and inclusion training.

HR houses most training through SJI's third-party vendor which serves as a repository to house all facilitator led, virtual, and on-demand course offerings. The Talent Management team provides oversight for all HR training offered to the workforce.

In 2016, SJI formed its corporate university - EmpowerU - where all leadership, professional development services and pipeline programs are housed. One of the key pipeline programs, POWER leadership development, identifies high potential early career talent who rotate through a two-year program with exposure to at least three different business functions, to gain broad exposure to SJI's business and operations while further developing leadership skills. The POWER program has had a 100% conversion rate of associates to full-time employees. A Leadership Development Program for high potential talent was also conducted through Dale Carnegie in 2019 to develop a "ready now" pool of potential candidates for leadership positions throughout the company. Other programs include basic SJI business and operations, basic supervision, career planning insights, manager boot camp, and professional development and utility training programs (customer service and meter reading).

Other training includes New Hire Compliance Training, Customer Relations Training (online), PUR Principles of Public Utilities Operations and Management Training Program, and Health Advocate Series Training Program.

Management Succession

This subsection describes HR's role in the management succession plans and process for management levels below Executive Officers. For an examination of the management succession plans and process for Executive Officers, please see Chapter 2, Executive Management and Corporate Governance.

During year-end talent discussions/calibration sessions, top talent is measured against core competencies and goals accomplishment compared to the needs. At the enterprise level, talent is also evaluated on an ongoing basis during bi-weekly Executive Workforce Committee meetings. This workforce planning process is designed to evaluate requests for new headcount, promotions, and changes to organization structure.

Job Architecture and Career Pathing Program

SJI has embarked on a comprehensive company-wide process for organizing jobs within a common framework, called the Job Architecture and Career Pathing program, with guidance from the PwC consultant (part of PricewaterhouseCoopers). The program began implementation in August 2019.

SJI has said that the program will establish: (1) clearly defined jobs and roles, (2) a standard set of job levels and job titles, (3) clearly defined career paths laterally and vertically across the organization, and (4) employees are empowered in their own career development. SJI sees the program as enabling it to manage the business, resources, and costs more effectively and efficiently. SJI has said that the "Career Pathing Model will:

- Increase our ability to attract, retain, reward, and motivate our employees.
- Enhance our ability to leverage and develop our top performers and high potential employees.
- Integrate new talent into the organization and culture.
- Proactively enhance our succession planning.
- Identify employee career growth potential."

The program would establish career ladders that align across management levels and salary grades for supervisory/management, professional, and support services employees. There would be level progression guidelines for all job types, including, management, business support, operations support, professional, and technical professional.

Performance Management Process

SJI has a formal Performance Management Process (PMP) for non-union employees administered through the HR department. Individuals at all levels through CEO are measured against predefined goals and core competencies, each of which are weighted at 50%. The PMP evaluation is completed by a given individual's supervisor and submitted to HR. In the instance of the CEO, the Board of Directors performs the evaluation.

The PMP combines the “performance goals” also known as Balanced Score Card (BSC) and performance competencies into a single performance process which drives the merit and bonus payouts. BSC goals are crafted by each company (SJI, SJG, and ETG) and each Senior Leader and then cascaded down to ensure alignment to departmental/team and individual goals. All BSC goals are entered into the HR Workday system by the employee and approved by the manager.

BSC goals are submitted based on four categories: Foundation/Financial; Operational Excellence/Process; Growth; and Customer, Culture/Learning and Development. During the performance appraisal process, employees are evaluated based on overall performance and given a performance rating (PMP rating) which then drives the annual merit and applicable bonus payouts.

The Corporate Balanced Scorecard contains the categories of Safety, Shared Services, Finance, Customer, Internal Process, and Learning and Growth. For each of these categories, there are one or more Goals, each with Targets, Target Value, Status, Comment, and Last Update.

The BSC is currently used for Director-level and above. Years ago, the BSC had been used for managers below Director level. The BSC process is not part of the Workday system and HR relies on departments to submit the BSC info to HR to be entered into the PMP module for calculating compensation payout.

Annual Merit Process. Employee base salary compensation is reviewed on an annual basis and merit increases are based on budget, market competitiveness, and individual performance. Individual increases are based on both the PMP rating and the employee’s placement in the salary range. PMP ratings are distributed as follows (Please note that the ratings distribution below is a guideline to follow. This is not the actual breakout of PMP ratings for SJI employees. Ideally, the performance rating model recommends a bell-shaped curve distribution of performance ratings similar to below):

- Exceeds – 10%
- Meets and Exceeds – 15%
- Successfully Meets – 55%
- Partially Meets – 15%
- Fails to Meet – 5%

The salary placement is divided by: Below Minimum, 1st Quartile, 2nd Quartile, 3rd Quartile, 4th Quartile, and Above Maximum. The PMP rating also drives payout for any applicable annual incentive payout (AIP).

Once employee evaluations have been completed, calibration and talent review meetings are conducted between HR and business leaders to evaluate performance cross-business lines and ensure equity in performance measurement, rating, and overall rewards across the company. The Executive Workforce Committee reviews and approves performance ratings and merit and bonus payouts for all non-union employees.

SJG tracks workforce management and performance metrics on a department-by-department basis. For department example, see Chapter 6, Distribution and Operational Management and Chapter 7, Customer Service.

COMPENSATION AND BENEFITS

The compensation and benefits functions were reorganized during the SAGE Audit as part of the consolidation of some HR functions under the umbrella of the Total Rewards team, led by a Director of Total Rewards, reporting to the SVP & CHR Officer. Executive compensation is led by the Executive Compensation Business Partner, broad-based (non-executive) compensation is led by the Compensation Business Partner, executive benefits are handled by a HR Specialist Senior (Benefits), and the non-executive benefits, previously handled by the HR Benefits Lead, has been eliminated and replaced with a Retirement Specialist, a position that was not filled at the time of the Audit.

For the broad-based compensation function, SJI participates in compensation and benefits surveys and references external benchmarking data to confirm that pay and benefits are representative of the marketplace, based on industry, company size, and closest competitors for talent. The survey results are provided in large raw data sets in Excel and are then integrated into the Pay Factors database which allows SJI to market price positions/jobs as required. The surveys used are provided by the American Gas Association (AGA) and Willis Towers Watson.

Compensation Functions and Practices

The Compensation program elements for non-union employees include:

- Base Salary – A fixed cash opportunity. Salary reflects role, level of position, responsibilities, experience, and market competitiveness.
- Annual Incentive Plan (AIP) – An annual at-risk cash compensation program with variable payout based on achieving quantitative company goals set at the beginning of the year. The program considers two components for final bonus, company results and achievement of individual objectives.
- Long Term Incentive Plan (LTI) – A restricted stock unit program with time-based restricted stock units (TBRSUs) (for director level positions).

AIP targets are a percent of the employee's base salary. Target percentages are pre-determined by level and are based on market competitiveness.

Awards are based on meeting the goals of the AIP Corporate Balanced Scorecard (BSC), weighted 70% on the achievement of certain pre-determined financial metrics, and 30% on the achievement of certain pre-determined stakeholder metrics (Customer, Safety & Strategic).

For Director and above, the individual payouts are based on BSC results and a performance modifier based on the individual annual performance rating. Individual performance can modify the award up to +/-25%. The AIP payout is calculated: Individual AIP target x AIP BSC results x Individual Performance Modifier.

For levels below the Director level, individual payouts are based on pool funding and Performance Management Program (PMP) rating. Pool funding is calculated based on the sum of all individual payout target dollars x AIP BSC Results. Payout is based on individual AIP target dollars x PMP payout percent. The AIP Performance Matrix is developed based on funds available from the AIP pool and final PMP rating distribution. AIP payout is maxed at 150% of target.

There are two payout conditions:

1. If relative Total Shareholder Return (rTSR) is less than SJI's Peer Group 25th percentile, then AIP is capped at 100% of target.

M. If SJI misses all of its AIP BSC threshold metrics, there will be a zero AIP payout.

Benefits Functions and Practices

Union Employees Benefits. Full time SJG union employees are eligible for benefits the first of the month following 60 days of service. Their benefit offering includes medical, dental, vision, prescription, life insurance and accidental death (AD&D), short- and long-term disability, 401k, and health savings and flex spending account plans. Employees have the choice of two medical plans (a point of service and a high deductible), two dental plans (a basic, free plan and a buy up enhanced option). Employees enroll in benefits (and make changes to their benefits) through the Human Resources Information System (HRIS), a module in Workday. Health Advocate is a resource available to employees which provides employee assistance (EAP) services, wellness services, and benefit claim/billing assistance. The Wellness Program offers up to a maximum of $200 to full time employees who complete various wellness programs. Each program has a predetermined point value (each point equals a dollar). Employees are eligible to begin participating in the 401k program on the first day of employment; the company's match (50% up to 8% of wages contributed) kicks in after one year of service. Annually, employees receive a 401k year-end contribution from the company.

Non-Union Employees Description of Benefits. Full time SJG nonunion employees are eligible for benefits the first of the month following date of hire. Their benefit offering includes medical, dental, vision, prescription, legal plan, accident plan, life insurance (both basic and voluntary buy up) and accidental death (AD&D), short- and long-term disability, 401k, and health savings and flex spending account plans. Nonunion employees have the choice of two medical plans (a point of service and a high deductible) and two dental plans (a basic plan and a buy up enhanced option). Nonunion employees enroll in benefits (and make changes to their benefits) through the HRIS. Health Advocate is a resource available to employees which provides employee assistance (EAP) services, wellness services and benefit claim/billing assistance. The Wellness Program offers up to a maximum of $200 to full time employees who complete various wellness programs, each program has a predetermined point value (each point equals a dollar). Employees are eligible to begin participating in the 401k program on the first day of employment; the company match (50% up to 8% of wages contributed) kicks in after one year of service.

EMPLOYEE AND LABOR RELATIONS

Employee Relations

Employee Relations' issues throughout the COVID-19 pandemic have been centered around safety and resources. Employees were concerned that the company was doing everything possible to provide a safe and clean environment. This has been accomplished through regular communications to employees, highlighting enhanced personal protective equipment (PPE) and safety protocols, launching a full remote working plan for all non-essential employees, and more rigorous building cleaning.

A task force was formed at the beginning of the COVID-19 pandemic and continued to meet during the SAGE Audit. This group is comprised of key stakeholders across the business who provide communications and links to information and resources to employees; the task force also made recommendations to the executive team on matters pertaining to policy and continued business operations.

To address employee concerns, such as approval for paid time off and instructions on when to quarantine, the HR Business Partner team replied directly to manager and employee inquiries through email which were not logged by category. A separate COVID-19 category was not established in HR Service Center (HRSC) until February 2021. Prior to February these matters were not centrally tracked and maintained through a HR Case created in the HRSC. Since initiating the COVID-19 category in HRSC, the company had five tickets opened for employee assistance: one regarding quarantine guidelines and four about pandemic-related paid time off.

SJI conducted its first corporate engagement survey in 2017 (pre-acquisition of ETG) and now conducts them on a bi-annual basis. The last survey was conducted in 2019 (post-acquisition of ETG) and the 2019 results are used as corporate baseline.

Labor Relations

Labor Relations responsibilities include: (1) fact-finding investigations into allegations of policy violations; (2) grievances related to disciplinary actions; (3) disagreements and grievances regarding allocation of work duties, field safety, and wage rates; and (4) benefits inquiries.

Union contracts are negotiated beginning eight to twelve months prior to agreement expiration. The Labor Relations team represents SJG, with the assistance of outside counsel as well as leaders of the effected SJG business lines (Street, Utility, Construction, Dispatch, Clerical, Customer Service, LNG, Pipeline, Allocations). The Labor Relations team consists of the Labor Relations Business Partner and two Labor Relations Specialists.

HR maintains a Grievance Tracking Log, which is broken into tabs to reflect disciplinary grievances and three categories of contractual grievances. HR does not have data for most of 2014 but data is available from 2015 through 2020.

Workers Compensation Claims

The management of workers compensation claims is shared by an Insurance Specialist Lead in the Legal department and by HR. The Claims Management System is the conduit between the establishment of a claim by the Safety and Quality Assurance department, the processing of the claim by HR for payment by NJM (contractor), and the periodic analysis of claims by the Insurance Specialist Lead, who examines premiums, deductibles, carrier performance, and yearly renewal of policies.

Incidents are reported to a division supervisor and to the Safety and Quality Assurance department. The claim is entered into the Claims Management System on the SalesForce platform and then is investigated by the local division. Liability claims are paid out by claims handling contractors.

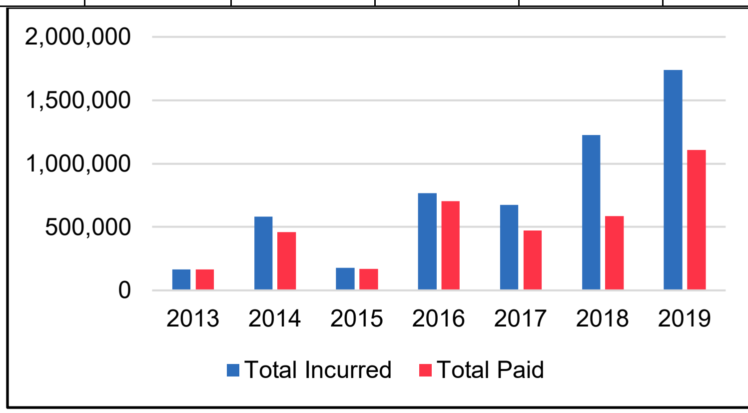
Other claim types, including General Liability Claims and Indemnification Claims, are handled by the Legal department. For further information on the Legal department, see Chapter 19, Support Services.

There has been an increase in the severity of injuries. Basic “fall and return” injuries can become chronic and symptoms worsen over the years; medical costs correspondingly increase.

In 2019, there was a large auto accident-related payout, causing the “Motor Vehicle Injury” payout to jump significantly to $755,015 for that year. In the previous years, the highest paid claims amount for this category was $320,900 in 2016, a difference of $434,115. By reducing the 2019 amount of $1,107,614 by $434,115, the normalized amount for 2019 is $673,499, or $14,967 paid per claim. Compared to the actual amount of $24,614 in 2019, the normalized amount of $14,967 is more in line with previous years' dollars per paid claim.

SJG Workers Compensation Insurance Claims ($)

	2013	2014	2015	2016	2017	2018	2019
Total Incurred	163,940	581,747	178,009	765,824	675,215	1,226,897	1,739,574
Total Paid	163,940	460,587	170,715	704,115	473,132	587,986	1,107,614
Number Of Claims	53	50	21	39	38	48	45
Dollars Paid Per Claim	3,093	9,212	8,129	18,054	12,451	12,250	24,614



AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYMENT

SJI's EEO/Affirmative Action/Non-Discrimination Policy is published by HR, and it was most recently updated effective July 2018. The policy statement includes the objective, scope, dissemination and implementation, employee reporting procedures, remedies, and protection against retaliation. SJI has posted its Diversity and Inclusion (D&I) guidelines on its website.

HR files annually required EEO-1 data collection reports per Equal Employment Opportunity Commission (EEOC) guidelines. Most recently, SJI was required to file EEO-1 Component 2 reports for the 2017 and 2018 calendar years. These reports were filed on November 11, 2019, and December 10, 2019, respectively. The reports were required as part of a national assessment of the quality and utility of the EEOC EEO-1 Component 2 Pay Data Collection.

SJI confirms that it follows the US Department of Labor guidelines for Affirmative Action. The company engages with external counsel to do a study of the SJI Workforce Demographics. This study includes an assessment of the results and recommendations to address any shortfalls. HR then presents findings to the CEO and provides recommendations for steps moving forward to stay within guidelines. SJI has implemented training for its employees: diversity and inclusion training for new hires, mandatory D&I training for leaders at all levels of the organization, and unconscious bias training for leaders.

The company has recently established the Environmental, Social, and Governance (ESG) Management Committee, coordinated by the Legal department. The ESG Management Committee is responsible for the development and implementation of the company's key sustainability strategies, initiatives, and policies. This includes management of SJI's commitment to safety, environmental, health, human rights, employee relations, governance, and community support strategies. The 2019 ESG Annual Report cites that 39% of SJI leadership (Supervisor, Manager, Director, Officer, and Senior Executive) is female.

SJI reports the following diversity factors:

- 51% minority representation, including female
- 31% female in entry level Engineering
- 39% female representation for the whole company
- 65% minority including female for new hires
- 28% people of color representation for the whole company
- 51% female and 41% people of color for new hires

The SVP & CHR Officer has access to a Culture Dashboard that shows graphs and tables that include annual trends of metrics for Employee Engagement, Customer Service Satisfaction, Diversity and Inclusion, and Attrition. The D&I screen includes annual metrics for Women/Non-White Promotions and Lateral Moves, Women/Non-White in Leadership (Manager+), Women/Non-White in Leadership (Director+), and Diversity Supplier Spend for several categories. The metrics displayed are for 2017 through 2019 and YTD 2020. The Culture Dashboard was developed during the last quarter of 2019, consequently there are no previous versions prior to 2019.

HR GOALS, OBJECTIVES, MEASURES, AND TARGETS

The SVP & CHR Officer has a 2021 Balanced Scorecard (BSC) that identifies HR Objectives, Measures, and Targets. The BSC feeds into SJI's Performance Management Process (PMP) which is the basis for the Executive compensation program. The Objectives category includes the four BSC basic subcategories of Growth, Operational Excellence, Culture, and Foundation.

The SVP & CHR Officer has access to a Culture Dashboard that shows graphs and tables that include annual trends for Employee Engagement, Customer Service Satisfaction, Diversity and Inclusion, and Attrition. metrics are displayed for the years 2017 through 2019 and YTD 2020. The Culture Dashboard was developed during the last quarter of 2019, consequently there are no previous versions prior to 2019.

B. FINDINGS

12-1 The two Communications Specialists reporting to HR have split responsibilities between HR and External Relations.

Communications Senior Specialist and the Communications Specialist positions within HR, have split responsibilities between HR and External Affairs (the External Affairs function is discussed in Chapter 20, External Relations). These positions have communications responsibilities for both internal employees and for external audiences, including administering and disseminating corporate information to external stakeholders and messaging to employees.

With respect to external communications, these two HR employees draft, edit and review corporate messages to ensure that they are clear, thorough, on-brand, and seek to preserve the company's image. They also evaluate message content and target audience, suggest appropriate delivery channels, and collect data on the performance of specific communications or campaigns. To accomplish their duties, they partner with all department heads, as appropriate, to ensure messaging is aligned with key initiatives and suitable to the target audience.

12-2 HR lacks a centralized capability for maintenance of certification and licensing requirements.

Job certification requirements are initially entered into Workday for newly appointed employees, but there is no HR process for ensuring that certifications are kept current by the employee. Employees can voluntarily update their Workday file, but it is up to the employee's manager to ensure that certifications and licenses are kept current by the employee. For example, SJI has acknowledged that there is currently no formal tracking mechanism for Project Management Professional certifications. Further, there is no recognition or reward to encourage employees to attain and maintain non-required professional and operational certifications for developmental and improved job performance.

12-3 Company-wide training is not coordinated by HR.

HR is responsible for training programs that are common to most or all departments, including leadership, supervision, and EEO/AA (Diversity and Inclusion). Operational-type training is conducted by operations departments and not tracked by HR. HR is looking at a learning management system that could be incorporated into Workday.

12-4 SJG recognizes the need to implement a management succession process and planning for managers below the level of Executive officers.

SJI, SJIU, and SJG do not have management succession planning for managers in many departments who are not at the Executive and Senior Officer levels. SJI has said that the succession planning processes across the companies are inconsistent and not at a mature stage cross-company below the Executive level. Most critical functions create succession plans independently of HR as part of their annual goal achievement process. HR has provided leaders with tools and resources to create succession plans for their business but does not currently and consistently create annual succession plans for all departments. SJI has said that this has been identified as an opportunity area to maintain continuity of business and retain key business knowledge. HR acknowledges that role-based succession plans and an organizational capability assessment were created for each functional area several years ago but do need to be refreshed and re-evaluated based on current organizational structure and critical business needs.

12-5 The organizational spans of control are often well below the expected span of control range for a utility of its size and complexity.

The title of HR Business Partner describes both management level and a high and broad-based skill level. The Director level designation indicates both level of responsibility/seniority and pay level. The HR Business Partner title is independent of the number of direct reports and in some cases is an Individual Contributor. All HR Business Partners are at the Director level.

An important element in organizational structure of a utility is the spans of control within the structure. Span of control is normally defined as the number of employees reporting to an individual supervisor. Although there are no generally accepted guidelines for the industry, for most utility organizations, spans of control ranging from as few as six direct reports up to 20 direct reports for a full-time manager or supervisor are practical. There are, however, several variables that affect the appropriate span of control in each specific circumstance including:

- Diversity of functions supervised
- Number of physical locations or mobility of employees
- Supervisory degree of involvement in subordinates' work
- Experience levels of the superior and subordinate
- Complexity of work planning required

These same variables apply in instances where a supervisor performs dual roles as a supervisor and as an individual contributor, adjusted in proportion to the extent of the manager's individual contribution. Spans of control that are too broad can also create problems such as inconsistent performance and inadequate supervision.

The spans of control for SJI, excluding Business Development, ETG, and contingent workers were analyzed by SAGE and the results are shown in the following table. The results include the average span of control for each management level. The high and low spans of control within each management level are also included in the analysis.

Spans of Control

	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7
Total Positions	10	35	96	176	89	131	210
Supervisory Positions (Not Counting Zeros)	1	6	29	46	33	20	21
Average Span	10.0	5.8	3.3	3.8	2.7	6.6	10.0
High Span	10	10	8	12	12	22	18
Low Span	10	1	1	1	1	1	3

The average spans of control are reasonable for the lowest and highest levels (Levels 1 and 7). The spans at the middle levels (particularly Levels 3, 4 and 5) are considerably lower than optimal.

The average span of control for the Director level was about three direct reports, with some Director-level employees having no or just one direct report. SJI has said that the 2019–2020 ongoing implementation of the Job Architecture program determined that some Director level employees should remain as individual contributors and the decision to allow other Director level positions to have few direct reports depended "on the Director's department, the nature of the work being performed, and the role and the job family to which it's assigned."

SAGE found that four VPs are categorized at the Director management level. The spans at the middle levels (particularly Levels 3, 4, and 5) are considerably lower than one might expect. SJI has said that these positions are justified because the title, specificity of the role, number of direct reports, and the span of control is greater than that of the other Director roles; however, it is a director-level management role. The VP role remains at the Director management level until they are promoted to an Officer level. Historically, SJI utilized the Vice President (VP) and Senior Vice President (SVP) titles to be true strategic department heads, reporting to the CEO. Additionally, a VP title equated to Officer of the company. SJI has said that over time, based on a desire to be more agile but also to reward and compensate individuals for strong performance, SJI introduced the concept of a "non-officer VP" and separate leverage points (incentive bonus and LTI) were identified. To distinguish these non-officer VPs from a traditional Officer/Executive of the company, the HR Compensation team used the Director management level in Workday to differentiate, as the next management level in Workday (Officer) can trigger different benefits, and reporting. SJI has said that it "will continue to evaluate each position to ensure that they are categorized appropriately in the correct management level."

12-6 SJI continues to develop and update job descriptions as part of the implementation of the Job Architecture process.

SJI has been creating job profiles for all non-union roles directly in the Workday system. The job profile contains the job descriptions and organizational leveling guides. SJI's process is to create job profiles in Workday only when a complete job description is available. Job descriptions are reviewed periodically, if there is a business need revision, and/or additions are made. This process was incorporated into the Job Architecture and Career Pathing program in 2019 to create more consistency in job descriptions and career paths.

Currently, Job Architecture has been completed for 85% of the non-union population. All SJI non-union employees have a job description and job profile which reside in Workday and are maintained by HR regardless of whether they have gone through the Job Architecture provers or not.

SJI's Job Architecture process does not include the five Executive officers and the 12 non-Executive officers. SJI has said that the Executive officer positions do not follow the Job Architecture process and therefore do not have specific leveling guides associated with their job descriptions. At the Executive level, these roles are single incumbent positions that have their own set of unique qualifications and are purely market based. There is no grading structure as utilized by the other positions that follow Job Architecture. The descriptions are unique and reflect the executive level roles they hold within the organization.

Executive job descriptions are revised if incumbents at the executive level have acquired additional responsibilities or move into new executive roles based on business needs or re-organization/re-structuring, then new job profiles are created, outlining the specific and unique qualifications associated with their new roles. There is a large degree of variation between job description format and content. Executive and non-Executive officer job descriptions do not include outputs and key performance metrics.

There are 95 (or about 15%) non-union SJI employees that have not formally gone through the Job Architecture process, and therefore do not necessarily have up-to-date job descriptions. SJI plans to apply the Job Architecture process to these remaining employees in 2021 through the 3rd quarter 2022.

12-7 SJI has taken steps to improve employee communications.

Key themes from the 2019 employee engagement survey indicated that the company had relatively high favorability ratings overall (68.6%). However, communication was a theme that was identified as an area of opportunity, specifically as it relates to ensuring employees understand the reasons behind organizational changes and how they fit into company plans. Specific results for the communication area are shown in the table. below. The percentages represent favorable positive responses.

Employee Engagement Survey – Communication

Issue	2017	2019
“When the organization makes changes, I understand why.”	37%	36%
“I understand the organization's plans for future success.”	64%	49%
“My immediate manager effectively communicates information that is important for me to understand.”	69%	78%

To improve overall communication and increase employees’ understanding of corporate changes, SJI prepared an Employee Engagement Action Plan which included the following key goals related to communication:

- Establishing channels for employees to provide feedback and ideas.
- Connecting employees to the larger corporate strategy and sharing different opportunities for individual career growth.
- Helping employees understand how they fit into the organization, creating greater connection between employees and leadership.
- Sharing how employees fit into the organization with a strategic plan in each update.

Both formal and informal communication channels were established or enhanced to improve opportunity areas related to communication. These included the following:

- Utilizing quarterly leadership meetings to inform managers about updates to strategic plan and progress of engagement survey action plan.
- Utilizing the monthly corporate newsletter to inform the broader organization on company updates and strategic plans.
- Implemented a cascading approach to corporate messaging holding Directors and above accountable for ensuring that key messaging and changes in organization are cascaded to teams.
- Created guides and talking points for leaders so corporate messaging is aligned throughout the company.

- Established employee engagement weeks to further engage and inform the organization throughout the year and incorporated a feedback vehicle so employees could provide feedback or ask questions related to information shared.
- Tied corporate messaging (corporate communications) back to the feedback that employees shared in the engagement survey.
- Connecting employees to the employee engagement strategy and sharing different opportunities for individual career growth.

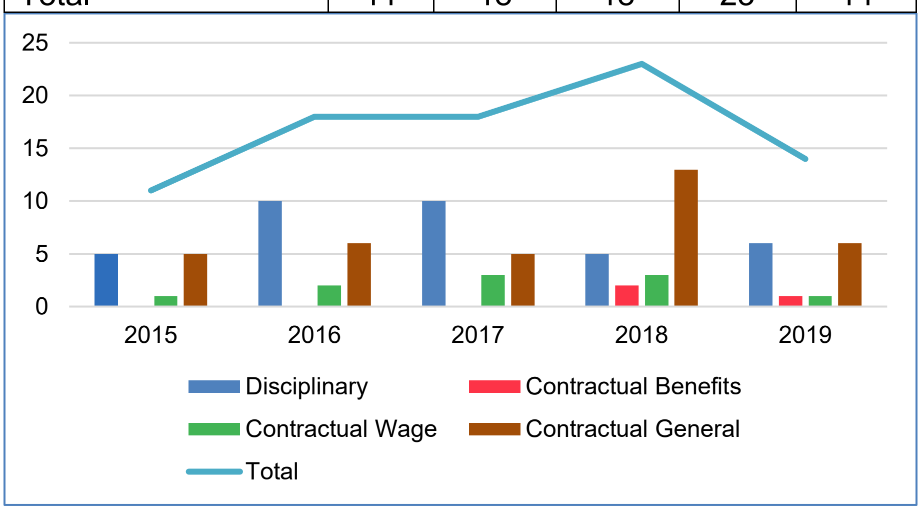
SJI has said that while a full action plan was created and many action items were implemented, the company found the need to pivot due to the restraints caused by the COVID-19 pandemic and work from home posture for many employees throughout the company. Key areas will be re-evaluated in 2021 during the next engagement survey.

12-8 The number of union grievances has remained relatively low and consistent over a several-year period.

Union grievances have been relatively flat and reasonably low from 2015 through 2019. There was a small spike in 2018 due to an increase in Contractual General grievances. This category in 2018 was a mixture of contractual disputes, including "contractors performing bargaining unit work" and an employee "skipped by dispatch for OT [overtime] list." The 2019 total was lower than the previous three years and somewhat higher than 2015, as shown in the table and graph below.

Union Grievances

	2015	2016	2017	2018	2019
Disciplinary	5	10	10	5	6
Contractual Benefits	0	0	0	2	1
Contractual Wage	1	2	3	3	1
Contractual General	5	6	5	13	6
Total	11	18	18	23	14



12-9 SJG employee ethnicity annual data through 2019 is insufficient to assess affirmative action progress.

The following table represents the change in employee ethnicity from 2017 through 2019:

Employee Population Ethnicity

	2017	2018	2019
American Indian	3	3	4
Asian	24	28	28
Black	83	138	134
Hispanic	47	109	134
Two or More Races	7	11	15
White	599	811	800
Total	763	1100	1115

The increase of total employees from 2017 to 2018 and the associated increases in the ethnicity categories was a result of the acquisition of ETG. The notable increase in Hispanic employees from 2018 to 2019 is not necessarily the result of planned recruitment of this minority group, but rather a consequence of the ETG acquisition.

Although SJG tracks ethnicity and other employee metrics, there are no specific annual targets designed to improve the metrics.

The SVP & CHR Officer has access to a Culture Dashboard that shows graphs and tables that include annual trends of metrics for Employee Engagement, Customer Service Satisfaction, Diversity and Inclusion, and Attrition. The Diversity and Inclusion screen does not have quantified targets against which to measure progress.

12-10 HR Objectives, Measures, and Targets lack quantified performance measures against which to measure progress.

The SVP & CHR Officer's Balanced Scorecard's Objectives are appropriate for a HR department. The Measures refer to the end-of-year assessment. The Targets lack any sort of specific quantified metrics, such as a due date, percent complete, benchmark, or other performance measures. Some HR employees have quantified Balanced Scorecard Targets, but they are not reflected in the SVP's BSC.

C. RECOMMENDATIONS

12-1 Transfer the two Communications Specialists to the External Affairs department and transfer their employee engagement responsibilities to existing or new hired HR employees. (See Finding 12-1)

The split functions have two very different audiences— company employees and external stakeholders— which have different goals and messaging. Shared resources often result in unclear understanding of allocated time and conflicting priorities between the two employees and external relations.

12-2 Develop the system capability to centrally track the certification and licensing requirements for specific jobs to ensure that certificates and licenses are kept current by the employee. (See Finding 12-2)

The employee's manager or supervisor should be alerted by the system for these compliance requirements. The system should facilitate and support a program that recognizes or rewards the employee for maintaining compliance with job requirements and the company should encourage employees to maintain non-required professional and operational certifications for developmental and improved job performance.

12-3 Centralize the coordination of company-wide training within HR. (See Finding 12-3)

It is appropriate that individual departments identify their training needs and design and implement programs for their unique functions and requirements. Training programs that are common to all or most departments appropriately reside within the responsibilities of HR. The centralization of coordination within HR and specifically within a Workday day database will ensure that individual employee training needs and requirements are being met and compliance information is readily available to HR and employee supervisors.

12-4 Reassess and develop a management succession planning process for management levels below Executive officers. (See Finding 12-4)

SJI recognizes that it should move forward with a re-assessment and implement a management succession process and plan for managers below Executive officers. HR should lead and coordinate the planning process. The plan should be written and then be reviewed and updated quarterly.

12-5 Restructure targeted organizational groups to increase spans of control to at least an average of six employees per supervisor. (See Finding 12-5)

SAGE understands that there are reasons for individual contributors and other special circumstances to be appropriately compensated, but the average spans of control for Director level positions and other mid-level positions continue to be unreasonably low. The company should restructure its organization to move the average span of control to an average of six employees per manager.

12-6 Ensure that job descriptions are current for all positions, that they provide a clear and consistent understanding for the employee and supervisor, and that they meet standards for common good practices. (See Finding 12-6)

SJI should continue to use the approach recommended by its consultant in October 2018 for creating and fine-tuning job descriptions, as part of the Job Architecture and Career Planning project:

- The definition of a job description is a set of activities regularly carried out by an individual on a regular basis, using a common template. It focuses on the key accountabilities and outputs (metrics of the job) and the skills, experience, and competencies required to perform the job at a proficient level.
- A job description should be simple and clear, in a standard agreed template, consistently prepared, and regularly reviewed and updated.

- The value of a job description for the:
  - Individual – provides clarity of job and performance expectations and is a foundation for performance review, objective setting, and personal development.
  - Management – provides clarity of each role in a business area, and how the roles relate to each other and create a team, department, or function. It is a foundation for recruitment, performance review, objective setting, and role development.
  - Organization – provides a key element of organization design, provides clarity of all roles in the organization through standardized documentation, improves communication by providing consistent role information, is a core document providing consistency across a number of HR processes, and is a foundation for recruitment, planned role progression, and career planning.

With respect to job descriptions of Executive and non-Executive officers, SJI should include outputs and performance metrics that link to the officers Balanced Scorecards and Performance Management Process.

12-7 Establish annual goals and targets to track and improve Diversity and Inclusion performance. (See Finding 12-9)

HR should lead a company-wide program to establish annual Diversity and Inclusion targets that link to existing metrics that are being tracked. The goals and targets should be supported by talent acquisition and management initiatives. The program should evaluate linkages to the Balanced Scorecard and the Performance Management Process. The HR Culture Dashboard should be modified to show progress against the targets.

12-8 Establish quantified performance measures for the SVP and Chief Human Resources Officer. (See Finding 12-10)

The Balanced scorecard (BSC) for the SVP & CHR Officer should have quantified metrics, such as a due date complete, percent complete, benchmark, or other performance measures, and be linked and cascaded to the quantified goals of HR employees.

13. FINANCE

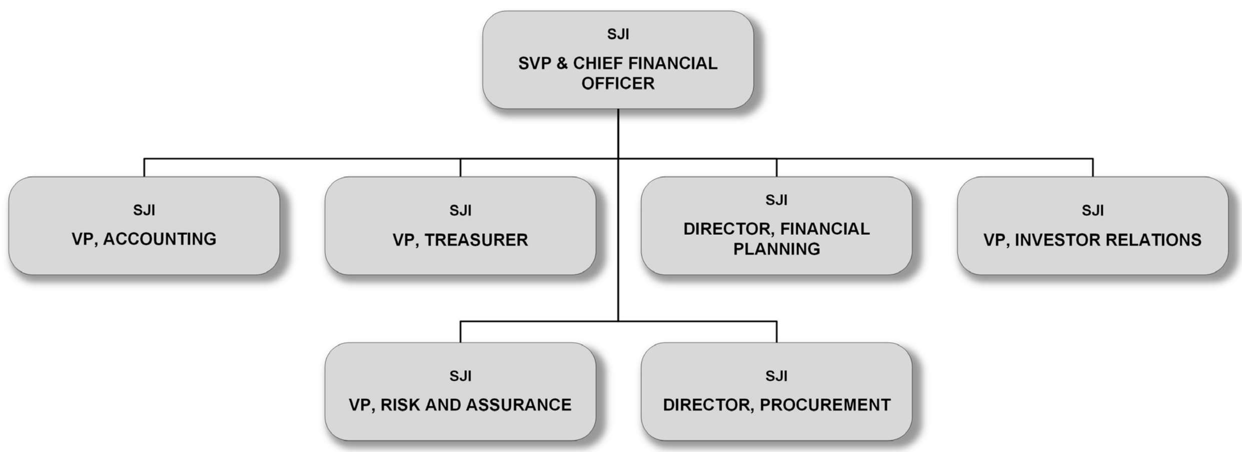
A. BACKGROUND

All of the finance functions for South Jersey Gas (SJG) are the responsibility of the South Jersey Industries (SJI) Finance Department. This department is responsible for the finance functions of all the subsidiaries in the SJI family of companies, including all of SJG's affiliates.

ORGANIZATION

The Senior Vice President (SVP) and Chief Financial Officer (CFO) for SJI is responsible for Accounting, Treasury, Financial Planning and Analysis, Investor Relations, Risk and Assurance, and SJI Business Support Services. SJI's SVP/CFO reports directly to the President and CEO of SJI. The Finance Department organization structure is shown in the following exhibit.

South Jersey Industries Finance Organization



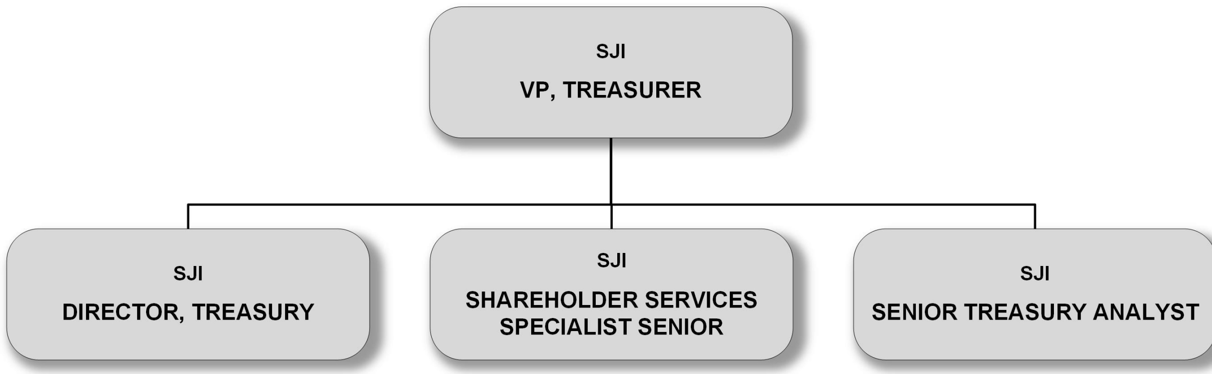
ACCOUNTING

The SJI Accounting Department is headed by a VP, Accounting. This department is responsible for tax, payroll, and accounting functions for all SJI companies. Additionally, the responsibility for cost allocations, including control, management, and direction, falls under this department. The review and assessment of all accounting functions are covered in Chapter 15, Accounting and Property Records; payroll functions are covered in Chapter 16, Payroll Reporting; affiliate relationships are covered in Chapter 8, Affiliate Relationships; and cost allocations are covered in Chapter 9, Affiliate Cost Allocation Methodologies.

TREASURY

Treasury functions are under the direction of a VP, Treasury. Treasury functions include treasury, cash management, pension management and accounting, and include capital structure development, providing shareholder services, SEC registrations and filings, vesting schedules, retail investor relations, oversight of the internal trust, and retirement and benefit programs (e.g., 401K). Pensions are assisted by Greystone Consulting (part of Morgan Stanley). The Treasury Department organization structure is shown in the following exhibit.

South Jersey Industries Treasury Organization



Cash Management

Both SJG and Elizabethtown Gas (ETG) stand alone and work independently in their cash management and borrowing functions, with their own banks and accounts. A review of SJI's cash management functions is contained in Chapter 14, Cash Management.

Short-term Borrowing

The short-term borrowing needs of SJG are met through the use of its own commercial paper (CP) program and a Credit Facility with multiple banks. SJG and its sister utility, ETG, do not participate in a money pool, although this type of arrangement is under consideration. However, currently there are no concrete plans to establish a money pool. The SJI holding company and the non-regulated entities share in a money pool-type arrangement, but both SJG and ETG stand alone and work independently in their cash management and borrowing functions, with their own banks and accounts. There is no common money pool arrangement with SJI Utilities (SJG's and ETG's parent) and SJG or ETG. This is to emphasize the separation and ring-fencing between regulated and non-regulated activities.

Commercial Paper. SJG's commercial paper (CP) program under which SJG may issue short-term, unsecured promissory notes to qualified investors up to a maximum aggregate amount outstanding at any time of $200 million, is backed by a credit facility. SJG uses the CP program in tandem with its revolving credit facility and does not expect the principal amount of borrowings outstanding under the CP program and the credit facility to exceed $200 million. The Credit Facility is used only if the CP market closes; this only happened once in 2020. The CP market is used because, currently, it is more cost effective than any other form of borrowing.

During 2019, SJG borrowed on a daily basis between $28 million to $197 million through its CP program at rates that ranged from 1.90% to 2.96%.

Credit Facility. SJG has a Five-Year Revolving Credit Agreement for $200 million with ten banks, dated August 14, 2017, specifying that SJG was the borrower, and the banks were lenders. This agreement has been amended twice, on June 12, 2018, and June 7,

2019. The second amendment added SJI Utilities (SJIU) as another borrower alongside SJG, and changed the maximum amount that could be borrowed from $200 million for SJG to $175 million for SJG and $25 million for SJIU. The lending banks involved and their commitment to the agreement are shown on the following exhibit.

Five-Year Revolving Credit Agreement Banks

Lender	Commitment
Wells Fargo, National Association	$28,333,333.33
Bank of America, N.A.	$28,333,333.33
JP Morgan Chase Bank, N.A.	$28,333,333.33
PNC Bank, National Association	$28,333,333.33
Citizens Bank of Pennsylvania	$25,000,000.00
TD Bank, N.A.	$18,333,333.34
Branch Banking and Trust Company	$15,000,000.00
KeyBank National Association	$15,000,000.00
Manufacturers and Traders Trust Company	$6,666,666.67
Provident Bank	$6,666,666.67
Aggregate Commitment	**$200,000,000.00**

The interest rate charged for use of any of the credit in this agreement consisted of a Base Rate plus an Applicable Base Rate Margin or the London Interbank Offered Rate (LIBOR) Rate plus an Applicable LIBOR Margin. The Applicable Base Rate Margin and the Applicable LIBOR Margin are based on the credit rating of the borrower (either SJG or SJIU) according to Moody's Investor Services (Moody's) and Standard & Poor's Rating Services (S&P). A schedule of the applicable interest rate margins charged based on the credit ratings of the borrower is shown in the following table.

Interest Rate Margins Based on Credit Ratings

Tier	S&P Debt Ratings	Moody's Debt Ratings	Applicable Base Rate Margin	Applicable LIBOR Margin
I	≥ A+	≥ A1	0.000%	0.800%
II	A	A2	0.000%	0.900%
III	A-	A3	0.000%	1.000%
IV	BBB+	Baa1	0.075%	1.075%
V	≤ BBB	≤ Baa2	.275%	1.275%

For the period of this audit, 2013 through 2019, SJG did not call upon its Credit Facility.

There is a financial covenant that requires SJG to ensure that the ratio of indebtedness to total capitalization (as defined in the respective credit agreement) does not exceed 0.70 to 1.

Long Term Debt

SJG's long-term debt issues have been made through the private placement market and have not been publicly issued. SJG has mostly used the private placement method because they are a well-known borrower, have a good name with a good credit rating, and private placement allows them to avoid some costs associated with placing issues through the public market.

At the end of 2019, SJG's long-term debt outstanding was $971.4 million. A schedule of SJG's long-term debt is shown in the following table.

SJG's Long-Term Debt as of December 31, 2019

Description	Interest Rate	Amount ($000)
First Mortgage Bonds – Series Due 2024	3.00%	50,000
First Mortgage Bonds – Series Due 2024	3.03%	35,000
First Mortgage Bonds – Series Due 2025	3.63%	5,455
First Mortgage Bonds – Series Due 2026	4.84%	15,000
First Mortgage Bonds – Series Due 2026	4.93%	45,000
First Mortgage Bonds – Series Due 2027	4.03%	45,000
First Mortgage Bonds – Series Due 2030	4.01%	34,000
First Mortgage Bonds – Series Due 2030	4.23%	30,000
First Mortgage Bonds – Series Due 2032	3.74%	35,000
First Mortgage Bonds – Series Due 2033	5.55%	32,000
First Mortgage Bonds – Series Due 2034	6.213%	10,000
First Mortgage Bonds – Series Due 2035	5.45%	10,000
First Mortgage Bonds – Series Due 2047	3.00%	200,000
Series A 2006 Bonds – Due 2036		24,900
Unsecured Term Loan with eight banks due 2020		400,000
Total SJG Long-Term Debt Outstanding		**971,355**

Credit Ratings

SJG is rated by Moody's and S&P. For the seven-year period of this audit, 2013–2019), SJG's credit ratings have been relatively constant. According to Moody's, SJG's Issuer Rating improved from A3 to A2 early in this period and then declined back to A3 in 2019, with the Outlook declining also from Stable to Negative. The S&P rating remained constant through the first six years from 2013 through 2018 and declined slightly from BBB+ with a Stable Outlook to BBB in 2019 with a Negative Outlook (early in 2020). Rationale given for the recent slight rate decline include weak credit metrics, increased debt to fund large capital investments, significant spending on environmental remediation, and SJI's non-utility operations.

Dividend Policy

SJG paid dividends to its parent, SJI, as funds were available.Dividend payment is dependent on free cash flow and rate case approved capital structure. The last dividend during the seven-year period being audited was in 2017. The decision to pay a dividend is proposed by the SJI Treasurer and presented to the SJIU Board of Directors (SJIU BOD) for approval.

Dividends paid by SJG to its parent company, SJI, are shown in the following schedule.

SJG Dividends Paid to SJI ($000)

Year	Dividends	SJG Net Income
2013	0	62,236
2014	18,201	66,483
2015	40,764	66,578
2016	0	69,045
2017	20,000	72,557
2018		82,949
2019		87,394
Total	**78,965**	**507,242**

SJG's dividend policy is to set a dividend payout ratio which approximates that of its parent company, SJI, as established in its annual financial plan and to meet or exceed all applicable regulatory requirements related to common equity balances. From time to time the board will vary from the indicated dividend payout ratio to accomplish specific goals, such as maintaining SJG's average annual equity to capitalization ratio at approximately the level set in the company's most recent Base Rate case proceeding.

FINANCIAL PLANNING AND ANALYSIS

The Financial Planning and Analysis organization is responsible for all financial planning and analysis and budgeting activities for all the SJI companies, including SJG. This group will compare actual results to budgets and forecasts and conduct variance analysis for all regulated and non-regulated entities. A review and assessment of the budget reporting, tracking, revision, and analysis is contained in Chapter 15, Accounting and Property Records.

INVESTOR RELATIONS

The role of the Investor Relations Department (IR) is (1) to ensure that the company complies with relevant regulations of the New York Stock Exchange, (2) to tell the company's story to the "street" in order to fund the growth of the company, and (3) to act as liaison between the company and shareholders and prospective shareholders.

Ten analysts currently provide research coverage of SJI, and the VP, Investor Relations communicates with them on a regular (perhaps daily) basis. Information that comes from this department is what has been approved by the company's General Counsel for public dissemination. The VP, Investor Relations will answer questions from these analysts concerning company information that has been provided them. The analysts may be working on their models of how the company operates and have questions concerning the information that has been provided them by the company. Questions usually relate to various business segments of the company during earnings periods. There is a Presentation Deck (available on the company website) about which they may have questions.

Analysts' reports will be forwarded from IR to the Senior Management Team. There is also an on-going dialogue with this team. There are no formal meetings, but there can be discussions on a daily and weekly basis. IR prepares a Weekly Investor Relations Report each Monday morning that highlights notable happenings in the broad market and utility sector over the past week and provides a calendar of notable events anticipated during the coming week. IR provides updates to the SJI Board of Directors at their board meetings. IR does not meet with the credit rating agencies. IR does not have responsibility for the administration of the annual Shareholders' Meeting.

RISK AND ASSURANCE

The Risk Analysis Department is comprised of three distinct areas related to identifying, managing, and analyzing risk. These are:

- Insurance
- Internal Audit
- Risk

Insurance

SJI's insurance function includes acquiring and managing insurance coverage for all SJI entities, including SJG. This group will be in contact with all insurance brokers. SJI carries all the usual corporate insurance policies including general liability, Directors and Officers (D&O), and property. A review and discussion of the Insurance function is contained in Chapter 19, Support Services.

Internal Audit

The Internal Audit group is headed by a director with four internal auditors. Additional auditing support is provided by outside contractors. The two contractors that currently provide support to Internal Audit are:

- Protiviti
- Price Waterhouse Coopers (PWC)

SJI utilizes external assistance in the form of Protiviti auditors for IT audits and Price Waterhouse Coopers (PWC) auditors for financial and operational audits. Currently, there are four large audits being conducted by the PWC auditors. The use of external auditors is to smooth out workloads and to bring in needed expertise. Presidio was involved in developing a Cyber Risk audit report (written by Presidio and issued by Internal Audit).

Internal Audit has had higher staff numbers in the past; it is trying to decide what the appropriate number of internal auditors should be. The acquisition of ETG has necessitated the use of outside support. Also, in the past Internal Audit has used interns from colleges during the summer and during other busy periods, but this has stopped during the corona virus period. Internal Audit will utilize SJI Human Resources when acquiring new recruits from within the SJI companies or from external sources.

The Internal Audit Department receives whistleblower referrals (financial and fraud issues) from the Legal Dept.There is also a SOX control concerning this activity.

Internal Audit gets involved with new information systems as soon as they are implemented, but not much before. Upon implementation, Internal Audit addresses any internal control issues concerning the new information systems. Information systems used by Internal Audit during the conduct of their audits and reviews include the basic Office modules, (e.g., Excel, Word, Share Point). Visio is used to develop process flows. Process flows are certified by Internal Audit quarterly. These are owned by the business units and must be verified by them to the Internal Auditors.

Auditors receive time off required to complete professional recertifications; additional training is provided by the local chapter of the Institute of Internal Auditing (IIA). Auditors also can attend professional organization conferences and training put on by SJI's external auditor (Deloitte).

There are no monthly reports from Internal Audit to management, although the VP, Risk Assurance meets (telephonically) with the Chair of the Audit Committee monthly and makes a presentation to the full Audit Committee quarterly at the SJI BOD meetings.

There are not many specific audits addressing only SJG; most internal audits will address all SJI operations and entities. Audit reports go to the Audit Committee, the full SJI BOD, the senior leadership team, and the management of the area. Typically, there is no problem with the audited work group accepting the observations and recommendations. The managers being audited have generally bought into the Audit Plan, which is based on risk assessment.

There have been no audits regarding cost allocations or the Cost Allocation Manual (CAM) in recent years. There has been one internal audit involving fraud in the past seven years. The Cyber Security audit conducted in 2020 was performed by one of SJI's contractors (Presidio) under the direction of Internal Audit, who issued the report. One of the regular audits conducted by Internal Audit is a Purchasing Card (P-Card) audit, although it might not be conducted every year.

The requirement to audit remotely due to the pandemic has not adversely affected the Internal Audit processes.

Internal Audit Plan. The Internal Audit Plan is put together in the January/February time frame each year and presented to the Audit Committee in February at a quarterly board meeting. Generally, the Audit Plan is approved as submitted; the VP, Risk Assessment informs the Audit Committee Chair monthly of the areas and risks to be audited. Historically, the Internal Audit Department has been able to complete each year's audit plan by year-end.

The Internal Audit Plan is risk-based. Before adoption, this plan is reviewed and approved by the SJI BOD Audit Committee at the February Audit Committee meeting. During this review process, the Audit Plan is not normally modified but the Audit Plan resources may be changed. Senior SJI management also review and are consulted concerning the Audit Plan. However, no group other than Internal Audit can alter the Internal Audit Plan. The presentation to the Audit Committee includes the status of the Audit Plan which contains planned internal audits and the testing of Sarbanes-Oxley (SOX) controls. These kinds of data are also present on the monthly management Dashboard review.

Audit Process. Internal audits usually require an average of 120–200 hours and account for 35%–40% of the Internal Audit Department's time, working on 45–55 audits per year. Auditors report their time using Workday and charge their hours to the company or entity that is being audited.

Audit Reports average five to seven pages in length, and include:

- Background section
- Executive Summary with a rating (e.g., acceptable, not acceptable, acceptable level of internal controls)
- Observations
- Recommendations
- Management Response – if future action is required, open audit issues and similar. If the response is shorter term, this could also be part of this response.

Observations or Findings are categorized as follows:

- Acceptable Internal Controls – not many in this category
- Adequate Internal Controls – the majority are this category
- Significant Improvement Needed – not many in this category
- Unsatisfactory

Further distinctions in Findings use a numerical range of one to three for the following elements rated:

- Exposure – 1, 2, or 3
- Concerns – 1, 2, or 3
- Housekeeping – 1, 2, or 3

From an Internal Control perspective, ratings are as follows:

- Adequate controls but can be improved for efficiency and effectiveness
- Limited controls
- Virtually no controls

Documentation of audit work and reports are maintained electronically on SharePoint. This was started at the end of 2019. Documentation for audits from earlier time periods (2013–2019) is maintained in manual files.

Follow-up on internal audit findings and recommendations is achieved through the quarterly update of the Internal Audit presentation to the SJI BOD with results concerning new and existing audits. Internal Audit develops a year-end report titled, "Follow up on Previous Audit Comments."

SOX Testing. SOX testing is performed quarterly and takes up 60%–65% of Internal Audit's time. The Internal Audit Department does all the SOX testing; there is no testing by management or department personnel. All SOX controls are tested every year; work is done quarterly; work is stratified based on frequency of control and categorized as high, medium, and low risk. The Internal Audit Department attempts to reduce the number of SOX controls every year and the number will change as processes and systems change.

There are 348 key SOX controls and 230 non-key SOX controls for a total of 578. Of these, there are 64 key SOX controls and 74 non-key SOX controls for SJG, or a total specifically for SJG of 138.

IT Auditing. Internal Audit has one Information Technology (IT) auditor that is responsible for performing IT audits and IT SOX testing for all SJI companies. The IT auditor also provides technical reviews of all processes and functions and will review implementation of IT systems regarding their financial impact, security, and business testing, and validate that the systems are working adequately and as planned.

Protiviti has assisted in IT audits only since 2020. No assistance from outside sources was used from 2013 through 2019. For the period 2013 through 2015, SJI had an additional IT Supervisor in the Internal Audit Department.

IT audits include:

- SOX IT testing
- IT fixed asset reporting (inventory of IT assets)
- IT process audits
- IT system audits
- IT system upgrade audits
- Special IT projects

Over the past seven years (2013–2019) Internal Audit has conducted 61 IT-related audits.

Audit Committee. The Audit Committee Charter is on the company’s website. It is reviewed annually, and the last revision was April 2020.The charter was previously revised two years ago. The SJI Audit Committee meets eight times a year, four in conjunction with the SJI BOD meetings and four telephonically to approve the10-K and 10-Q reports. Because of the pandemic, the Audit Committee has not met in person since January 2020. There is a fixed calendar of items to be addressed during these meetings to ensure that all Audit Committee Charter items are addressed. Material for the Audit Committee meeting is available to the Audit Committee members one week in advance of the Audit Committee meetings.

When the Internal Audit Plan is presented in November, the Audit Committee also receives a description of the top three projects that did not make the year’s audit plan and the reasons why. The Audit Committee sees a one-page summary of the Audit Plan by quarter in priority order.

The Audit Committee reviews all audit report recommendations and all progress concerning audit reports since the previous Audit Committee meeting. If the Audit Committee sees recurring problems with audited work groups, they will get more involved with the root problems. Additionally, the Audit Committee reviews the performance of the VP, Risk Assurance. The Director, Internal Audit reports to the VP, Risk Assurance, and not to the Audit Committee.

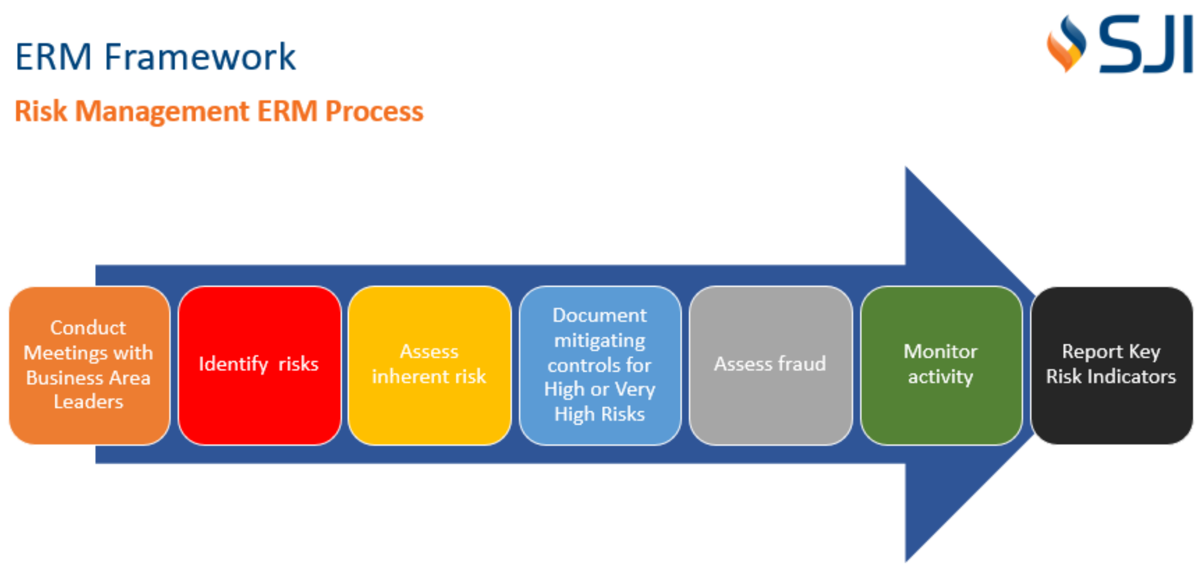
The Audit Committee, along with the General Counsel, is notified concerning whistleblower calls (external or internal) that come in through the hot line. Compliance complaints go to the VP, Risk Assurance.

Deloitte has been SJI's (and SJG's) external auditors since 1948. This arrangement is reviewed annually. In the last ten years the company has changed audit partners several times. Audit partners must change every five years and advisory partners must change every seven years. The Chair, Audit Committee believes that Deloitte has an excellent utility practice and reputation.

Risk Management

The Risk Management Department (RMD), consisting of a director and four staff, is tasked with evaluating risk faced by the entire SJI organization. This department performs a risk assessment for the organization, including interviewing key members of management and business line leaders throughout the year to identify both internal and external risk factors that may affect the Company and the associated controls that mitigate the identified risks. After the meetings, the RMD reviews, evaluates, and updates its risk register. The risk register contains all the risks identified and their financial impact, criticality, likelihood, and mitigating controls. The Enterprise Risk Management (ERM) process is shown graphically in the following exhibit.

Enterprise Risk Management Process



Risk Register. The Risk Register presents an Excel schedule of perceived risks. The following list provides the column headings for the current Risk Register.

- Business Entity
- Business Area/Function
- Point of Contact
- Strategic Objective
- Primary Risks

- ESG
- Key and Emerging Risk Indicators
- Description of Risk
- Likelihood?
    1. Extremely Unlikely (<5% probability)
    2. Not likely (<35% probability)
    3. Equal chance (50% probability)
    4. Likely (>65% probability)
    5. Very likely (>95% probability)
- Criticality?
    1. Almost no impact ($0 – $99K)
    2. Minor impact ($100K – $999K)
    3. Some impact ($1M – $1.9M)
    4. Significant impact ($2M – $4.9M)
    5. Extremely Significant impact (>$5.0M)
- Risk Level Before Controls (Likelihood + Criticality)
- Inherent Risk Level (Very High, High, Moderate, Low)
- Velocity
- Financial Impact (if risk occurs, impact the event may have on business goals and objectives)
- If High Risk, Identify Mitigating Controls(s) Here
- Residual Risk Level
- Fraud Scheme
- Fraud Scenario
- Mitigating Fraud Control(s)

The likelihood of a risk being realized is determined by the business leader. Business leaders review the Committee of Sponsoring Organizations (COSO) internal control framework to determine the Criticality (but relies on subject matter experts (SMEs) for dollar estimates.

Every month the RMD distributes a Risk Dashboard, and the Key Risk Indicators report to the Risk Management Committee (RMC). The Risk Dashboard Report provides information on the status of the most significant risks to SJI. Key risk indicators (KRIs) are measurements used by an organization to manage current and potential exposure to various operational, financial, reputational, compliance, and strategic risks. The Risk Assessment color codes used for KRIs are shown in the following exhibit.

KRI Codes

Key Risk Indicator Risk Assessment		
Risk Level		Trend
🟢	Low Risk	Risk Decreasing
🟡	Moderate Risk	Risk Unchanged
🔴	Elevated Risk	Risk Increasing

The RMC was established to develop, implement, and enforce risk management policies and procedures. The current members of the RMC are as follows:

- Chief Executive Officer, SJI
- Chief Financial Officer, SJI
- President, SJI Utilities
- Highest ranking officer for rates
- President, Elizabethtown Gas Company
- Vice President, Risk Chairman, SJI
- Chief Accounting Officer, Controller/Vice President Accounting, SJI
- Chief Information Officer, SJI
- Senior Vice President/General Counsel, SJI
- Vice President, Enterprise Project Management
- Vice President, Gas Supply and Allocations

On an annual basis, the assessment results are presented at a RMC meeting and to the Board of Directors.

The Credit Risk function includes new counterparty agreements, running credit reports, and financial reviews on producers and trading companies using Dunn & Bradstreet and Standard & Poor's reports. There are approximately 40 gas producers and several hundred trading companies. SJI reviews credit status annually. Most companies have moderate credit ratings; some have low ratings.

The Market Risk function looks at markets daily, reviews exposure based on changes in the market (mostly non-reg), reviews requirements and approvals based on BPU directives, ensures that market risk will stay within limits, and ensures compliance with the hedging portfolio and approved financial hedging.

The Enterprise Risk Management function utilizes the COSA framework, receiving input from business leaders of 49 different organizations; discussing the probability of things happening (Very High, High, Moderate, Low); and reviewing mitigating controls that are, or have been, put in place.

During the first six months of the year, Risk Management will conduct interviews with management, look at the previous year's issues, and add issues. During the second half of the year the same list of issue will be reviewed, and emails will be sent to verify that nothing has changed since the first half of the year.

Through 2019, The Risk Register was presented to the SJI BOD Risk Management Committee Members and to the Audit Committee of the SJI BOD. In April 2020, the Risk Management Committee of the SJI BOD was disbanded and replaced by the Audit Committee and the ERM Committee.

For Cyber Security risks, SJI relies on an outside (3rd party) review. Risk Management relies on Internal Audit for verification and effectiveness of mitigation efforts.

B. FINDINGS

13-1 There were no adverse effects as a result of the financing undertaken by SJG, SJI, and all affiliates.

SJG finances its operations through the issuance of long-term debt in the private market and commercial paper for short-term debt. During the seven-year period covered by this audit, SJG floated First Mortgage Bonds in the amount of $1.1 Billion. A schedule of the bonds issued by SJG are shown in the following table. Interest rates appear to be reasonable for the type of indentures and the dates. SJG's long-term debt and short-term debt financing is separate from that of its parent, SJI, and its affiliates.

SJG Debt Issued 2013–2019

Year Issued	Description	Interest Rate	Amount ($000)
2013	Med Term-Note Due 11/2030	4.010%	50,000
2014	Med Term-Note Due 11/2030	1.010%	59,000
2014	Med Term-Note Due 05/2017	4.230%	30,000
2015	Med Term-Note Due 01/2030	Variable	80,000
2016	Med Term-Note Due 06/2017	Variable	61,000
2017	Med Term-Note Due 06/2017	Variable	200,000
2017	Med Term-Note Due 01/2019	3.000%	200,000
2018	Med Term-Note Due 01/2047	Variable	310,000
2019	Med Term-Note Due 04/2020	Variable	90,000
Total			**1,080,000**

SJG's issued debt in order to finance its cash needs, which include capital expenditures, a remediation program, and dividends to its parent, SJI. SJG's financing is separate from that of its parent, SJI, and its affiliates. The only effect from this financing would appear to be the one level downgrade in credit rating from A-2 to A-3 from Moody's and from BBB+ to BBB from S&P due to increased debt-to-fund capital investments and significant spending on environmental remediation.

13-2 Affiliate interrelationships between SJG and its affiliates have not adversely affected the financial performance of SJG.

During the 2013 through 2019 time period, SJG's operating revenue increased by 27.6% ($446 mill to $569 million) and net income increased by 40.3% (from $62 million to $87 million). This is a compound annual growth rate of 4.13%. During the same period, net property, plant, and equipment increased by 82% and operating revenue per customer increased by 16%. SJG's financial and customer trends are shown in the following table.

SJG Financial and Customer Trends ($000 except for Ratios and Customers)

	Year Ended December 31						
	2013	2014	2015	2016	2017	2018	2019
Operating Revenues	$446,480	$501,875	$534,290	$461,055	$517,254	$548,000	$569,226
Net Income	$62,236	$66,483	$66,578	$69,045	$72,557	$82,949	$87,394
Property, Plant and Equipment, Net	$1,424,775	$1,589,369	$1,770,766	$1,952,912	$2,154,083	$2,383,459	$2,596,102
Total Assets	$1,909126	$2,185,672	$2,288,204	$2,551,923	$2,865,974	$3,118,236	$3,348,555
Total Customers	362,256	366,854	373,100	377,625	383,633	391,092	397,090
Operating Revenue per Customer	$1,232	$1,368	$1,432	$1,221	$1,348	$1,401	$1,433

During this same seven-year period, SJG's involvement with its affiliates in terms of dollar amounts of transactions increased significantly.

Charges from goods and services provided to SJG from its affiliates have increased by 84% over the seven-year period from 2013 to 2019. This was a compound annual growth rate (CAGR) of 9.57%. The majority of charges resulted from goods and services provided to SJG by its parent, SJI, followed by gas purchases from South Jersey Resources Group (SJRG).

The dollar amount of goods and services provided by SJG to its affiliates from 2013 through 2019 were less than 30% of the charges for the goods and services provided by affiliates to SJG ($96.1 million / $340.2 million). Approximately 50% of the total charged to affiliates were for goods and services provided to its parent, SJI. The annual amount of total charges has increased by almost 200% during this seven-year period. The CAGR of these transactions during this period is almost 20% (19.76%).

SJG maintains committed and uncommitted credit facilities that are segregated from those which support SJI. SJG also does not cash pool with SJI or any of SJI's affiliates. The only mechanism available to move funds up to the parent company is a dividend from SJG to SJI that would need to be approved by SJG's Board of Directors. Any transactions that occur between SJG and any of its affiliates must be on an arm's length basis and are reviewed as part of the BPU's affiliates standards.

Practices and protocols enumerated in the SJIU Financial and Physical Natural Gas Transactions Risk Management Policy and Procedures mitigate the risk of an affiliate relationship increasing risk to SJG.

It does not appear that the interrelationships between SJG and its affiliates hampered the financial performance of SJG.

13-3 SJI's affiliate activities have had a minor dilatory effect on SJG's credit ratings.

SJG's credit rating remained steady for the first six years of the seven-year period covered by this audit. The credit rating decreased slightly from A-2 to A-3 from Moody's and from BBB+ to BBB from S&P in 2019. Although not the main factor noted by the credit agencies for the downgrade, one of the factors mentioned throughout the seven-year period was that SJG's credit was constrained by SJI's non-utility operations and associated debt. Therefore, it is reasonable to assume that SJI's affiliate activities have had a minor negative effect on SJG's credit ratings.

13-4 The debt management policies of SJG, SJI, and its affiliates have not produced any real or perceived encumbrances of SJG's utility assets.

SJG's debt management policies keep SJG's utility assets separate from those of SJI and its affiliates. SJG's short-term debts consist of commercial paper backed by a credit facility. These are segregated from those which support SJI and its affiliates. The only method to move funds up to SJG's parent is a dividend, which requires the approval of the SJG Board of Directors. Long-term debt consists of first mortgage bonds floated in the private placement market. Covenants applicable to these bond issues limit all transactions with affiliates except those based on "fair and reasonable terms no less favorable…than would be obtainable in a comparable arms'-length transaction." Additionally, it is SJG's policy that any transactions that occur between SJG and any of its affiliates must be on an arm's length basis.

13-5 SJI's business diversification has not harmed or produced any significant negative effects on SJG.

Over the past seven years (2013 through 2019), SJG has purchased goods or services from six of its affiliates and provided goods or services to fourteen of its affiliates. None of these affiliates (regulated or unregulated) operate in the same market and do not harm market competitiveness. Although an affiliate, ETG, is also a local distribution company, and both SJG and ETG are regulated by the New Jersey Bureau of Public Utilities (NJBPU) and serve different service territories in New Jersey.

13-6 The methods used by SJG and its affiliates to determine and allocate consolidated income taxes is reasonable as long as not used for ratemaking purposes.

A SJI procedure governs the calculation and allocation of current federal income tax to SJG and its affiliates. The objective of this procedure is to "document the calculation and allocation of each subsidiary's tax liability included in the consolidated return and to accurately and completely reflect the income tax liability on the books and records of each subsidiary and the consolidated financial statements of SJI." Using the consolidated tax rate, the Federal Income Tax for each subsidiary of SJI is calculated based on each company's taxable income and in the same manner as if the company filed a separate return.

For ratemaking purposes, SJG must include a consolidated tax adjustment (CTA) calculation using the rate base method. This allows SJI to keep certain tax savings and requires SJG to reduce the rate base by 100% of the calculated CTA.

13-7 The Internal Audit function is effective in ensuring that the policies and procedures governing the operations of SJG and its affiliates are adequate and complied with.

The Internal Audit Department is managed and staffed by experienced and competent internal auditors. The methods utilized in determining what areas should be audited and the planning and execution of the audits is appropriate for utility companies. Audit reports are complete and succinct and address the most important issues being audited. The attention given to the review of audit reports and audit activity by management and the Board of Directors is reasonable and appropriate.

13-8 There have been no audits of the Cost Allocation Manual.

The Cost Allocation Manual (CAM) prescribes the manner in which costs will be charged to SJG and its affiliates. The purpose of the CAM is to ensure that allocations to and from SJG and its affiliates do not result in subsidization of non-regulated services or products by regulated entities. The assurance that allocations are done correctly is very important to regulators, investors, shareholders, and SJG and SJI management. Internal Audit should conduct periodic audits of the CAM and cost allocations.

C. RECOMMENDATIONS

13-1 The annual Internal Audit Plan should include periodic audits of the CAM and the cost allocations governed by the CAM. (See Finding 13-8)

A significant amount of cost is allocated or direct charged from SJG affiliates to SJG via policies and procedures contained in the CAM. Additionally, a large amount of cost is charged or allocated from SJG to its affiliates, also relying on the policies and procedures from the CAM. The importance of these cost transfers among affiliates is substantial. An annual or periodic audit of the CAM and the cost allocations that emanate from the CAM should be included in the audit planning process, and audits of the CAM should be performed by Internal Audit on a regular basis.

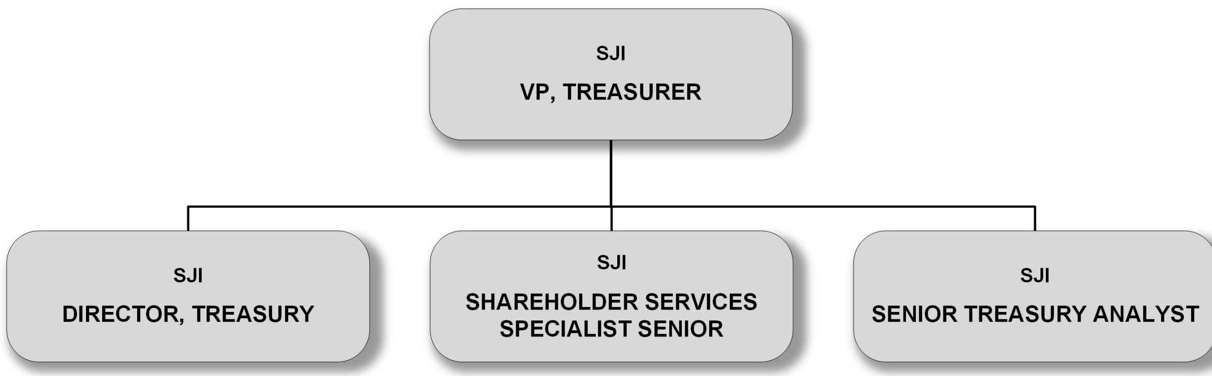
14. CASH MANAGEMENT

A. BACKGROUND

ORGANIZATION

The cash management functions of the South Jersey Gas Company (SJG), South Jersey Industries (SJI), and their affiliates are the responsibility of the SJI Treasury Department under the control of the SJI Director, Treasury, reporting to the SJI VP, Treasurer. This organization, also shown in Chapter 13, Finance, is shown below:

South Jersey Industries Treasury Organization



CASH MANAGEMENT

SJG has separate bank accounts and its own short-term revolving loan programs and commercial paper (CP) program. There are 13 SJG bank accounts in five banks as follows:

- Wells Fargo
  - Customer Receipts
  - Main Operating Account
  - Street Opening (Permit Fund)
  - Disbursement
- Citizens
  - Lockbox
- TD Bank
  - Payroll
- JP Morgan
  - Uncommitted Line
  - Concord
- Bank of New York
  - Optional Redemption Subaccount in the Bond Fund
  - Rel of Property
  - Credit Facility Account

- Pledged Bond Account
- 1st Mortgage Bonds 10%

Ratepayer payments are sent to the lockbox operated by Citizens Bank and transferred by wire to the Wells Fargo Customer Receipts account nightly.

CASH FLOW

Cash flow for SJG is forecast at budget time and included in the budget and financial forecasts prepared by the Financial Planning and Analysis (FP&A) Department. Actual cash flow is reviewed and compared to budgeted cash flow. There is a Daily Cash Report that goes to senior management that shows the last ten days of cash flow. Additionally, there are monthly cash flow reports. A sample monthly Cash Flow Forecast for SJG, ETG, and SJI is shown in the following exhibit.

Cash Flow Forecast – SJI, SJG, and ETG

Line #	Description	SJI	SJG	ETG	Total Consolidated
1	**Opening Balance**	xx	xx	xx	xx
2	Capital Markets (Debt/Equity Issuance)	xx	xx	xx	xx
3	Investments	xx	xx	xx	xx
	Receipts				
4	Receipts	xx	xx	xx	xx
5	I/C Receipts	xx	xx	xx	xx
6	Revolver Libor Borrowings	xx	xx	xx	xx
7	Total Receipts	xx	xx	xx	xx
	Disbursements				
8	Checks and Wire Disbursements	xx	xx	xx	xx
9	I/C Payments	xx	xx	xx	xx
10	Debt Principal/Interest	xx	xx	xx	xx
11	Revolver Libor Paydown	xx	xx	xx	xx
12	Total Disbursements	xx	xx	xx	xx
13	**Cash Flow from Operations (line 7 - line 12)**	xx	xx	xx	xx
14	**Net Cash Position (Sum of lines 1,2, 3, and 13)**	xx	xx	xx	Xx

This above exhibit displays the daily opening cash balance, cash receipts, cash disbursements, cash flow from operations, and the net cash position for SJG, as well as ETG, SJI, and the consolidated position for all three.

Cash flows for SJG are shown in the following table, along with the dividend payments to SJG's parent, SJI, and SJG's retained earnings as of the end of each year from 2013 through 2019.

Cash Flows and Financial Results 2013–2019

Net Cash Flow	Years Ended December 31 ($000)						
	2013	2014	2015	2016	2017	2018	2019
From Operating Activities	146,677	103,984	166,904	142,972	112,138	117,659	138,992
From Investment Activities	(160,246)	(214,225)	(229,053)	(210,316)	(258,671)	(245,388)	(270,358)
From Financing Activities	12,911	109,999	61,146	67,928	149,761	126,372	134,855
Total Net Cash Flow	(658)	(242)	(1,003)	584	3,228	(1,357)	3,489
Cash and Cash Equivalents at Beginning of Year	2,678	2,020	1,778	775	1,391	4,619	3,262
Cash and Cash Equivalents at End of Year	2,020	1,778	775	1,359	4,619	3,262	6,751
Dividends Paid to SJI		18,201	40,764		20,000		
Retained Earnings	390,019	438,301	464,115	533,160	585,838	668,787	756,180

SJG's net cash flow was negative for four of the seven years covered by this audit, with positive cash flows experienced in only 2016, 2017, and 2019. The positive Cash Flow from Operating Activities is made up primarily from Net Income, Depreciation and Amortization, and Deferred Income Taxes. The negative Cash Flow from Investment Activities consists almost entirely of the Construction and Acquisition of Utility Plant (the purchase or construction of fixed assets). The positive Cash Flow from Financing Activities represents the issuance of long and short-term debt and cash provided by its parent, diminished by the amount of dividends paid to its parent. The balance of cash and cash equivalents increased by over 200% during this period, improving from $2 million at the end of 2013 to $6.7 million at the end of 2019. Retained earnings increased by 95% from the end of 2013 to the end of 2019 ($756.2 million compared to $390 million). Retained earnings is a measurement of historical profits and reflects the amount of net income left over after paying dividends.

Dividend payments from SJG to SJI were dependent on free cash flow and rate case approved capital structure. From time to time the SJG Board of Directors will vary from the indicated dividend payout ratio to accomplish specific goals, such as maintaining SJG's average annual equity to capitalization ratio at approximately the level set in the company's most recent Base Rate case proceeding.

WRITE-OFFS

Accounts receivable write-offs for SJG and its affiliates are shown in the following table.

Bad Debts and Write Offs

Company	Years Ended December 31 ($000)							Total 7 Years
	2013	2014	2015	2016	2017	2018	2019	
SJG	4,315	9,807	14,689	6,964	6,949	7,898	7,189	57,811
Marina	74		536					610
SJE	77	26	125	142	(38)	6	98	436
SJESP	499	69	214	72	24			878
Total All Companies	4,965	9,902	15,564	7,178	6,935	7,904	7,287	59,735

The 2014 and 2015 increases for SJG were a result of a transition to the new Customer Care and Billing (CC&B) system in October 2014 and an initiative to write off aged inactive receivables. The new CC&B created improved visibility into aged receivables. Additional aging buckets were created to better analyze aged receivables and assess repayment potential.

A customer's outstanding balance is written off when it reaches 365 days in the Inactive status. A customer account becomes "Inactive" once the account has been stopped (i.e., where service is disconnected or where the customer requests cessation of service) or final billed within the CC&B. Upon reaching 365 days as an Inactive account, the CC&B transfers the balance associated with the account to the write off service agreement. This transfer triggers a write off journal entry recorded by the Accounting Department.

CAPITAL STRUCTURE

SJG's year-end capital structure for 2013 through 2019 is shown in the following exhibit.

SJG Capital Structure

Description	Years Ended December 31 ($000)						
	2013	2014	2015	2016	2017	2018	2019
Short-term Debt	65,500	101,400	134,400	104,300	52,000	107,500	171,300
Long-term Debt	475,000	543,000	611,991	645,082	829,173	900,264	971,355
Common Equity	608,762	683,806	705,297	842,097	932,523	1,005,618	1,095,450
Total Capitalization	1,149,262	1,328,206	1,451,688	1,591,479	1,813,696	2,013,382	2,238,105

Short-term debt consists of SJG's commercial paper program. Long-term is comprised primarily of first mortgage bonds. See Chapter 13, Finance, for a discussion of short-term and long-term debt. SJG's common equity is 100% owned by SJI.

COST OF CAPITAL

SJG's cost of debt (weighted interest rate cost for the short-term commercial paper program and the weighted interest rates for the long-term debt issues) for 2013 through

2019 is shown in the following table, as well as the cost of capital after adjusting the debt cost for tax effects.

SJG's Cost of Debt and Cost of Capital

Description	Years Ended December 31						
	2013	2014	2015	2016	2017	2018	2019
Short-term Debt ($000)	65,500	101,400	134,400	104,300	52,000	107,500	171,300
Weighted Cost	0.3057%	0.4489%	0.6593%	0.9560%	1.8767%	2.9588%	1.9927%
Long-term Debt ($000)	475,000	543,000	611,991	645,082	829,173	900,264	971,355
Weighted Cost	4.6268%	4.2102%	3.7774%	3.4918%	3.4482%	3.6592%	3.4009%
Total Debt ($000)	540,500	644,400	746,391	749,382	881,173	1,00,764	1,142,655
Weighted Debt Cost	4.1032%	3.6183%	3.2159%	3.1389%	3.3555%	3.5845%	3.1898%
Federal Income Tax (FIT) %	35%	35%	35%	35%	35%	21%	21%
Cost of Capital [(1-FIT%) x Weighted Debt Cost] ($000)	2.6670%	2.3519%	2.0903%	2.0403%	2.1811%	2.8317%	2.5199%

The weighted cost of SJG's short-term debt ranged from a low of .3057% in 2013 to a high of 2.9588% in 2018. The weighted cost of SJG's long-term debt ranged from a low of 3.4009% in 2019 to a high of 4.6268% in 2013. The cost of short-term debt increased over the seven-year period, while the cost of long-term debt decreased over the same period.

The SJG's cost of capital is comprised of the relative cost of debt after income tax considerations. The corporate federal income tax rates were 35% in 2013 through 2017. This rate was 21% for 2018 and 2019.

B. FINDINGS

14-1 SJG's Cash Forecasting Process is reasonable and provides accurate estimates to manage operations.

SJI's Treasury Department forecasts cash flow for SJG, SJI, and their affiliates on a daily, monthly, and annual basis. Actual cash flow is compared to forecasts and budgets. The daily cash position tracks SJG's daily opening cash balance, cash receipts, cash disbursements, cash flow from operations, and its net cash position. SJG's daily liquidity is also monitored with reports that display its credit situation including the amount of credit available. The methods and processes used by SJI to forecast and monitor SJG's cash needs and available cash is appropriate and efficient.

14-2 SJG's cash is not intermingled with cash of its parent and other affiliates.

SJG's cash is controlled and managed by the SJI Treasury Department, which also manages the cash of SJI and all the SJI affiliates. SJG's cash is kept separate from that of its parent and its affiliates. A total of 13 separate bank accounts in five different banks are used to collect, manage, and disburse cash belonging to SJG. These accounts only contain cash belonging to SJG. There are adequate systems in place to identify, manage, and report SJG's cash. SJG's cash is not intermingled with that of its affiliates.

14-3 Funds generated by SJG's depreciation charges were not used for non-utility or non-SJG purposes, and dividend payouts did not adversely affect its financial performance.

Funds made available from non-cash charges for depreciation expense are shown in SJG's cash flow statements.

SJG's Depreciation, Depletion, and Amortization Charges Compared to Dividends and Cash Balances

Net Cash Flow	Years Ended December 31 ($000)							
	2013	2014	2015	2016	2017	2018	2019	Total
Depreciation and Depletion	35,404	38,627	42,771	49,031	55,302	61,183	67,403	349,721
Amortization	12,857	13,528	15,897	14.870	16,352	21,439	26,508	121,451
Total: Depreciation, Depletion and Amortization	**48,261**	**52,155**	**58,668**	**63,901**	**71,654**	**82,622**	**93,911**	**471,172**
Dividends Paid to SJI		(18,201)	(40,764)		(20,000)			(78,965)
Additional Investment by SJI	25,000	25,000		65,000	40,000			155,000
Net Cash Flow from Transactions with SJI	25,000	6,799	(40,764)	65,000	20,000			76,035
Cash and Cash Equivalents at End of Year	2,020	1,778	775	1,359	4,619	3,262	6,751	N/A
Retained Earnings	390,019	438,301	464,115	533,160	585,838	668,787	756,180	N/A

The total cash flow attributed to depreciation, depletion, and amortization charges ranged from $48.3 million in 2013 to $93.9 million in 2019. This was an increase of almost 95% in the seven-year period. Total cash provided by depreciation, depletion, and amortization amounted to $471 million. During this same period, SJG paid dividends to SJI in three of the seven years for a total of approximately $79 million. This outflow of cash to SJI was offset by additional investments in SJG provided by SJI of $155 million, yielding a net cash in-flow of cash to SJG of $76 million. Cash and cash equivalents increased by over 200% from the end of 2013 to the end of 2019, and retained earnings increased by 94%. During this period, SJG did not acquire or dispose of any companies. Funds generated by SJG's depreciation charges were not used for non-utility or non-SJG purposes, and there does not appear to be any negative effect on SJG's financial performance measures from the transmission of dividends to SJI.

14-4 SJG's write-offs of bad debt was not unusual for a gas utility and did not have a negative impact on SJG.

The average of SJG's write-offs for the seven years 2013 through 2019 was 2.3% of sales. The write-off percent increase in 2014 and 2015 was due to a transition to SJG's Customer Care and Billing (CC&B) system. The CC&B was implemented October 2014 and provided increased visibility of aged inactive receivables. SJG's write-off percentages for 2013 through 2019 are shown in the following exhibit.

Write-Off Percentage 2013– 2019

Company	Years Ended December 31							Total 7 Years
	2013	2014	2015	2016	2017	2018	2019	
Write-offs ($000)	4,315	9,807	14,689	6,964	6,949	7,898	7,189	57,811
Sales ($000)	309,329	348,676	397,073	327,721	340,932	394,980	429,597	2,548,308
Write-off Percent	1.4%	2.8%	3.7%	2.1%	2.0%	2.0%	1.7%	2.3%

The write-off percentage experienced by SJG is not unusual for a gas utility and did not have an adverse effect on SJG's financial performance or cash flow.

14-5 Diversification activities of SJI do not adversely affect SJG's cost of capital.

SJG's cost of capital is calculated using its cost of long-term and short-term debt. The cost of long-term and short-term debt in the guise of interest rates is largely determined by SJG's credit ratings from the major, international credit rating agencies. In SJG's case, this would be Standard & Poor's Rating Services (S&P) and Moody's Investor Services (Moody's). Several factors influence the credit ratings assigned to SJG by S&P and Moody's. Among these are financial results and credit metrics, the amount of capital investments, and the amount of spending on remediation, as well as SJI's non-utility operations. It would not be reasonable to think that SJI's non-utility operations provided anything more than a minor impact on SJG's cost of capital considering the other credit-related factors.

14-6 SJG's cost of capital is comparable to industry averages.

SJG's cost of capital over the seven-year period from 2013 through 2019 ranged from 2.04% to 2.83%. Increases in these cost percentages in the last few years were caused primarily by the decrease in the Federal Income Tax rate from 35% to 21% which increased the after-tax cost of capital. These rates were comparable to industry averages during this period.

C. RECOMMENDATIONS

None

15. ACCOUNTING AND PROPERTY RECORDS

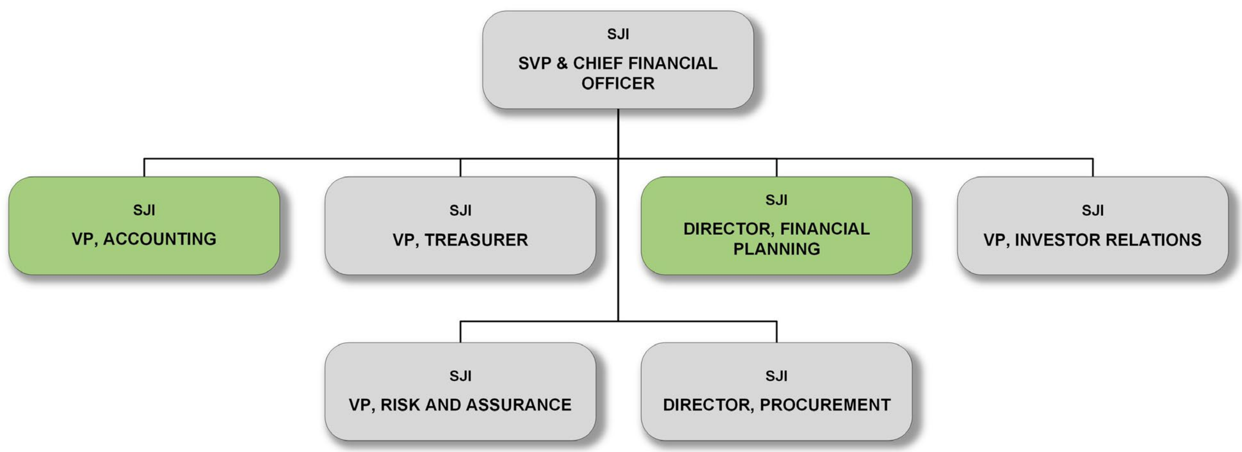
A. BACKGROUND

Accounting and property records functions for South Jersey Gas (SJG) and its affiliates are the responsibility of the South Jersey Industries (SJI) Accounting Department, under the direction of the VP, Accounting. Budgeting functions for SJG and its affiliates that are reviewed in this chapter are the responsibility of the Financial Planning and Analysis (FP&A) Department, headed by a Director, FP&A.

ORGANIZATION

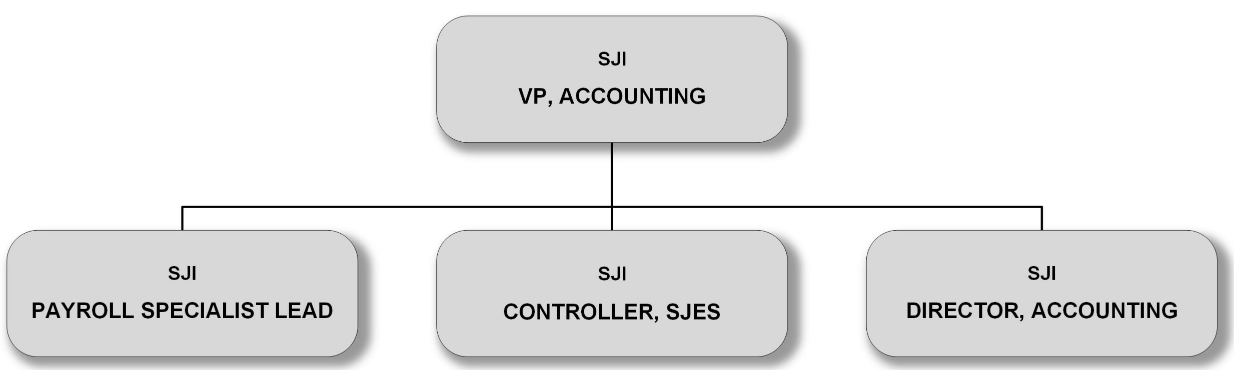
The VP, Accounting and the Director, FP&A report directly to the SVP, Finance and Chief Financial Officer (SVP & CFO) of SJI. The organization chart of the Finance Department depicting these relationships as well as the other direct reports to the SVP, Finance are shown in the following organization chart.

South Jersey Industries Finance Organization



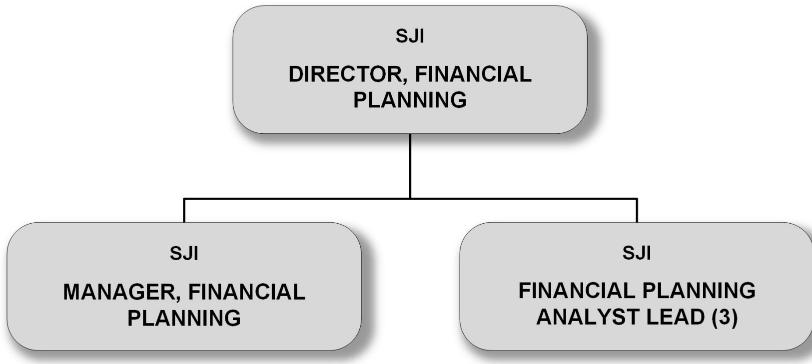
The VP, Accounting is responsible for the accounting functions for SJG, SJI, and all SJI entities. This position reports directly to the SVP & CFO and has three direct reports as shown in the following organization chart.

South Jersey Industries Accounting Organization



The Director, FP&A is responsible for operating and capital budgeting functions for all SJI entities, including SJG, ETG, all non-utility entities, support services entities, and corporate consolidated work groups. This position reports directly to the SVP, CFO, and has four direct reports as shown in the following organization chart.

South Jersey Industries FP&A Organization



ACCOUNTING

Accounts Receivable

The processes for receiving and securing accounts receivable are covered in Chapter 14, Cash Management.

Payroll

The SJI Payroll Department processes payroll for SJG and all the SJI companies. Since 2018, the WorkDay payroll system has been used for more than 1100 employees, with approximately 300 in SJG. The review and assessment of all Payroll functions are covered in Chapter 16, Payroll Reporting.

General Ledger Accounting

General ledger accounting functions for all of the SJI entities are performed by either the Utility Accounting group or the Non-Utility Accounting group. The Utility Accounting group is concerned with SJI's two utilities (SJG and ETG) and SJIU. The Non-Utility Accounting group is responsible for all the other SJI companies and support organizations.

Utility Accounting. This group handles the general ledger accounting for both utility companies, SJG and ETG, as well as for SJIU. This includes accounting closing, revenue and cost accounting, regulatory accounting, financial statements, consolidations, variance analysis, property tax, and BPU filings. Flow charts of these processes have been developed and are verified annually by Internal Audit. Variance analysis conducted consists of balance sheet and income statement reviews and comparisons to prior periods. Material variances (generally ten percent) must be explained monthly. Time reporting for the work performed is entered bi-weekly on-line and is either direct charged or allocated to other companies based on the three-factor formula.

A list of the process flows pertaining to the accounting work performed for SJG is as follows:

- Billing
- Capacity Release
- Cost of Sales
- ETA
- Gas in Storage Inventory
- LNG
- Materials & Supply Inventory
- Non-Current Assets
- Non-Current Liabilities
- PPE
- Prepaids and other current assets
- Provision for Doubtful Accounts
- Purchasing O & M
- Unbilled Revenue

This work group provides input from their activities to the following:

- Monthly Accounting Committee – consisting of the VP Accounting and the senior executives (presidents of both utilities and SJIU). Variances from budget are identified and explained at the profit and loss level.
- FP&A – variance analysis work
- Monthly Results Call (utilizing Power BI summaries of Hyperion data). The Monthly Results Call can consist of 40–50 persons. Since the virus lockdown, more staff have been included on the call as a way of staying connected.

Information systems used by this work group for SJG include PowerPlan for Plant Accounting and Lawson for General Ledger accounting. Both systems seem to be working adequately. Lawson will be replaced by WorkDay. The migration from Lawson to WorkDay will take approximately 18 months and was completed in May 2022. The Lawson version in use is no longer supported by the vendor; this has caused some level of inefficiencies since staff cannot be cross trained on both Lawson and WorkDay (which is being used for ETG and SJIU). There are interfaces to the customer billing system (Oracle) and to PowerPlan. Currently, two instances are being used with two feeder systems. SJI hopes further down the road that after migration to WorkDay, only one instance will be needed. SharePoint is used for electronic filing of documentation. Documents are mostly in Excel format while entries are posted in Lawson. Some screen shots are stored online.

There are approximately 30–50 SOX controls in this area. Internal Audit will review and tests these annually. This group is not involved with the maintaining any portion of the Management Service Agreement or Shared Services Agreements.

Non-Utility Accounting. The Non-Utility Accounting function (South Jersey Energy Solutions, Inc. [SJES] Accounting work group) is responsible for all non-regulated accounting; Security Exchange Commission (SEC) filings; period-end closings; general ledger accounting; internal controls, accounting for corporate acquisitions; and liaison with external auditors.

Accounting performed for the non-regulated entities includes financial reporting for the Energy Group of companies, comprising 15–20 companies, including South Jersey Resource Group (SJRG), South Jersey Energy Investments (SJEI), South Jersey Energy (SJE), South Jersey Exploration (SJX), South Jersey Industries (SJI) and their subsidiaries, and Marina Energy and its subsidiaries. Financial reporting includes monthly closing and preparation of journal entrees, as well as quarter and year-end closing and preparation of 10Qs and 10Ks.

For SJRG, this group is responsible for accounting for wholesale trading, computing storage balances, hedges to post, tracking volume of gas sales, ending storage balances, and otherwise keeping records for gas transactions. For transactions between SJRG and SJG, this group is involved in off-system sales and gas procurement concerning correcting entries.

Time is reported monthly on timesheets entered into the WorkDay system. Time is charged to the entity for whom the work is performed. Monthly Journal Entries (JE's) are prepared for charging labor cost to the non-regulated entities. Personnel in this work group charge 40–50% of their time via the direct charge method and 50–60% via allocations. Charges from SJI to SJG consist primarily of Management Service Fees; other charges can represent reimbursement for invoices paid by SJI. This group will review monthly charges from SJI to SJG in relation to the budgeted amounts as established by the FP&A group. Unusual variances will be evaluated for appropriateness and reasonableness.

There are approximately 100 SOX controls (key and non-key) in this area. Internal Audit will review and test these controls throughout the year.

Accounts Payable

The Accounts Payable (A/P) function is headed by a manager who reports directly to the VP, Corporate Shared Services. This is a recent change made in 2020. Previously, Accounts Payable reported to the VP, Treasury. This work group is responsible for all accounts payable functions for SJG, ETG, and SJI and all of its affiliates. These functions include processing invoices, payments (wires, ACH, or checks), settlements, escheatment, and 1099s; performing account and bank reconciliations; and responding to internal and external auditor requests.

All invoices come to A/P through the E-mailbox. Invoices for SJG are pulled and routed to the proper general ledger (G/L) coder through the Perceptive system, the workflow system used by A/P for SJG. Data is entered on an E-form in Perceptive, and after determining if the Purchase Order (PO) is correct, validated and routed to the correct Approver, based on whether a PO or a Vendor Agreement is involved. The Approval Matrix contains the work force location code, description of the transaction, if there is a vendor agreement, and approval limits. Approval limits range from $35,000 to $99.9 Billion. The A/P final review determines if everything is correct and sends transactions with POs to the Lawson general ledger system and those without POs to a staging location. The Perceptive System, from Hyland Software, Inc., is SJI's workflow system into which the invoices are fed. The system routes the invoices to the various approvers after invoice amounts and dates are entered. There are at least two codes per location (business unit). There are 60 to 70 clerks in the SJG and SJI business units working as coders. If a payment has not been approved within five days, it will be routed up to the next higher level of approval to be approved.

Invoice copies are uploaded to Perceptive. The A/P data processor pulls up the invoice and completes the E-form with the company name, workflow number, whether the invoice is for a purchase order or non-purchase order, and vendor number if invoice is for a non-purchase order. Vendor numbers are automatically filled in based on the Purchase Order. Based on the A/P approval matrix and the workflow number, the A/P data processor then routes the invoice forward to a general ledger coder who reviews the invoice and enters the general ledger number(s) into which the invoice is to be charged. Then, based on the A/P approval matrix, the workflow number, and the invoice amount, the general ledger coder routes the invoice for approval. For purchase order invoices, Perceptive does the approval routing three-way match. Invoices for vendor agreements are automatically interfaced to Lawson (the general ledger system that processes payments for SJG) invoices for purchase orders and non-purchase orders are manually interfaced by the A/P supervisor the next day.

Payments. Every morning there is an automated interface with the Lawson general ledger system where the vendor files are maintained. Payments through wire transfers are sent out every day; payments through ACH are sent out on Tuesdays and Thursdays; check payments are sent out on Thursdays. The Cash Requirements report/schedule lists all checks that are available to be paid that day. Reports of payments in PDF are sent to Cash Management.

Either an A/P Specialist or the A/P Manager can both send transactions to and access the check-writing printer. Normally, the check-writing printer is in the A/P office. The check-writing printer is not segregated or secured from the rest of the A/P department. However, the micro encoder, toner, and blank checks are kept in a locked drawer accessed only by the A/P Manager or one of the A/P Specialists. During the Covid-19 period, check-writing printers are located at two employees' (A/P Specialists) houses. These are the only printers that can print checks. Check stock is blank stock (self-mailer) paper. There is a special toner used for these printers. Checks are normally printed on Thursday or Friday and as needed. Check stock is located at the office or now at the homes of the two A/P Specialists. Check stock is blank, not pre-numbered; stock is not inventoried. Remote operations were set up by IT with a special modem, just used for writing checks. The two A/P Specialists print 230–250 checks per week, primarily customer refund checks.

A/P reconciles eight disbursement bank accounts, which are all zero bank accounts (ZBA). At month end the Cash Payment Register is reconciled to SJG's bank statement. During the monthly close, bank accounts are reconciled and closing jobs are run for each SJI company. If the number of payments is large, this may require two days to complete.

The total number and amounts of payments in check, wires, and ACH for SJG and its affiliates are shown in the following exhibit.

SJG, SJI, and Affiliates Payments 2013–2019 ($ Million)

	Payments							2013-2019 Totals	
Company	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**Payment Amounts**	**Number of Payments**
SJG									
Checks	57.2	36.4	52.2	54.0	40.4	26.7	26.2	293.1	
Wires	615.8	718.8	733.4	660.2	884.4	740.3	856.4	5,209.3	
ACH	363.3	469.2	449.8	353.9	464.2	522.8	407.2	3,030.4	
Total	1,036.3	1,224.4	1,235.4	1,068.1	1,389.0	1,289.8	1,289.8	8,532.8	174,959
SJI								12,032.9	15,467
Affiliates								14,732.0	49,007
TOTAL								**35,297.7**	**239,433**

The number of payments made on behalf of SJG (174,959) from 2013 through 2019 accounts for more than 70% of the total number of payments made (239,439) by the entire family of SJI companies but only 24% ($8,532.8 million) of the total dollar amount of payments ($35,297.7 millions).

A/P is involved in testing SOX A/P controls. All payments of $50,000 or greater will be reviewed to ensure that the payments were properly approved and that there were explanations for the approval. The Approval Matrix is part of the Perceptive System.

The plan for SJG to switch from the Lawson Enterprise Resource Planning (ERP) software to WorkDay ERP should make A/P processes run smoother. Currently, payment types are sent to Cash Management for routing to the banks, while under WorkDay, these will be submitted directly to the banks. The move from Lawson to WorkDay should be very positive and more efficient since all payments could then be run in the same file

Tax Accounting

All tax accounting functions for SJI companies, including SJG, are performed by the SJI Tax Accounting Department, headed by a manager, who reports directly to the SJES Controller (Non-regulated Accounting), who reports to the VP, Accounting. This group is responsible for the tax calendar, tax filings, provisional tax, income tax returns, corporate tax, startup returns, tax depreciation, and tax research.

The calculation and allocation of income tax for each SJI subsidiary is governed by documented policies and procedures. Federal income tax for SJG is calculated on taxable income as if SJG were filing a separate return.

Taxes involved are:

- Sales and use tax (monthly and quarterly), transportation and natural gas, and customer care (customer revenue)
- Income tax (CBT) for the state of New Jersey
- Utility or property tax for the state of West Virginia

- Corporate income tax for the state of Pennsylvania
- Uniform Transitional Utility Assessment (UTUA) – essentially a pre-payment of state sales tax and income tax
- Federal Excise Tax for compressed natural gas (CNG)

An outside contractor (Deloitte) is also utilized to review taxes, sign off on tax returns, and to perform special tax-related projects.

All labor time is allocated to SJI companies and entities or is allocated through the SJI Management Fee.

The PowerTax system (from PowerPlan) supports the Tax Accounting Department.

There are fifteen SOX controls appliable to tax accounting – two monthly, four quarterly, and nine annual. SOX controls in this area have to do with verification of the presence of checklists of activities, reconciliation of balances and accounts, sign-offs as evidence of reviews completed, the development of reports, and the filing of returns. Internal Audit will test the SOX controls to verify tax processes every quarter.

There are no tax issues that apply to SJG, just tax law changes. There were two adjustments on New Jersey State Tax for the period 2012–2015, one for $36,000 CBT and one for $263,000 Sales & Use Tax (negotiated assessment).

Plant Accounting

The Manager, Plant Accounting, is responsible for asset accounting for both SJG and ETG. The manager, Plant Accounting reports directly to the Director, Utility Accounting, who reports to the VP, Accounting, and is supported by two Senior Accountants and two Accounting Associates, along with three to four contractors. The contractors were brought on to handle the additional work that came with the acquisition of ETG from the Southern Company.

The Plant Accounting function serves both ETG and SJG in a similar manner. Additions to SJG's plant are presented by the capital program owners and Financial Planning through Project Accounting, after receiving project approval from management via the Capital Budget or the "Outside the Budget Process." The Capital Budget is normally approved during the November SJI Board of Directors (SJI BOD) meeting.

Plant Accounting first determines if the costs involved are capital costs, rather than operation and maintenance expenses. SJG follows policies and procedures concerning the capitalization of property, plant, and equipment that adheres to Generally Accepted Accounting Principles and the code of federal regulations as administered by the Federal Energy Regulatory Commission (FERC) and adopted by the New Jersey Board of Public Utilities for use by public utilities under its jurisdiction.

If the costs under consideration are appropriate capital costs, a new project number will be established in the PowerPlan, an asset accounting system. PowerPlan will create one authorization number and one work order for each project entered. Once there is an authorization number, the project is active for charges to be recorded against it.

During the unitization process, Plant Accounting will perform a high-level review of the transaction. Plant Accounting will look at what was built and if the invoices add up to the total; they may not look at all, or even any, of the invoices for appropriateness. The appropriateness of charges against capital projects is not the responsibility of Plant Accounting. Plant Accounting will look to see if there is material cost and overhead on the project. SJI does not have a policy specifying how soon after closure a project must be unitized. The Plant Accounting process flows are included in their SOX controls.

If there is variance between the budget and actual project cost that is more than 10% or $100,000, whichever is less, the project will appear on the Authorization Changes Report. These projects will need to be reauthorized or approved. This report shows any authorizations that were received with approvals, all projects closed or canceled, and any projects that have been inactive for three months or more.

In addition to PowerPlan, other information systems used by Plant Accounting include Lawson, which interfaces with PowerPlan; Perceptive, to retrieve invoices.; email for approvals; Maximo, to provide “As-Built” information; and Workday for SJG payroll.

Pension Accounting

The Pension Accounting function is the responsibility of a Financial Reporting Lead/Manager reporting to the SJES Controller (responsible for non-utility accounting). Responsibilities include pension accounting, equity accounting, and impairment analysis.

This function serves as the liaison with Willis Towers Watson (WTW), the outside firm that produces the Actuarial Valuation Reports for SJI. There are four plans that concern SJG employees: (1) defined benefit pension plan for bargaining unit employees, (2) defined benefit pension plan for non-bargaining unit employees, (3) Post-Retirement Benefit Plan (OPEB), and (4) Supplemental Executive Retirement Plan (SERP). The SJI Financial Reporting Lead/Manager performs true ups when WTW submits their reports and attends calls with WTW so that the reports can be explained to accounting personnel.

The defined benefit pension plans were frozen in 2003, with any new employees added after that time not being eligible for the retirement plans. Those not eligible for the defined benefit pension plans can participate in an enhanced defined contribution plan. Approximately 34% of SJG’s employees are participants in the pension plan and eligible for annuity payments upon retirement. The other 66% are eligible for the enhanced defined contribution plans. This function has no involvement with pension investments, which are the responsibility of the Investment Committee for the Pensions.

FINANCIAL PLANNING AND ANALYSIS

The Financial Planning and Analysis (FP&A) Department reports directly to the SVP & CFO. This department is responsible for all budgeting functions (operating and maintenance (O&M) and capital) for SJG, SJI, and affiliates. Procedures that govern the annual budget process are shown below.

- **Budget Calendar development.** The budget calendar generally includes the following steps and milestones:
  - Working with the SVP & CFO and other key finance leaders, the FP&A team compiles a timeline or calendar for delivery of the budget.

  - The budget calendar commences with a kickoff meeting in July of each year and the distribution of budget templates customized for each cost center within SJI. Cost centers will use the template to provide requisite budget data.
  - In August and early September, responsible parties within the cost centers must generate and submit initial budget data for the following year.
  - Management reviews start in late September, with a goal of having three to four rounds of senior level review during the budget cycle.
  - CEO reviews begin in early October, with the goal of having two to three CEO reviews during the budget cycle.
  - Meetings of the SJI BOD are generally held in late November where approval of the following year's budget is an agenda item.
- **Budget kickoff presentation.** The budget kickoff presentation includes the following:
  - The FP&A team develops a kickoff and training presentation to establish expectations and timing for the following year's budget. The presentation typically includes:
    - Budget goals
    - Improvements to the budget process
    - The budget calendar
    - Identification of key employees within cost centers and budget presenters
  - The budget presentation is first made to senior leaders within SJI to obtain their approval.
  - Thereafter, the presentation is shared with all other business line leaders and budget presenters, so that these employees understand the budget calendar and the budget expectations for the upcoming budget year. Because this information may be disseminated to forty to fifty people, meetings with sub-groups within SJI are typically held to answer questions and obtain feedback.
  - As part of this process, the following information is shared:
    - Capital budgeting procedures
    - Business unit budget targets
    - Salary and promotion budget guidelines.
- **Budget template development.** Currently, the budget process is carried out using the planning tool, Hyperion, which enables the electronic gathering of budget data. The development of the budget template involves the following:
  - The FP&A team generates two types of budget templates: Payroll templates and non-payroll templates.
  - For the payroll budget template, headcount-related information (e.g., name, position, salary, incentive compensation structure, capitalization assumptions) is loaded into templates on a cost center basis and is distributed using secured access for the budgeting coordinator.

- Non-payroll budget templates are developed in much the same way, but are distributed via email, because the templates do not contain sensitive payroll data. Non-payroll budget templates include: (1) historic actual expenditures, (2) prior budgets and budget targets, and (3) current budget forecasts.
- The budget templates request information to be budgeted at the cost center and spend category level for all cost centers in SJI.

➢ **Budget Reviews.** Beginning in late-October, SJI conducts both line leader and management reviews of the budget for the upcoming year.
- The FP&A team is the facilitator of core data in these reviews and provides summaries of the budget data to all participants in advance of the budget review meetings.
- The budget information collected through this process is compiled and summarized, first by cost center, and then by company, to facilitate the budget reviews.
- Cost center reviews are the first review where budget participants provide explanations to cost center owners.
- SJI reviews are provided by company management and reported to the SVP & CFO.
- Participants and the FP&A team then review and compare the proposed budgets for the upcoming year against the applicable budget targets, requiring explanations for variances between the proposed budget and the budget target.
- The CEO budget reviews are conducted by the SVP & CFO and other key company leaders. The CEO budget reviews include a review of comparisons between the proposed budgets and the budget targets, where explanations for variances are provided. Requests for follow-up and further revisions may be made of the SVP & CFO and other key company leaders during the CEO budget reviews.

➢ **SJI Board of Directors Budget review and presentation.** Meetings of the SJI BOD are held quarterly, and the fourth quarter meeting of the SJI BOD is usually held in late November (on or about the third week of November). During this meeting, the budget is an agenda item.
- About a week prior to this meeting, budget information is provided to the SJI BOD.
- The CEO and SVP & CFO present the budget to the SJI BOD, and Senior Vice President and other key leaders are available to provide details and answer questions.

➢ **Budget Approval and Tracking.** Following approval of the budget consistent with the steps above, the budget is then set and remains unchanged throughout the year. However, FP&A keeps track of actual expenditures and forecast updates throughout the year, which are compared against the original, approved budget.

SJG's current budget process begins in late July and continues through the beginning of January or February of the following year. The budget is presented to the SJI BOD for approval in accordance with the SJI BOD's meeting schedule. Preliminary budgets may be reviewed with the SJI BOD's Strategy and Finance Committee and the full SJI BOD in earlier stages, prior to being presented for final approval. Budgets, operating and capital, are not so much influenced by upper management as by expected credit rating effects.

The annual budget kick-off meeting encompasses an evaluation of capital and O&M needs (labor and non-labor) by the business lines based on the strategic direction of SJI, margin projections, and evaluation of various initiatives and programs. Based on the input received from the business lines, the Finance team evaluates cash flows and financing needs. Drafts of the budget are subject to multiple review sessions with Management before finalizing and presenting to the SJI BOD for approval.

Budgets are not always completed by the end of the calendar year. Weather can cause changes at the end of the year and these changes are taken into account and included in the budgets.

The Payroll, Non-payroll O&M, and Capital budgets are due to FP&A by the latter part of August. Working drafts of these budgets are reviewed, discussed, and revised through the early part of October by the FP&A teams, financial management, and the management of the budget units. By mid to late November, the budgets are finalized and presented to SJI senior management and the SJI BOD.

Budgets used to be developed on a one-year basis, but this was changed to a two-year budget last year. The original budget, which does not change, is augmented by quarterly, or as needed, current forecasts. The two-year budget is part of a five-year financial forecast. The two-year budget is at a greater level of detail than the five-year forecast. Hyperion is the planning software used for budgeting, forecasting, and reporting against budgets.

Operating Budget

SJG and all the SJI companies use a bottoms-up budgeting process. Forecasts are developed that change the budget numbers and are reported on bases of three months of actual and nine months of forecast, six month actual and six-month forecast, and nine-month actual and three-month forecast. The two-year budget is part of a five-year financial forecast. The two-year budget is at a greater level of detail than the five-year forecast. Hyperion is the planning software used for budgeting, forecasting, and reporting against budgets.

Reporting against the budget or most recent forecast is done monthly with actuals compared to forecasts on month-to-date, year-to-date, and full year comparisons. Monthly reports are given to management (more detailed and in an electronic format that allows drilling down into the data) and the SJI BOD (less detailed and in a written format).

Capital Budget

The FP&A team will consolidate the capital budgets (e.g., capital spend, capital deployment, new growth) developed by the business units.

The development of capital expenditures proposals and projects is the responsibility of the VP Operations for SJG. This organization is responsible for proposing capital budgets and long-term capital planning. Considerations are primarily safety, compliance, and reliability, and not necessarily financial. New business decisions are analyzed and reviewed by NJ regulators.

Prioritization and evaluation of proposed capital budget items is the responsibility of SJG, not FP&A. Monthly meetings are held to review actual results of capital projects compared to budgets. These meetings are conducted using Microsoft 365's Power BI Dashboard. which allows all participants to view and drill down to examine underlying reasons for variances from the budget. This software receives inputs from Hyperion and is updated by participants responsible for the various business areas. Separate meetings are held for SJG, ETG, and SJI and consolidated and shared services. Utilization of this dashboard for monthly variance meetings started in 2019. Financial results are made available in hard copy to the SJI BOD. Quarterly, the SJI BOD also receives KPIs.

The following general guidelines apply to all budget requests for capital expenditure authorizations.

- **All Authorizations:** Due to the existence of procedures establishing overrun allowances for each Blanket or Special Authorization, contingency amounts should normally not be included in budget estimates.
- **Blanket Authorizations:** Backup related to levels of activity, cost per unit assumptions, and any other information utilized to develop cost estimates shall be submitted to the responsible executive as part of each Blanket Authorization budget request. Any changes to assumptions from the previous year's Blanket Authorization should be clearly identified. At the same time that the next year's Blanket Authorization budget is prepared, an updated forecast for the remainder of the current year is also required. While no specific form exists for a Blanket Authorization request; SJI Financial Planning will provide annual guidance and formats for required financial details, etc.
- **Special Authorizations:** Since these authorizations are developed for specific, clearly identifiable projects, each Special Authorization request must include a full cost justification or other explanation of benefits to assist management in prioritization. The form for submission of a Special Authorization request either during the budgeting process or off-cycle is shown as Exhibit A. The only exception to completion of Form PC169 or PC269 for a special authorization during the budget process is when carry-overs are required, and the total project will remain within current authorized limits. SJG Plant Accounting will assign Special Authorization numbers upon approval of the annual Capital Expenditure Budget or approval of an authorization submitted off-cycle. No charges may be assigned to, or work started on a Special Authorization until it is formally or verbally approved by the President of SJG.
- **Carry-Over Expenditures:** Officers and Managers responsible for Special Authorizations which are anticipated to carry-over into a following year shall provide SJI Financial Planning with an estimate of the carry-over amount during the annual capital expenditure budgeting process. No additional approval is necessary for carry-over expenditures if within the current authorized limits for the project; however, these carry-overs will limit capital dollars available for new projects in the next budget year. If a carry-over authorization is anticipated to

exceed the current authorized amount for the project, a formal revision must be processed (VIII.B. below). Specific directions and formats will be provided annually by SJI Financial Planning.

B. FINDINGS

15-1 The processing, recording, authorization, and accountability of accounting functions related to SJG transactions are appropriate for utility operations.

The accounting and property records functions for SJG and its affiliates are handled by the SJI Accounting Department, reporting to the SJI SVP & CFO. The accounting functions reviewed in this chapter—general ledger accounting, accounts payable, plant accounting, tax accounting, and pension accounting—are adequately staffed with experienced accounting personnel, utilize documented policies and procedures, and are supported by modern information systems. Accounting functions are performed in an efficient and timely manner and produce results in the form of financial records and statements that appear to be accurate, reliable, and certain. Internal controls are assured by use of detailed process flow diagrams, reflecting all accounting functions, that are reviewed and verified against actual processes by Internal Audit and the external auditors and included in Sarbanes-Oxley (SOX) controls that are tested at least annually.

15-2 Budget reporting, tracking, analysis, and revision are performed in an effective and efficient manner.

Budget functions for SJG and its affiliates are handled by the SJI FP&A Department which reports directly to the SJI SVP & CFO. The responsibility for developing and managing the Capital and O&M budgets is located at a reasonably important level within the SJI organization, reporting directly to the SJI SVP & CFO, who reports directly to the SJI CEO. Budget planning begins with the development of a budget calendar establishing steps and timeframe for budget development along with necessary procedures, targets, and guidelines. The actual budget development is managed through the use of a comprehensive planning and budget information system, Hyperion, which is utilized by a large number of utility companies throughout the United States. This system provides an effective and efficient means to develop and manage budgets. Budgets are reviewed and approved by SJG and SJI management as well as their respective BODs. Performance against budgets is tracked and reported on a monthly basis. Forecasts representing most recent expectations are updated on a periodic basis.

15-3 Work order procedures are efficient and property records are maintained in a fair and equitable manner.

SJI's Plant Accounting, reporting to the Director, Utility Accounting is responsible for accounting for expenditures against work orders and maintaining property records for SJG's property, plant, and equipment. This work group handles the plant accounting function for both SJG and ETG. Plant assets are maintained on the PowerPlan information system, which is utilized by most electric, gas, and water utilities in the United States. PowerPlan is linked to the Lawson general ledger system, the WorkDay system for payroll, and Maximo for work management. Plant Accounting complies with Generally Accepted Accounting Principles and FERC policies and procedures concerning the identification, recording, and maintenance of property, plant, and equipment assets. Procedures concerning the accounting for work orders are efficient. SJG's property records are maintained in a fair and equitable manner.

C. RECOMMENDATIONS

None

16. PAYROLL REPORTING

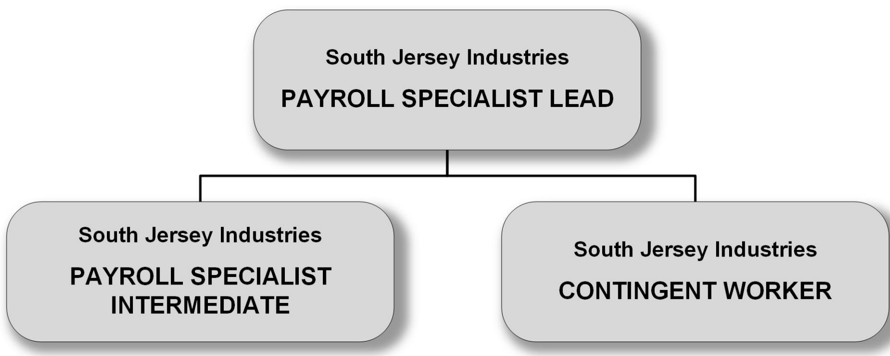
A. BACKGROUND

ORGANIZATION

The payroll function for the South Jersey Gas (SJG) employees is operated by the South Jersey Industries, Inc. (SJI) Payroll Department. This department reports to the SJI VP, Accounting, and is responsible for the payroll functions for SJI and all its subsidiaries. The Payroll Department is headed by a Payroll Specialist Lead who is supported by two staff. One of the Payroll staff is an SJI employee, and the other is a contractor. The contractor has been in place since early 2020 and received a two-year contract extension. The contractor, provided by Robert Half & Associates, was brought in because of the Elizabethtown Gas Company (ETG) acquisition and to provide Workday software experience.

The organization structure for the Payroll Department is shown in the following exhibit.

Payroll Department Organization Structure



OVERVIEW

All SJI companies, including SJG, use Workday for their payrolls. Pay is processed weekly and bi-weekly. In processing, bonus pay and retroactive pay are processed before regular pay. The payroll review includes timesheets, approvals, catch-up earnings, gross pay, and net pay. Comparisons are made to previous payrolls for reasonableness. Memo invoices are sent to SJI Accounts Payable and Cash Management for tax, net pay, and garnishments.

SJG uses an exception-based pay system, with exceptions being holidays and vacations. Union workers also get overtime, double time, and shift premiums. Time is input electronically; there are no paper timesheets. There are currently 29 timekeepers responsible for inputting time for SJG employees. Supervisors must review and approve time every two weeks.

PAYROLL SYSTEM

Following the development and review of a business case analysis, SJG's Payroll function was migrated from Lawson to Workday in 2017 after it was determined that Workday met all SJG's business requirements. Since Human Resources and Payroll functions were closely integrated, and since Workday had been previously implemented for most Human Resource functions, it also seemed logical to migrate SJG's Payroll function to Workday.

Key benefits that Workday Payroll was supposed to offer were:

- A robust calculation engine to handle complex requirements and automatically calculate pay results in real time
- Ability to define processing criteria for pay runs and run multiple pay groups together
- Employee access to mobile and online pay slips
- Self-service online input for forms W-2 and W-4 and tax and payment elections
- Ability to perform comprehensive audits before the final payroll run
- Ability to view prebuilt reports for insights into payroll results
- Automatic tax updates through a cloud-based model
- System-to-system integration with the Office of Child Support Enforcement for Income Withholding Orders (e-IWO)

Objectives stated in the Workday Payroll Implementation business case included:

- Development of a unified, easy to use system of record across the organization
- Mitigation of risks inherent with the passing of personal information through system integrations
- Creation of an enterprise-wide system of record
- Elimination of numerous unnecessary manual processes
- Allowing SJI employees and executives easily accessible information on their direct reports
- Expansion of the investment made by Human Resources in 2015 to utilize a cloud-based solution that can address current and future needs without the cost and complexity associated with on-premises solutions
- Enhancement of speed and capability across compliance and regulatory reporting
- Capturing, understanding, and refining numerous undefined business processes
- Expanding the self-service capabilities of Workday to include payroll related functions
- Consolidating the payroll system and tax module.

Advantages that were to be realized from implementation of Workday Payroll for SJG were:

- Reduction of operating costs
- Reduction in the time from implementation of the system to the realization of benefits from the system (as compared to implementation of alternative systems)
- Increased Value to Investment Ratio
- Increased Operational Efficiency

- Improved compliance with defined security and business rules by providing transparency into system access and improved control over transaction initiation and operation
- Reduced dependency on manual processes by replacing Excel spreadsheets and unrefined business processes and, therefore, reducing the opportunity for errors

Workday produces many reports that assist the Payroll Department in managing the SJG payroll function as shown in the following exhibit.

Workday Commonly Used Reports

No.	Report Name
1	Company W-2 Audit
2	Cost accounting by employee
3	Deduction summary and detail
4	Earnings summary and detail
5	Edit period schedule
6	EIB ADP periodic tax
7	EIB off cycle import
8	EIB on cycle import
9	Full union OT report
10	GL data issues
11	INT019
12	INT020
13	L424 union deduction detail
14	Net check report
15	PAY_RPT_Base Hours ≠ 80
16	PAY_RPT_Deduction Detail
17	PAY_RPT_Deduction Detail Not Summarized-BE
18	PAY_RPT_Deduction Detail-Monthly-BE
19	PAY_RPT_Deduction Summary
20	PAY_RPT_Earning Detail
21	PAY_RPT_Earning Detail - Non-Summarized
22	PAY_RPT_Earning Summary
23	PAY_RPT_Gross-to-Net by Employee - by Selected Period-BE
24	PAY_RPT_Gross-to-Net by Location
25	PAY_RPT_Net Check Report-BE
26	Pay_RPT_Tax Summary
27	Payment printing run
28	Payroll accounting by company
29	Payroll register
30	Payroll register summary w subtotals
31	Payroll run calculation
32	Payroll run pay complete

No.	Report Name
33	Payroll run retro calculation
34	Payroll run retro complete
35	Tax summary and detail
36	Tax_Filing_Quarterly_Data_by_Company
37	View settlement run
38	W-2 Preview
39	Withholding orders this period
40	Workers with Unapproved Time-BE
41	Workers with Unsubmitted Time-BE

Additional payroll reports that are used include:

- Pre-Approval Report – provides summary of gross and net payroll for each pay period
- Reallocation report – moves time and associated payroll to end-use companies
- Multi-Worksite Report – provides the number of employees by location

TIME REPORTING

All time is required to be entered, submitted, and approved by noon each Monday (9am on 4-day work weeks/holiday weeks). Every Monday, the Payroll Administrator runs reports of "Submitted" and "Approved" time for the employees due to be paid that cycle (weekly, bi-weekly groups) for all the "direct billed" employees (employees who must enter their time to be paid). If there are any employees whose times have not been submitted and approved, emails are sent to the managers or supervisors in charge of those groups reminding them of the deadline. This report is typically run between 9–10am. Payroll runs a second report between 11am–12pm and again sends out emails, including to higher level managers, if there is any time still unsubmitted or unapproved.

Once times have been submitted and approved, the Payroll Administrator processes the payroll. An important step in the payroll process is a report that allows a review of the hours submitted. Payroll runs a 40-hour report for the weekly employees and an 80-hour report for bi-weekly employees. If there are discrepancies, such as employees who do not meet the 40 or 80 hours, verifications are made via email to ensure that the employees are being paid accurately. There is also typically a communication from HR regarding employees who are on leave and, as such, are expected to have reduced hours or no hours. The 40/80 hours report is a part of the payroll pre-approval process which is reviewed by the Payroll Lead prior to processing. Records of the unsubmitted and unapproved reports are reviewed as well, and the Payroll Lead is copied on all reminder communications sent out.

Employees working for SJI, SJG, and SJES are paid for 80 hours and only need to enter exceptions into their timesheets. Employees working for ETG and SJIU are "direct report" employees who must enter their time to be paid.

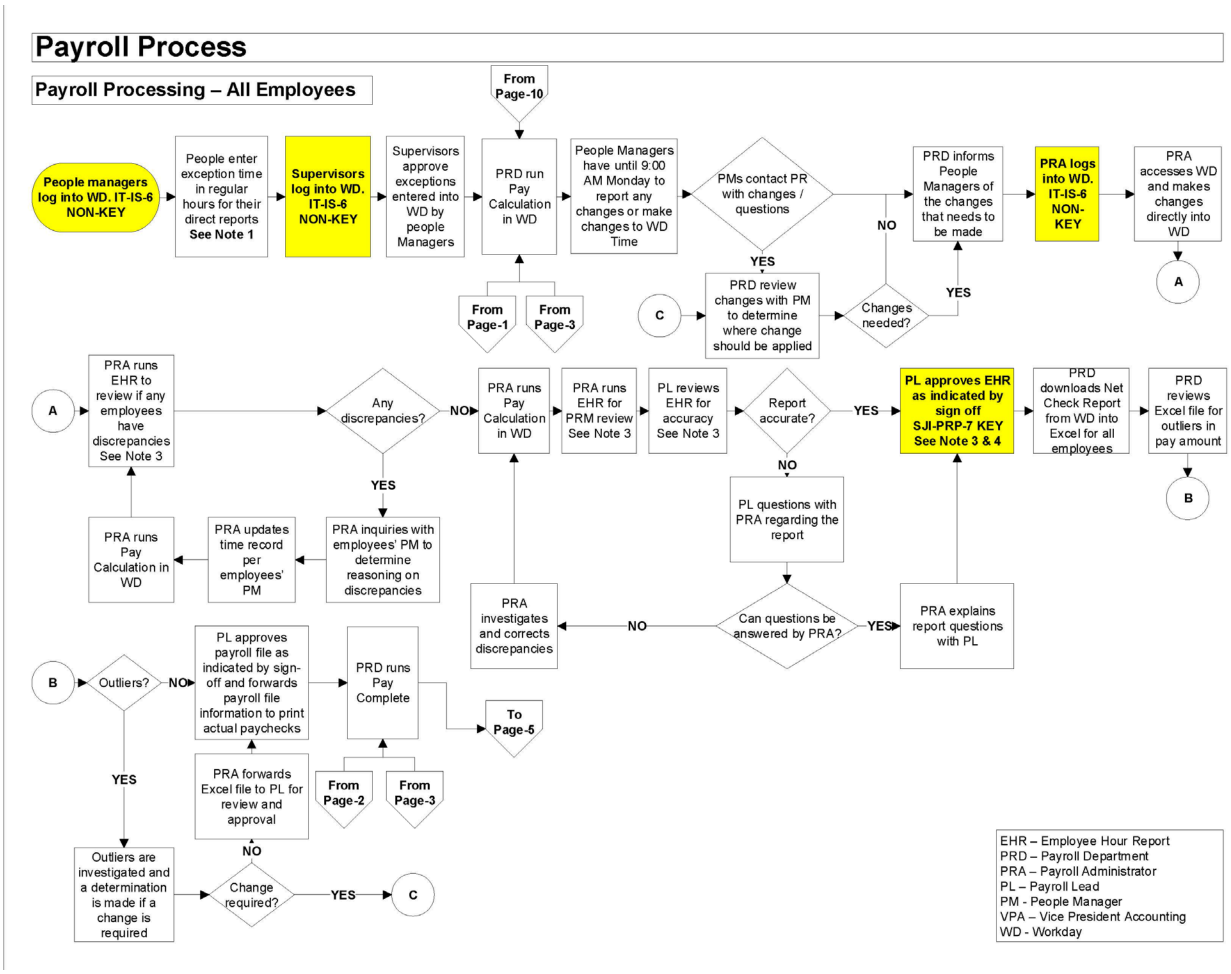
Many employees are required to assign hours worked to different cost centers of projects. These allocations are reviewed monthly and are pulled for the 26th of one month to the

25th of the following month (e.g., August reallocations are pulled for 7/26–8/25). The reallocation is done because there often are employees whose wages need to be split between different companies or who work on projects for multiple companies. The reallocation is done via journal entries based on employee time records. Emails are sent out each month to employees reminding them to enter their time allocations by the 27th of each month for the period ending on the 26th. These reminder emails include instructions of how to enter time allocations and how to make corrections if time was entered incorrectly in a previous period.

PAYROLL PROCESS

The payroll process is shown in the following exhibit.

Payroll Process



Payroll tax is handled by ADP (as of December 2019). This includes tax reporting and filing of required tax documents.

INTERNAL CONTROL

Internal control over the payroll functions is managed using SJI's Sarbanes-Oxley (SOX) controls, the documentation of payroll functions depicted on process flow charts, and audits conducted by SJI's Internal Audit Department and the audit work of external auditors. There are six key Sarbanes-Oxley (SOX) controls for the payroll function shown in the following table.

Payroll Department SOX Controls

Control No.	Control Description	Control Frequency
SJI-PRP-7	Payroll Lead signs off on the Employee Hour Report as evidence of review and approval.	Weekly
SJI-PRP-8	Payroll Lead electronically approves ADP quarterly reports through ADP Smart Compliance.	Quarterly
SJI-PRP-6	Payroll Lead signs off on the Direct Deposit Spreadsheet as evidence of review and approval.	Bi-Weekly
SJI-PRP-3	The Payroll Lead reviews the current period reconciliation and related payroll journal entry and after the information is deemed appropriate and accurate, signs off on the reconciliation.	Monthly
SJI-PRP-4	The Vice President, Accounting signs off on the ADP memo bills as evidence of review and approval.	Bi-Weekly
SJI-PRP-2	The Payroll Lead reviews the current net payroll by employee and after the information is deemed appropriate and accurate, signs off on the Pay Report Gross to Net by Period.	Each Occurrence

Flow charts updated on an annual basis describe the functions in the Payroll Department. In addition to the Payroll Processing flow chart shown above, there are fourteen other flow charts covering the following payroll functions/topics:

- New hires
- Changes/maintenance
- Union employees
- Employee stock option plan
- Terminations
- Donations
- Check printing process
- General ledger updates
- Net check report
- Review of payroll process checklist
- Quarter end process
- Summary of net pay and tax spreadsheet/ACH confirmation summary
- Control sheet for checks and ACH's
- Processing time entry and approval

Internal Audit reviews the process flow charts on an annual basis to verify that they are correct and will test the key SOX controls in the payroll function area on at least an annual basis. Additionally, there were seven internal audits conducted in the 2013 through 2019 period that evaluated the payroll system as well as payroll processes.

Payroll and benefit expenses and costs, as reported in SJG's last base rate case in the 2013 through 2019 period, are reconciled to the August 31, 2017 Operating Income Payroll and Employee Benefit Expenses as shown in the following two exhibits.

Pro Forma Adjustment to August 31, 2017 Operating Income Payroll Expense ($)

Description	Amount
Annualized Payroll Expenses	33,213,325
Less: Test Year Payroll Expenses	29,590,959
Pro Forma Payroll Adjustment	3,622366
FICA Adjustment	277,111
Total Pro Forma Payroll Adjustment	**3,899,477**

Pro Forma Adjustment to August 31, 2017 Operating Income Employee Benefits Expense ($)

Description	Amount
Annualized Benefit Expenses	6,325,577
Less: Test Year Health Insurance Expenses	5,150,197
Pro Forma Benefits Adjustment	**1,175,380**

B. FINDINGS

16-1. Tax payments have been made in a timely manner, and there have been no penalties assessed for the payroll function.

Corporations are required to make installment payments of estimated tax based on the amount of the total tax liability shown on the most recent return. For the period 2013 through 2019, SJG did not have a tax liability on its federal income tax return. During this period, SJG did make Uniform Transitional Utility Assessment (income tax portion) payments of $3,411,000 and Corporation Business Tax payments of $9,000,000 to the New Jersey Division of Revenue.

16-2. Payroll reports submitted appear to be accurate.

All New Jersey employers must file an "Employer Report of Wages Paid" (WR-30) within 30 days of the end of each calendar quarter. This report lists all individuals who were employed and/or received remuneration as employees during the calendar quarter. The data supplied is used to determine eligibility for New Jersey unemployment and temporary disability benefits. Additionally, all employers must file the "Employer's Quarterly Report" (NJ-927), representing a count of all full-time and part-time workers covered by the NJ Unemployment Insurance Law who worked during, or received pay for, the payroll period that includes the 12th of the month.

There were 28 WR-30 reports and 28 NJ-927 reports filed with the State of New Jersey for the period covered by this audit which SAGE reviewed.

During the seven-year period, the number of employees with their wages data that were reported ranged from a low of 476 for Quarter 1 of 2013 to a high of 625 in Quarter 3 of 2019, with a quarter-end average of 523. The total number of employee payroll data sets reported was 14,122. The quarterly number of payroll records was converted to the average annual number of payroll records for each year. This yielded a total of 3,676 payroll records for the seven-year period as shown in the table below.

Average Number of Payroll Records 2013–2019

Year	Average Number of Payroll Records
2013	482
2014	496
2015	498
2016	507
2017	537
2018	576
2019	580
Total	3,676

SAGE compared the data from the WR-30 reports to a listing of employees and payroll data on SJG's EFW2 files. EFW2 is the electronic filing format for submitting payroll information for W-2s and personnel receiving 1099-Rs to the Social Security Administration (SSA) on an annual basis.

Because of the amount of data to be reviewed, SAGE employed a statistical sampling basis for its comparison, using a sample size of 140 personnel records (20 for each of the seven years in question). With a sample size of 140, a population size of 3,676, and a confidence level of 95%, the margin of error is 7.96%. This means that there is a 95% chance that the real value is within 7.96% (plus or minus) of the sampled value. The sampling did not find any variation between the wages reported on the WR-40 reports and the wages reported on the EFW2 files that are transmitted to the Social Security Administration.

Statistical Sampling – SJG Personnel Records, 2013–2019

Description	Amount/Percentage
Population Size	3,676
Sample Size	140
Confidence Level	95%
Margin of Error	7.96%

A comparison of the total salary amounts reported on the NJ927 reports and the totals from the EFW2 File revealed some discrepancies in 2014, 2015, 2016, 2018, and 2019. The differences in the totals for these years were adequately explained by SJG with reconciling items as shown on the following table.

NJ927 Report and EFW2 File Wage Reconciliation

Description	2013	2014	2015	2016	2017	2018	2019
NJ Wages							
DR 166 – NJ927W	37,417,237.74	40,162,045.29	41,882,688,17	41,394,080.74	45,099,938.85	49,353,900.00	45,328,433.74
DR 167 – EFW2 File	37,417,237.74	39,990,302.91	81,856,300.82	41,367,472.25	45,099,938.85	49,997,328.60	45,635,140.80
Difference	0.00	171,742.38	26,387.35	26,608.49	0.00	(643,428.60)	(306,707.06)
Reconciling Items							
Note A		(28,827.18)	(26,387.35)	(26,608.49)			
Note B		(142,915.20)					
Note C						6,573.50	6,573.50
Note D						636,855.10	300,133.56
Net Difference	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

A. The difference is the taxable retired officer group term life (GTL) not recorded in Lawson and manually included in the W2's issued through American Technology Solutions (ATS), a third-party tax form service provider.

B. Manual W2c – Issued by ATS, a third-party tax form service provider.

C. Supplemental Executive Retirement Plan (SERP) retirees; retirement/pension payments paid as 1099-R earnings and not in W-2 totals.

D. Wages paid in other jurisdictions – Pennsylvania.

A comparison of New Jersey payroll taxes paid as reported on the two sources, the NJ927 reports and the EFW2 File also revealed some discrepancies in 2018 and 2019. These differences were adequately explained by SJG's reconciliation as shown in the following exhibit.

NJ927 Report and EFW2 File Payroll Tax Reconciliation

Description	2013	2014	2015	2016	2017	2018	2019
NJ Taxes							
DR 166 – NJ927W	1,313,667.70	1,450,533.97	1,590,948.94	1,532,640.53	1,750,537.28	1,991,556.13	1,894,446.21
DR 167 – EFW2 File	1,313,667.70	1,450,533.97	1,590,948.94	1,532,640.53	1,750,537.28	2,011,270.73	1,903,660.17
Difference	0.00	0.00	0.00	0.00	0.00	(19,714.60)	(9,213.96)
Reconciling Items							
Note A						19,714.60	9,213.96
Net Difference	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Notes:

A. Wages paid in other jurisdictions - Pennsylvania.

Overall, the payroll reports submitted to New Jersey appear to accurately reflect SJG's payroll during the seven-year period of this audit.

16-3. Internal controls concerning the payroll function appear to be adequate.

There are six key Sarbanes-Oxley (SOX) controls concerning the SJG Payroll function. These controls are tested every year by the Internal Audit Department. Additionally, there were seven internal audits conducted in the 2013–2019 period evaluating the payroll system as well as payroll processes. Flow charts depicting the various work steps in the payroll function are updated on an annual basis by the Internal Audit Department. The payroll function appears to be adequately controlled.

16-4. The payroll automated system is relatively new, contains all the necessary features of a modern payroll system, and had been adequately tested before implementation.

SJG's Payroll function was handled by the Lawson system prior to 2017. In 2017 Workday was implemented after it was determined that Workday met all SJG's business requirements, and because it had previously been implemented for SJG's Human Resources function. Workday provided additional payroll functionality that was missing in the Lawson system and had already been thoroughly reviewed as part of the decision to implement the Workday financial enterprise resource planning (ERP) system for SJG and SJI. The Workday payroll system is an established, fully integrated payroll system designed to streamline the payroll process including tax compliance for enterprise-level organizations.

Prior to the implementation of the new payroll system, there was a separate business case analysis performed related to the replacement of the Lawson payroll system with the Workday payroll system. Key impacts from switching to the Workday payroll system included expected reductions in manual work processes and increased visibility on payroll and labor data as well as increased self-service access to payroll data.

C. RECOMMENDATIONS

None.

17. OTHER REPORTING

A. BACKGROUND

INTERNAL CONTROLS

The internal controls associated with the processes of filing New Jersey and Federal Government reports include Sarbanes-Oxley Controls (SOX), process flowcharts, and internal audits.

SOX Controls

Internal control over SJG's and SJI's business functions, including reports filed with the State of New Jersey and the Federal Government, is ensured by enforced compliance with SJI's SOX controls. SJI has 348 key SOX controls and 230 non-key SOX controls for a total of 578. Of these, there are 64 key SOX controls and 74 non-key SOX controls for SJG, or a total specifically for SJG of 138. To verify compliance with these controls, the SOX controls are tested by SJI's Internal Audit Department. Testing is done quarterly, and all SOX controls are tested annually. SOX testing requires approximately 60%–65% of the Internal Audit staff's time. The Internal Audit Department does all the SOX testing, with no testing performed by the management or personnel of the business departments.

Process Flowcharts

Additional control over business functions, including all reports and filings with the State of New Jersey and the Federal Government, is enhanced by SJI's comprehensive use of business process flow charts (updated on a quarterly basis), describing pictorially the functions of each SJG and SJI department. Functions depicted on process flow charts are also reviewed and verified annually by the Internal Audit Department.

Internal Audits

Another level of control consists of internal audits of business processes and functions. In the seven-year period from 2013 through 2019, 437 internal audits were conducted on the SJG and SJI business processes to ensure that functions were performed according to company and regulatory requirements, including the filing of state and federal reports.

B. FINDINGS

17-1 Internal controls are adequate to ensure accuracy and timeliness in filing New Jersey and Federal Government reports.

Internal controls in place for SJG and SJI include SOX controls and testing, quarterly certification of process flowcharts, and periodic internal audits. During the seven-year period from 2013 through 2019, SJG has not been assessed penalties from improper filing of reports, compliance issues, or rate treatment. Controls at SJG and SJI are sufficient to ensure that New Jersey and Federal Government report filing is performed accurately and in a timely manner.

C. RECOMMENDATIONS

None

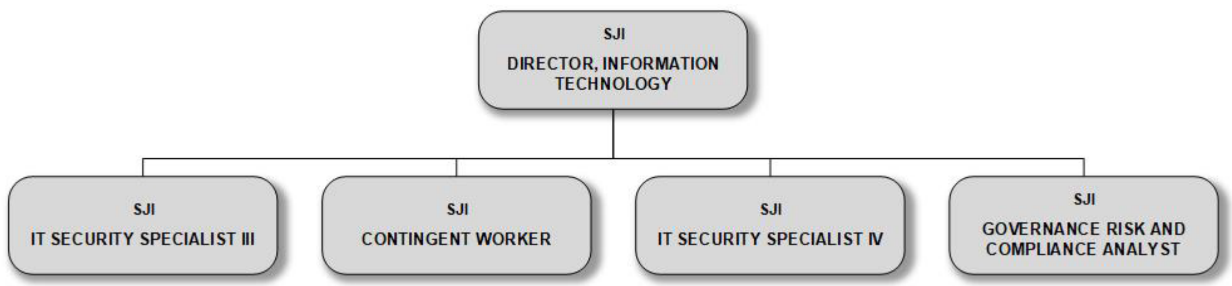
18. CYBER RISK MITIGATION/CYBER SECURITY

A. BACKGROUND

Cyber risk mitigation and cyber security is the responsibility of the Security and Technology Architecture organization in the Information Technology Department. This is referred to as the IT Protect function in SJI's five Information Technology functions: Plan, Build, Run, Protect, and Report.

The IT Protect function, headed by a director with two IT Security Specialist staff and several contractors is responsible for Cyber Security: firewalls, cyber security audits, vendor evaluations, training associates in cyber security, combating phishing attempts, security monitoring, incident response, security operations, and secure architecture. The director reports directly to the CIO, VP of Information Technology. The Security and Technology Architecture organization is shown on the following exhibit.

SJI Security and Technology Architecture Organization Structure



IT PROTECT FUNCTION

The IT Protect function is responsible for:

- Developing and executing an Information Security Risk Assessment Process for conducting regular risk assessments of SJI information assets, departments, and external parties to evaluate threats and vulnerabilities and ensure appropriate responses to same.
- Developing and implementing an Information Security Awareness Program for all SJI.
- Participating in the Policy Lifecycle Process to provide information-security-specific insight during policy development. This may include original development of policies specific to information security.
- Participating in information System lifecycle processes, relationship management processes, and incident management processes to identify, advise and/or act on potential and actual risks.
- Developing and executing a Security Monitoring and Reporting Process for ongoing monitoring and reporting on information security metrics, including suspicious activity, threats and vulnerabilities, and high-level departmental compliance monitoring.
- Coordinating and supporting related information security activities throughout SJI.

- Maintaining appropriate relationships with the information security community to obtain threat intelligence and further all the above goals.
- Reporting the SJI security status to the Executive Committee on a regular basis.

SJI INFORMATION SECURITY STRATEGY

The primary information security strategy followed by SJI is to manage risk to acceptable levels while pursuing business objectives. Policies and procedures establish the framework to protect SJI's information assets and ensure accountability for SJI's actions and adherence to the three pillars of information security:

- Confidentiality – Protection of information against unauthorized disclosure throughout its lifecycle.
- Integrity – Protection of the accuracy and completeness of information.
- Availability – Protection of the accessibility of information when required

Information is defined as the property of, or value to, SJI, including:

- Strategic information
- Business plans
- Financial data and information, including financial models and operating results
- New products or services
- Computer programs
- Mathematical proofs, derivations, and models
- Statistical methods and analyses
- Operational research models
- Passwords
- Payroll and compensation data

Information assets are defined as SJI information or a computerized system storing, transmitting, and/or processing SJI information. These include:

- Endpoints (desktop PCs, laptops, tablets, and smartphones)
- Servers
- Networking infrastructure, such as routers, switches, and wireless access points
- Internal and external software applications, including email
- Operating systems
- Storage media, such as hard drives, USB flash drives, and writable CDs

Specific work performed includes operations and maintenance (O&M) and capital cyber security projects, phishing investigations, third party security reviews, and phishing training and policing. Work performed will be charged to either O&M or to a specific capital project. Time and expense will be charged to the SJI company or entity for whom the work is performed, or to a general cost bucket for further allocation.

STANDARDS

SJI uses the National Institute of Standards and Technology Cyber Security Framework (NIST CSF) as the basis for its information security program. This is considered to be a best-practice architecture for information security. SJI utilizes accepted information security principles, such as role-based access control, segregation of duties, and least privilege. Measurement of the maturity of the information security program is obtained through the use of the Cybersecurity Capability Maturity Model (C2M2). SJI will look at this annually and use it as a guideline. The American Gas Association (AGA) drove the use of this model and will facilitate workshops on it. Quarterly, a report goes to the SJI Board of Directors (SJI BOD) on cyber security.

SJI is subject to regulation by the New Jersey Board of Public Utilities (NJBPU). In situations where SJI Information is subject to regulation by applicable laws, such as NJBPU orders, SJI will comply with such laws. If an applicable regulation is more stringent than the NIST CSF standard as implemented by SJI, the more stringent regulation is followed.

MANAGEMENT OVERVIEW

All cyber risk/cyber security program matters are reported to the Risk Management Committee. The members of the Risk Management Committee are as follows:

- Chief Executive Officer SJI
- Chief Financial Officer
- President, SJI Utilities
- Highest ranking officer responsible for rates
- President, Elizabethtown Gas
- Vice President, Risk Chairman, SJI
- Chief Accounting Officer/SJI Controller/Vice President, Accounting
- Chief Information Officer
- Senior Vice President/General Counsel
- Vice President, Enterprise Project Management
- Vice President, Gas Supply and Allocations

GOVERNING CHARTER

The Information Security Risk Management Committee Charter presents the philosophy of information security within South Jersey Industries and represents the endorsement of South Jersey Industries executive management team. It identifies the motivation for security, describes information security principles and terms, and defines the scope of information security policies and responsibilities of the various security functions.

The principles, scope of coverage, and compliance action that govern cyber security at SJI and its affiliates are shown below:

- **Principle 1:** Information security policies, standards, guidelines, and procedures are developed to communicate security requirements and guide the selection and implementation of security control measures.

- **Principle 2:** Personal accountability and responsibility for information security are incorporated in roles and responsibilities that ensure that every individual applies the applicable information security policies, principles, procedures, and practices in their daily work-related activities.
- **Principle 3:** Information security education, training, and awareness programs ensure that users are aware of security threats and concerns and are equipped to apply organizational security policies and principles.
- **Principle 4:** Information assets are classified according to their criticality to the organization enabling an appropriate level of protection.
- **Principle 5:** Information assets are to be used for the intended business purpose only.
- **Principle 6:** Legal, regulatory, and contractual requirements are identified, documented, and followed.
- **Scope:** It is intended that information is protected in whatever form, including paper documents, electronic data, and the spoken word. Information should be protected while at rest and when it is handled, transmitted, or conveyed. IT assets include all devices and hardware/software components of the IT infrastructure, applications, and data stores.
- **Action:** All employees and contractors have a responsibility to report suspected security failures or policy violations.

POLICIES AND PROCEDURES

There are a number of information technology policies and procedures utilized by the IT Protect function to help mitigate cyber security risk. These policies and procedures are listed in the following table.

Cyber Security Risk Policies and Procedures

Cyber Security Policies and Procedures
2. Master Information Security Policy
N. Electronic Usage / Acceptable Use Policy
O. Change Management Policy
P. Change Management Procedure
Q. Cyber Security Incident Response Policy
R. Cyber Security Incident Response Plan
S. Data Backup Policy and Procedure
T. Database Security Configuration Standards
U. Default Vendor Management Policy
V. Disaster Recovery Planning and Testing Procedure
W. Guidelines for Appropriate Use of Administrator Access
X. Information Technology User Account Management Policy
Y. Intrusion Prevention and Network Security Policy

Cyber Security Policies and Procedures
Z. Intrusion Prevention and Network Security Procedure
AA. Policy and Procedure for Password Management and Complexity
BB. Configuration Management Policy
CC. Patch Management Process
DD. IT Asset Management Policy and Procedure
EE. Operating System and Server Configuration Policy, Procedure and Standards
FF.SCADA Security Policy and Procedure
GG. Server Modification Policy
HH. Server Modification Procedure
II. Server Security Audit Procedure

[REDACTED]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

RISK AWARENESS TRAINING

SJI and affiliate personnel are educated and trained in cybersecurity threats, risk, and issues by the IT Protect work group. This group will send out phony or simulated phishing emails ("Phishing Tests") to employees to see if they respond. If employees respond, they can be identified and required to attend cyber security training. These phishing emails will be sent out up to five times during the year, usually sending out two different emails each time. Cyber security information and bulletins are sent out to all employees four times per year.

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

Cyber Security Training Programs

Module Name	Year(s) Assigned	Description
Attack Scenario	2017, 2018, 2019	A detailed walkthrough of a cyber-attack against a fictional organization from the unique perspective of the attacker.
Creating a Cyber Secure Home	2017, 2018	Effective cybersecurity practices are important both at work and at home. This module describes the steps that can be used at home to protect personal devices, Wi-Fi networks and online accounts. It also covers the importance of information backups, such as cloud services or external hard drives, in the event of an attack, theft or loss of a device. Secure behaviors at work often start at home.
Email and Phishing	2016, 2017, 2018, 2019	Phishing is an email-based cyber-attack that often targets many people at once. This module explains key methods cyber attackers use to get people to click on the bait in an email message. It also identifies the primary clues that each person can use to detect phishing and how to safely check links in an email. Finally, the module reviews additional safe email behaviors, such as careful use of auto-complete and reply-all features, which can accidentally be used to share information with those who are not authorized to see it.
Federal Personally Identifiable Information (Federal PII)	2017, 2018, 2019	Any Personally Identifiable Information (PII) that comes from federal agencies is protected by federal law.
Hacked	2019	A security incident or compromise can occur even with security controls and security awareness training in place. This module focuses on the common warning signs used to identify and report an incident, regardless of the cyber-attack employed. It is critical that when any of these signs are observed, they are reported immediately to the help desk or information security team.
Hacked - Interactive	2017, 2018	A security incident or compromise can occur even with security controls and security awareness training in place. This module focuses on the common warning signs used to identify and report an incident, regardless of the cyber-attack employed. It is critical that when any of these signs are observed, they are reported immediately to the help desk or information security team.
ICS Attack Surfaces	2017, 2018, 2019	An analysis of specific attack approaches that target various layers of the ICS system.
ICS Drivers and Constraints	2017, 2018, 2019	A deep dive into the principal cybersecurity drivers and constraints that impact how a control system needs to be engineered, managed and supported.
ICS Incident Handling	2017, 2019	A review of critical ICS incident response topics for all individuals that interact with ICS environments.

Module Name	Year(s) Assigned	Description
ICS Information Assurance	2017, 2019	An in-depth synopsis of ICS-focused information assurance program concepts, like risk management, account management, data classification and defense.
ICS Network Security	2017, 2018, 2019	An overview of concepts specific to defending ICS environments at the network layer.
ICS Server Security	2017, 2018, 2019	An examination of concepts specific to defending ICS environments at the server layer.
ICS System Maintenance	2017, 2019	An audit of ICS system maintenance tasks like patching, backups, change management, monitoring and logging.
Introduction	2017, 2019	A brief history of ICS, regulation and why ICS-focused security behavior training is critical.
IT Staff	2019	Your IT staff has privileged access to your critical systems, and it is very important that they are secure. We discuss how your IT staff can protect themselves and your organization, including proper use of privileged accounts, limiting the information they share, and how they can detect if a system is compromised.
Malware	2017, 2018, 2019	Malware is software that is used to perform malicious actions. This module explains what malware is and provides examples of commonly used malware, such as ransomware, spyware and keyloggers. This module also focuses on key methods attackers use to deploy malware and how each of us can defend against them, such as keeping devices updated with current versions of software and security patches for protection. Finally, the module reviews misconceptions about malware and stresses reporting any signs of infection as soon as possible.
Overview of ICS	2017, 2018, 2019	A breakdown of ICS components, industries and support personnel roles and responsibilities.
Overview of ICS Attacks	2017, 2018, 2019	A review of ICS Threat Actors and examples of ICS-based attacks and trends.
Personally Identifiable Information (PII)	2017, 2018, 2019	This module explains what PII is and the extra steps employees must take to protect it and other types of confidential information. Examples include the use of encryption and personal email accounts, the sharing of sensitive information, using only authorized systems to store or process sensitive information, and securely disposing of sensitive data. This module is built on and recommends people to watch the Data Security module first.
Physical Security	2017, 2018	Physical security is an important component of information security. This module explains how attackers can attempt to trick or fool their way into restricted areas, such as by tailgating. This module also discusses how employees can protect the physical security of your facilities by managing visitors, protecting entrances and exits, proper information disposal and related physical security behaviors.

Module Name	Year(s) Assigned	Description
Senior Leadership	2018	Senior leaders and their staff are a primary target, especially in today's world of targeted attacks. This module covers important concepts, such as how to be secure when traveling, proper mobile device use and security, the most common indicators of targeted attacks, and how to set an example to help build a secure culture.
Social Engineering	2019	Social engineering is a common tactic used by cyber criminals to create attacks. This module explains and illustrates different types of social engineering attacks and how people can detect and defend against them. As social engineering can take on any form, this module lays the foundation for secure behaviors learners can use in the event of an attack.
Social Engineering - Interactive	2017, 2018	Social engineering is a common tactic used by cyber criminals to create attacks. This module explains and illustrates different types of social engineering attacks and how people can detect and defend against them. As social engineering can take on any form, this module lays the foundation for secure behaviors learners can use in the event of an attack.
Targeted Attacks	2017, 2018, 2019	Targeted attacks, such as spear phishing and CEO fraud, involve research on the target before the attack is launched. While these funded cyber attackers may launch an attack for a variety of reasons, this module provides real-world examples of how a targeted attack works and how everyone in an organization can protect and defend against them. Key security behaviors include not oversharing information, following policies or procedures used to protect information, recognizing signs of spoofing and social engineering and managing links and attachments in emails.
You Are The Shield	2016, 2017	This introductory module explains how cyber attackers are focusing on human risk to gain access to data and information by bypassing technology's defenses. However, each person has the ability to identify and report the signs of a potential attack. Learners are encouraged to build a strong cyber shield and use training to strengthen their cyber-detection skills at work and at home.
You Are The Shield - Interactive	2016, 2017, 2018, 2019	This introductory module explains how cyber attackers are focusing on human risk to gain access to data and information by bypassing technology's defenses. However, each person has the ability to identify and report the signs of a potential attack. Learners are encouraged to build a strong cyber shield and use training to strengthen their cyber-detection skills at work and at home.
Avoiding Dangerous Links	2019, 2020	The purpose of this module is to teach end users to understand why they should treat any email attachment with a healthy suspicion, and how to handle these types of messages.
Data Entry Phishing	2019	The purpose of this module is for end users to learn to identify and avoid scams that request personal or sensitive data.

Module Name	Year(s) Assigned	Description
Introduction to Phishing	2020	The purpose of this module is to teach end users to look at the best practices related to identifying and handling suspicious emails.
Social Engineering	2020	The purpose of this module is to teach end users that social engineers build relationships and target the human tendency to be open and helpful, all in an effort to steal data, access confidential networks, and run scams. Learn how to recognize and avoid common social engineering techniques and keep your people, areas, and assets secure.

[REDACTED]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[REDACTED]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[REDACTED]

[Redacted]

[Redacted]

[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]
- [Redacted]

[Redacted]

[Redacted]

RESPONSE TO NJBPU CYBER SECURITY ORDER

In response to NJBPU's Reliability and Security Order, Docket No. AO16030196 (the Order), SJI addressed gaps between its cyber security and the requirements of the NJBPU order. A new organization, IT Protect, was developed to manage the cyber security program, cyber security positions were added, and personnel were hired. Below is a list of the personnel additions and action items taken in response the Order.

Personnel Additions

Positions	Dates
Director, Cybersecurity	August 2016
CIO	April 2017
Senior IT Security Specialist	August 2017
IT Security Specialist	November 2019

[Redacted]

[Redacted table]

INTERNAL REPORTING

IT Protect utilizes the SJI Dashboard monthly to provide SJI management with a presentation of the cyber security posture and key cyber security risks. Quarterly, there will be a cyber security presentation to the SJI BOD.

INTERNAL AUDIT REVIEW

Following the issuance of the BPU Order (Docket No. AO16030196) in the matter of utility cyber security program requirements in March 2016, SJI Internal Audit performed three audits in 2017, 2018, and 2019, reviewing South Jersey Gas's compliance with the Order. These audits focused on compliance with five categories of the key elements from the Order.

SAGE reviewed two of the three audit reports, 2017 and 2019. In both years Internal Audit determined the following:

- General cyber security process – management maintained the program appropriately to safeguard digital assets and decrease risk.
- Scope of assets – asset inventory was appropriately maintained.
- Cyber security requirements:
  - Cyber risk management – process appears to be appropriate.
  - Situational awareness – process appears to be appropriate.
  - Incident reporting – process to manage, assess, and report cyber incidents appears to be appropriate.

  - Response and recovery – process appears to be appropriate.
  - Security awareness and training – process to train and inform employees of security awareness appears to be appropriate.
- Implementation – submissions to the BPU appear to properly document the milestone confirmations and communications of compliance required.
- Accountability and SJI BOD review – submission to the BPU appears to be properly documented.

B. FINDINGS

18-1 The organization structure and governance of SJG's cyber security function is appropriate for identifying and responding to cyber threats.

SJI organized the Information Technology Department to include a work section or group titled Security and Technology Architecture or (IT Protect). IT Protect has been tasked with the responsibility for safeguarding the cyber security of SJG, SJI, and the other affiliates and is staffed with professional, experienced cyber security experts and specialists. The line of control is direct from IT Protect to the SJI CIO, SJI Risk Management Committee, SJI CEO, and the SJI Board of Directors. This organization and governance structure ensures that cyber security threats are identified and receive the proper amount of attention and enables a timely response with any necessary mitigation efforts.

18-2 SJG's overall approach to addressing cyber security issues is reasonable.

SJG's overall approach to addressing cyber security issues is to protect information assets and actions while adhering to three constricts of information security: confidentiality, integrity, and availability. The information security program is based on industry best practice standards. Management overview of the program is in place and practices are governed by a comprehensive charter and documented policies and procedures. There is adequate program review to ensure compliance with outside (federal and state) and internal requirements.

18-3 Risk assessment and mitigation plans appear to be effective and reasonable.

The risk assessment process seems to be appropriate for SJG. Response to cyber security incidents is governed by the Cyber Security Incident Response Policy. The process for identification of risks appears to be effective. Outside specialist firms are used to evaluate potential risks, and the overall risk mitigation plans appear to be complete. Using the Cyber Security Incident Response Plan, the Computer Security Incident Response Team (CSIRT) is responsible for executing assessment, containment, backup/preservation of evidence, analysis, eradication, and recovery activities. Mitigation efforts for the two recorded cyber security incidents in the past were successful.

18-4 SJG has taken reasonable steps to promote broad awareness of the importance of cyber security.

The establishment of the IT Protect function, staffed with experienced cyber security experts was an initial effort to promote broad awareness of the importance of cyber security. The awareness of cyber security is acknowledged by the establishment of the cyber security organization and reporting relationships up through IT Protect to the CIO, Risk Management Committee, CEO, and Board of Directors. Awareness down to the other SJG and SJI employees and contractors is enforced by the documented policies and procedures, practices, test phishing expeditions, and cyber security training modules.

18-5 Cyber security training is substantial and available for employees and contractors.

There are thirty cyber security training modules available to be taken by the employees and contractors of SJG, SJI, and their affiliates. The most common cyber security threat that faces SJG is from phishing, an emailed cyber-attack that usually targets many users at once. The IT Protect group can identify those users that have fallen for phishing attacks by sending out phony or simulated phishing emails and identifying who responds. Users who respond to the phony phishing attacks can then be required to take additional training. A record of the training modules taken are tracked and recorded for each employee by Information Technology.

18-6 SJG receives information and coordinates response with appropriate outside entities.

Inputs to the IT Protect function in the form of directions, information, and alerts are received from [redacted].

18-7 SJG complies with the NJBPU cyber order.

In response to NJBPU's Reliability and Security Order, Docket No. AO16030196 (the Order), SJI addressed gaps between its cyber security and the requirements of the NJBPU order. These included hiring a Director of Information Security, forming a cyber security work group (IT Protect), creating new policies and procedures, and updating security policies and procedures. Steps taken include addressing cyber risk management, situational awareness, incident reporting, response and recovery, security awareness and training, and implementation. For the three years since issuance of the Order, 2017 through 2019, SJI has submitted a certification signed by the SJI CIO that SJI and SJG were in compliance with the Order.

18-8 Findings of audits or reviews of SJG and SJI cyber security preparedness and response are positive.

Internal Audit performed three audits from 2017 through 2019, reviewing South Jersey Gas's cyber security preparedness. Audits evaluated the general cyber security process, the maintenance of assets, cyber risk management, situational awareness, incident reporting, response and recovery, security awareness and training, and accountability to the BPU. In these audits the audit findings were positive, and processes were found to be appropriate and properly documented.

C. RECOMMENDATIONS

18-1 Records of Cyber Security Training should be maintained in a centralized training data base controlled by Human Resources (see Finding 18-5).

Currently, records of training modules that have been completed by employees of SJG, SJI, and their affiliates are maintained by the IT Department. Because of the importance of exposure to the most recent security issues and the required training necessary to thwart cyber security attacks, it is imperative that training efforts be given the highest level of exposure possible. Although training in this area should still be managed and controlled by the Security and Technology Architecture work group in the Information Technology Department, training documentation should be available and reviewed by the highest levels of SJG and SJI management. Therefore, it is reasonable to place this training documentation in a common training database maintained by SJI Human Resources in order to ensure the highest level of exposure and recognition.

19. SUPPORT SERVICES

This Chapter is presented in nine sections:

A. Insurance and Claims
B. Legal
C. Facilities Management
D. Materials Management
E. Transportation
F. Real Estate and Land Management
G. Computer Systems and Services
H. Records Management
I. Security of Infrastructure
J. Findings
K. Recommendations

A. INSURANCE AND CLAIMS

BACKGROUND

The insurance and claims function is managed by an Insurance Specialist Lead who reports to the VP of Risk and Assurance who reports to the SVP and Chief Financial Officer. The Insurance Specialist Lead is assisted by an Insurance Specialist Senior.

SJI has a broad category of insurance coverages to protect the organization from unexpected losses. There are 18 different policy types (e.g., auto liability, property, environmental pollution, workers compensation) and 23 different carriers, some providing more than one policy type. SJI manages the insurance and claims function for both SJG and ETG. See Chapter 12, Human Resources, for discussion of workers/employee compensation claims.

An insurance broker is utilized to purchase insurance coverage. The current insurance broker is Conner Strong & Buckelew. The insurance broker is a direct liaison with the various insurance carriers which provide SJI with coverage. Policy renewals are completed on an annual basis.

The Insurance Lead completes all applications and secures all supporting documentation from the various business line leaders. The broker submits the applications and documentation to the insurance companies, negotiates terms and conditions, coverages, and premium rates. The broker presents final policy premium quotes to the Insurance Lead and the VP of Risk and Assurance. Upon agreement, the brokers are provided with authority to bind the policies as quoted. The broker submits an invoice to SJI for the quoted policy premium. SJI issues payment to the broker. The broker issues direct payment to the insurance company on behalf of SJI.

SJI self-insures the first $500,000 of all third-party losses. If a loss is higher than the self-insurance amount, the risk is transferred to a commercial general liability policy for handling and resolution. SJI sets aside an amount of self-insurance monies into an uninsured risk reserve account to provide for any third-party losses that are anticipated to occur below the deductible of the commercial general liability policy. The monies within the uninsured risk reserve account are for direct payment of third-party losses incurred.

To determine the amount necessary to fund the annual uninsured risk reserve account, SJI utilizes total annual settlement losses for the previous five years. The total annual settlement loss is multiplied by the Consumer Price Index Inflation Rate to create a trended claim cost for each of the previous five years. An average is then taken of the trended claim cost for the previous five years to establish the annual uninsured risk reserve.

Claims

SJI receives submissions for various types of claims. Claims are entered into the Claim Management System (CMS) by the responsible department. CMS is an internal database which was built by the IT Department on the Salesforce platform. CMS is accessed via a web portal link on the SJI intranet. When a claim is entered into the CMS, a unique claim number is generated, and the system automatically forwards the claim to the appropriate handler based on the type. The claim is then investigated and resolved.

The number and amounts of claims against SJG varied significantly during the period 2013 through 2019. For 2019, SJG reported 76 property claims totaling $129,935, 15 indemnity claims totaling $4,913, and three bodily injury claims totaling $5,790. In 2016, there was a high of 85 property claims totaling $534,758 and in 2018 there was a low of 29 claims totaling $72,081.

SJG self-insures the first party auto exposure to owned vehicles. Motor vehicle damage claims are reported concurrently to the Fleet and Insurance Departments. Damage repairs to SJG owned vehicles are handled by Fleet through contracted repair shops. Vehicle damage or injury to third parties, caused by SJG vehicles, is reported by the Insurance Department to our auto insurance carrier for investigation and handling. There were 122 SJG motor vehicle claims from 2016 through 2019.

The table below shows insurance claim related information from 2013 through 2019.

Insurance Claims

	2013	2014	2015	2016	2017	2018	2019
Claim Count	140	94	87	125	93	80	98
Claims Paid	77	46	44	55	36	42	42
Percent of Claims Paid	55%	49%	51%	44%	39%	53%	43%
Amount Paid	$126,275	$124,315	$408,495	$542,710	$157,729	$112,410	$140,638
Payout per Claim	$1,640	$2,703	$9,284	$9,876	$4,381	$2,676	$3,349

Generally, the claims history does not have notable trends. Although the number of claims made and the number of claims paid have varied widely, the percent of claims paid has remained within a relatively narrow range of 39% to 55%. It is notable that the amounts paid in 2015 and 2016 were three to four times higher than in other years. For 2015, there was increased frequency and severity of claims, including fire loss, and in 2016 there was increased frequency and severity of claims, including freeze up claims.

Insurance Broker

The SJI contract for the insurance broker, Conner Strong & Buckelew, has a term of three years beginning January 1, 2020. Fees in lieu of a commission are $352,500 per year, which are recorded at the SJG level. The contract describes terms and conditions for providing brokerage services, primarily the procuring and administering of the policies. There is a Statement of Additional Services which would be provided at the client's request.

SJI has a standard broker performance evaluation form which includes quality, delivery, renewal, and service categories. Each subcategory line item has columns for average points, weight, weighted points, and comments. The columns are totaled with actual points, possible points, and actual percentage, yielding a total weighted percentage. The most recently completed evaluation form awarded the broker with a total weighted percentage of 98.12%.

B. LEGAL

BACKGROUND

The Legal function is managed by the General Counsel and Chief Compliance Officer. The Office of General Counsel (OGC) encompasses the Legal, Corporate Secretary, Compliance, and the Environmental, Social, and Governance (ESG) functions.

In 2021, there were several title changes. Reporting to the General Counsel are two Director-Assistant General Counsels, the Corporate Secretary, and the Director of ESG, and the Assistant Compliance Officer. Specific functions are assigned to each of the two Director-Assistant General Counsels:

- SJI Utilities, Inc. (SJIU, SJG, and ETG)
- South Jersey Energy Solutions, LLC (SJES) non-regulated matters

Annual internal legal services costs, including salary (payroll) expenses, cash and stock awards, and employee benefits and taxes, varied from year to year during the period 2013 to 2019. These internal costs increased from $705,679 in 2013 to a period high of $2,004,078 in 2018 and then declined to $1,548,874 in 2019.

The Legal function handles negotiations for easements, contract disputes, new contracts, purchasing issues, NJBPU complaints, gas incidents, legal input for policy changes, and collection issues. Claims are done in-house. Land use rights issues are done by both inside and outside attorneys. Debt issues are typically handled by outside attorneys.

Internal Legal Services

The Assistant General Counsel assigned to SJIU provides legal services for the Construction, Engineering, Asset, Utility, Environmental, Procurement, Shared Services and Compliance, Sales, and Customer Experience Departments. Functions include guidance on legal issues, drafting agreements, resolving disputes, negotiating divestures, facilitating compliance, managing litigation, and occasional representation before NJBPU.

The Assistant General Counsel (SJIU) reports hours in Workday (the human resource management system) by case or matter codes. A fixed allocator is used for charging time to the two utilities.

External Legal Services

External legal services for SJG are engaged by the General Counsel who will manage or will designate another staff attorney to manage the engagement. SJI established “Outside Counsel Guidelines and Requirements” for contracting and managing external services including engagement letter requirements, insurance liability, communications, billing, and reporting.

SJG uses outside counsel for:

- Construction disputes and litigation
- Complex contract negotiations
- Labor and employment issues, disputes, and lawsuits
- Remediation of historic sites and any litigation
- Financial matters and agreements
- Labor contract negotiations and escalated disputes
- General litigation matters in state and federal court

New proposed contracts and purchase orders are submitted by the originator to a program named Application Xtender. Based on the nature and risk level of the contract, Application Xtender routes the contract for review and approval to Legal and other departments as required. Approved contracts are then executed by an officer of the SJI and retained in Application Xtender. It serves both as a regulatory compliance control (e.g., SOX) and for contract management. Each new or renewed contract with outside counsel requires that the outside counsel provide an estimate of the cost of services and must report and explain variances.

The OGC's 2021 SJI Balanced Scorecard goals include: (1) Keep third party spend even on a year-over-year basis, (2) Interface with key shareholders, (3) Enhance key performance metrics, and (4) Promote diversity and promote a culture of diversity. The goals are supported by a list of 2021 initiatives which include specific action items.

A comprehensive slide deck supports the monthly legal services meeting. The October 2020 slide deck portrays key performance indicators for Outside Counsel Legal Spend, Contract Review, Claims Management, Shareholder Engagement, Board and Corporate Governance, and ESG. For example, the 2020 year-to-date (YTD) outside counsel legal spend is shown by SJI affiliate. The legal spend for SJG was $908,925, exceeding the spends of other affiliates. The slide deck shows disputed legal bills and YTD saved.

C. FACILITIES MANAGEMENT

BACKGROUND

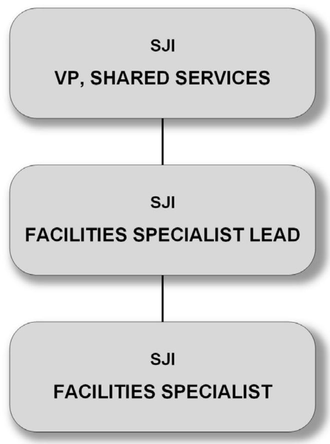
Facilities Management serves all SJI companies including SJI, SJG, ETG, and Millennium. It manages the real estate portfolio; does facility planning and space planning; manages capital improvements, repairs, and a preventive maintenance program;

provides for mailroom and courier services including deliveries and logistics; manages Food Service at Folsom and Atlantic City; pays the utility bills (it has contracts with Marathon Energy for electric supply and Atlantic City Electric for electric delivery for all SJG facilities); provides for emergency response; and participates in the pandemic response and return to office planning. Facilities Management is responsible for all facilities functions including leasing, except for property taxes, property insurance, acquisitions and divestitures, and environmental site remediation.

Facilities Management Organization

Facilities Management is an SJI level function that serves all of SJI, including SJG. The Facilities Management organization structure is shown in the following exhibit:

Facilities Management Organization



The SJI Chief Financial Officer supervises the Vice President, Shared Services, who supervises the Facilities Specialist Lead. The Facilities Specialist Lead supervises one Facilities Specialist.

All facilities work is contracted. Facilities Management has 35 separate long-term contracts for repetitive facilities work like janitorial, food service, HVAC maintenance, fence and gate maintenance, and miscellaneous renovations and repairs. At any one point in time, it also has multiple individual contracts for larger specific projects such as the Folsom headquarters renovation and roof replacements that are bid separately. In 2020, SJI spent a total of $2.7 million on facilities services. The Facilities Management unit is focused on planning, administration, and contracting and contractor management.

The Facilities Specialist Lead is an individual contributor and personally manages large contracts like the renovation of the Folsom headquarters. The Facilities Specialist focuses on managing contractors that support SJG. An additional Facilities Specialist will be hired to serve ETG.

Real Estate

SJG's Real Estate Listing includes 95 total properties. These are used for:

- Regulator stations, meter stations, block valve sites, and compressor stations – 52
- Folsom headquarters, division work centers, and McKee City – 18

- Environmental remediation and related sites – 10
- Other – 15

The total assessed value of the SJG real estate is $19.2 million. The only vacant properties listed are some of the environmental sites.

The Facilities Management unit manages 25 of the SJG properties: the headquarters, division work centers, McKee City, and others. The Transmission and Distribution Operations units manage the regulator, meter, valve, and compressor station sites. The Environmental unit manages the environmental and related sites.

As noted above, there are several departments within the company that manage real estate. Beginning in 2021, Facilities Management will manage the overall portfolio of real estate. This will include meeting with department leadership on a regular basis to discuss changes to real estate ownership. In addition, while there is no formal annual real estate and facilities review process, regular meetings are held with tenants in each facility and short- and long-term plans are created to determine needed changes to operations and maintenance or capital projects to be done at each location.

Following are the only SJG real estate transactions reported since 2012:

- Land for the Atlantic City headquarters was purchased in 2018 for $3 million.
- Land for a SJG compressor station was purchased in 2019 for $940 thousand.
- Land was sold to the South Jersey Transportation Authority for runway protection in 2018 for $5 thousand.
- 118 acres around the Folsom headquarters was sold in 2018 for $575 thousand.

From 2013 through 2019, SJG received approximately $10 thousand per year for rentals of space on the Folsom headquarters roof and properties at McKee City.

Policies and Procedures

Facilities Management has the principal responsibility for a four-page Facilities Business Continuity Plan that covers alternate locations for employees, data back-up and recovery, critical information technology requirements, telecommunications, critical facilities, and communications with stakeholders. In addition, Facilities Management operates under the following policies and procedures:

- Emergency Action Plan for the Atlantic City Headquarters – responsibilities shared with Security, Environmental, Safety, Corporate Safety, and Compressed Natural Gas (CNG) Operations
- SJI Space Allocation Policy
- SJI Desk Hotel Policy
- SJI Gym Policy and Guidelines

Facilities Projects

Major Facilities Management projects from 2017 through 2020 were the construction and occupancy of the new Atlantic City headquarters and the renovation of the Folsom headquarters. Construction on the new Atlantic City headquarters began in 2017 and was completed in 2018. The SJG utility operating functions moved from the Folsom headquarters to the new Atlantic City headquarters. SJI departments and senior leadership were relocated to the Hammonton North, Hammonton Grand, and Mt. Laurel facilities.

The Folsom headquarters was vacated and the renovation began in May 2019 and was completed in December 2020. The SJI departments and senior leadership team are planned to occupy the Folsom headquarters when personnel return to the office from their work-from-home arrangement after the pandemic. The leased Hammonton facilities were vacated during 2020 while the SJI personnel were working from home.

The renovation of the Folsom headquarters began in 2019 when SJG relocated to the new Atlantic City headquarters. The total cost of the Folsom headquarters renovation was $23.4 million over 2019 and 2020. The book value of the Folsom headquarters at the end of 2020 was $29.3 million. SJG owns the Folsom headquarters and the plan is that SJI will pay SJG market-based rent for use of the facility. Approximately 54% of the rent (SJG's share of the Management Service Fee) will then be charged to SJG for SJI services to SJG.

Total capital spending budgeted for the Folsom headquarters building renovation in 2020 was $19.7 million out of a total Facilities Management capital budget of $21.3 million. The other $1.6 million of capital spending was budgeted for typical facilities improvements, renewals, and replacements including paving; an ADA ramp; HVAC replacement; and roof, window, and door replacements.

D. MATERIALS MANAGEMENT

BACKGROUND

The Procurement, Contracting, and Materials Management function for SJI, SJIU, and SJG is focused on contracting because all standard utility materials are supplied by a single contractor that also provides all of the transportation and warehousing for the materials, along with other services, such as meter testing.

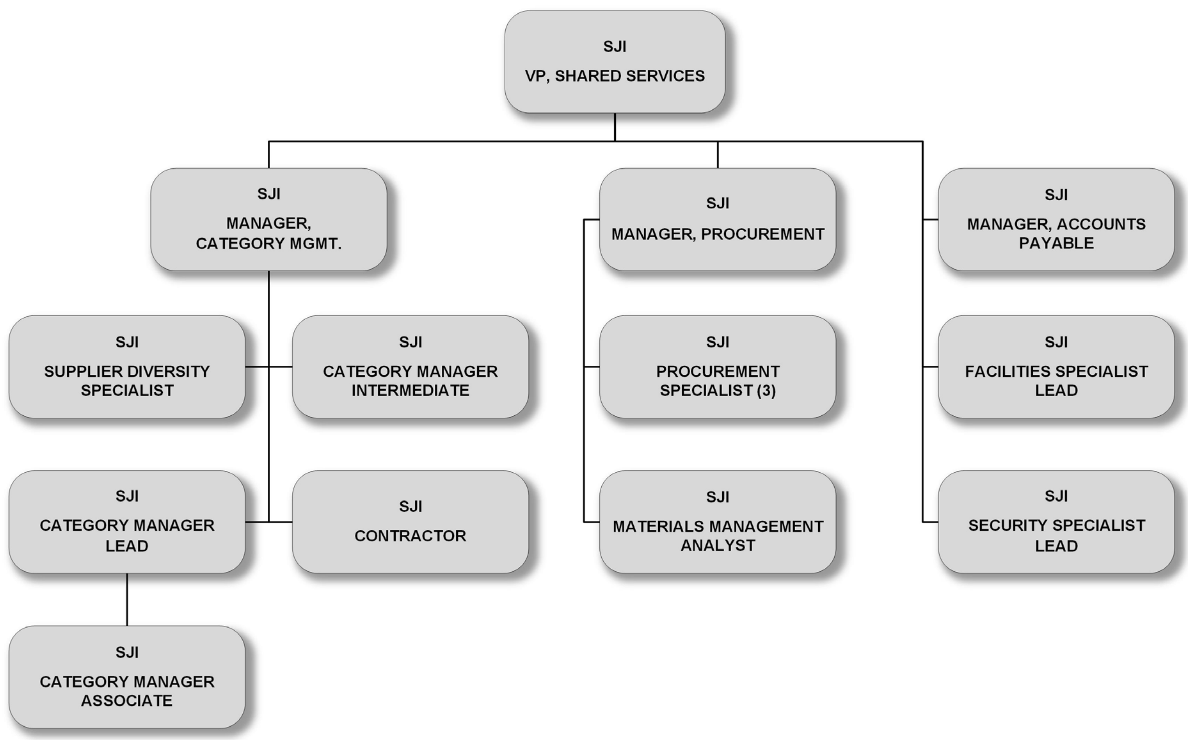
Further, much of the utility work is contracted as well, including engineering design, construction, and compliance work such as leak surveys and gas facilities locating. Most utility support services work is contracted as well, including Facilities, Fleet, and Security. Therefore, the emphasis at SJI, SJIU, and SJG is on contracting and contractor management with a small function for the purchasing of goods and services not provided by the materials contractor or other service contractors.

Most of the SJI, SJIU, and SJG contracts are for multiple years covering a variety of goods and/or services. These contracts are referred to as "systems contracts" in this section. Contracts for a unique service not covered by the systems contracts are referred to as "single purpose contracts." Procurements of materials not covered by the materials system contracts are referred to as "purchase orders." Within SJI, releases against a systems contract are often called "purchase orders." This section refers to orders against a systems contract as "releases."

Organization

The SJI Chief Financial Officer, who reports to the SJI CEO, supervises the Vice President of Shared Services. The Vice President of Shared Services, in turn, supervises two contracting and purchasing units, Category Management and Procurement. Category Management and Procurement are SJI level organizations serving all of SJI including both SJG and ETG. The organization structure for the Category Management and Procurement functions is shown in the following exhibit.

SJI Category Management and Procurement Organization Chart



The Vice President, Shared Services supervises Accounts Payable, which is covered in Chapter 15, Accounting and Property Records, and two other shared services, Facilities Management and Security, which are covered in separate sections in this chapter.

Category Management manages the systems contracting process and two shared services, Materials Management and Fleet Management. The Manager of Category Management has three employee direct reports and a contractor:

- One employee focuses on supplier diversity and works to increase spending with certified diversity suppliers. SJI is a member of several diversity certifying groups.
- One employee administers the materials contract and is the defacto Materials Manager for SJI, SJIU, SJG, and ETG.
- One employee administers the fleet and CNG contracts and is the defacto Fleet Manager for SJI. (This function is covered in the Transportation section of this chapter.) This employee has one direct report assistant.
- The contractor helps with document management.

Procurement handles one-time purchases of materials not covered by the materials contracts, single purpose contracts, releases against contracts, and the procurement cards (P-cards). The Procurement Manager has four direct reports. Two Procurement Specialists process requisitions and purchase orders in the ETG purchasing system and maintain the Suppliers (vendors) in the ETG purchasing system. One Procurement Specialist handles the department's information needs, like report writing, and also manages the P-cards. A union position handles requisitions and purchase orders in the SJG purchasing system. SJG will convert to the ETG purchasing system during 2021 and 2022.

Policy

The SJI Corporate Procurement Policy and Procedures is six-page document that provides high level guidance for procurement and contracting. It covers roles and responsibilities, delegation of authority, conflicts of interest, contracting mechanisms, supplier diversity and sustainability, and supplier management. There are no written procedures below this corporate policy document, although the purchasing and accounting information systems have relevant built in controls. All SJI procurements and contracts must go through Category Management or Procurement except for natural gas and hedging, debt issuance, benefits, outside attorneys, utility bills, and property taxes.

There is also a SJI Contract Review and Signature policy covering roles and responsibilities for reviewing and approving contracts. It also requires all contracts to be entered into the Legal Department's contract tracking system.

Spend

The 2019 SJI spend analysis is summarized in the following exhibit. Comparable information for prior years is not available.

SJI Spend Analysis ($ million)

Supplier Category	2019
Finance and Insurance	545.8
Operations Services	57.5
Gas Marketing	207.8
Intercompany	120.1
Construction	164.4
Benefits	13.4
Professional Services	52.0
Information Technology	15.7
Government	16.0
Materials	29.3
Utilities	1.7
Legal	2.2
Fleet Services	.7
Employment Service	.7
Marketing	4.7
Facilities	2.0
Real Estate and Rental and Leasing	0.0
Environmental, Health and Safety	3.0
Charities	.1
Other	40.2
Transportation and warehousing	.2
Grand Total	**1,282.4**

SJI total spend for all categories in 2019 was $1.3 billion.

SJI issues procurement cards (P-cards) for incidental and emergency purchases in the field. The following exhibit show the trends in P-card usage from 2015 (the first year this data was available) through 2019.

Purchasing Card Usage Trends

Description	2015	2016	2017	2018	2019
Transaction Number	18,104	18,726	20,313	24,431	20,384
Spend Volume	$3,335,892	$3,384,2109	$3,457,011	$4,195,501	$3,533,494
Year-Over-Year Volume	0%	1%	2%	21%	(16%)
Average Spend per Card	48,777	$8,239	$8,044	$7,691	$5,704
Average Transaction Size	$184	$181	$170	$172	$173
Average Number of Open Cards	380	411	430	546	619
Average Number of Active Cards	325	355	378	458	506
Active Cards Percentage	86%	86%	88%	84%	82%
Average File Turn Days (estimate)	27.97	28.67	28.82	24.85	28.43
Large Ticket Volume	$245,500	$56,500	$15,669	$8,951	$46,387

P-card usage transactions increased from a low of 18,104 in 2015 to a high of 24,431 in 2018 before declining in 2019 to 20,384. Total spend volume followed suit from a low of $3.3 million in 2015 to a high of $4.2 million in 2018 before declining in 2019 to $3.5 million.

Systems Contracting

Category Management is a systems contracting function being developed. At present, the Vice President of Shared Services and the Manager of Category Management act as individual contributors in developing and placing systems contracts. As Category Management develops, it will be increasingly responsible for planning, analysis, and placing systems contracts. It plans to add an additional contactor resource in 2021.

SJI has standard templates for:

- Request for Proposals (RFP)
- Master Services Agreement
- Statement of Work

These are the starting points for new contracts and contract administration. If the standard template language is acceptable to the requester and contractor, lower levels of review and approval are required. If significant changes to the standard language are required, higher level scrutiny is applied.

Procurement

Procurement is the transactional processing function for purchase orders and releases against systems contracts. It has points of contact for each SJI department. Purchase orders are used for one-off purchases not covered by a systems contract. Examples include a compressor, extra (not from the materials system contract) personal protective equipment, vehicle wrapping, and fuel. There are an estimated 50 purchase orders and releases per month.

Materials Management

A single contractor is utilized to provide the materials management function for SJI and SJG. The systems contract covers all standard utility materials, transportation, warehousing, deliveries, and ancillary services such as meter testing. One Category Manager administers the contract, coordinates materials planning with the contractor, solves problems, and provides feedback to the contractor. The Category Manager interfaces with the contractor's Branch/Warehouse manager and its account manager assigned to SJI.

The contract originated in 2006 and was last amended in 2020. The following table shows the annual purchases from the materials contractor from 2013 through 2019 separated into purchases from the division consignment storerooms and deliveries to job sites.

SJG Purchases from the Materials Contractor

Year	SJG Consignment Purchases	Amount	SJG Delivered Purchases	Amount	SJG Total Purchases	Amount
2013	37,472	$6,927,255	10,556	$11,101,862	48,028	$18,029,117
2014	30,583	$6,799,712	10,805	$13,742,243	41,388	$20,541,955
2015	37,486	$5,731,561	11,484	$18,429,856	48,970	$24,161,417
2016	34,236	$4,801,184	12,338	$18,545,055	46,574	$23,346,239
2017	31,457	$5,427,305	12,071	$19,848,470	43,528	$25,275,775
2018	35,545	$5,640,224	10,571	$18,610,539	46,116	$24,250,763
2019	37,094	$7,827,288	11,793	$21,464,099	48,887	$29,291,386

The total purchases increased from $18 million in 2013 to $29 million in 2019. The percentage of total purchases from the consignment storerooms decreased from 38% in 2013 to 23% in 2019.

The materials contractor is an international distribution company specializing in providing products for natural gas infrastructure construction and maintenance, including natural gas local distribution companies like SJG and ETG. The contractor has a warehouse in Glassboro, NJ dedicated to SJI serving both SJG and ETG.

The contractor has also has five consignment cages (storerooms), one at each of the five division work centers. The cages are not staffed but are secured. The cages contain standard materials appropriate for each division. Each stocked item has minimum and maximum inventory levels set in consultation between the contractor and SJG Operations. However, there is no regular review of the levels and it is unusual to reduce the levels.

SJG employees badge into the cages, collect the needed materials, and scan them into the contractor's inventory system along with their badge number. The contractor's system reports usage by badge number that can be translated to work order by day. Each cage is replenished one to three times per week, depending on activity levels. Items that have dropped below the minimum level are replenished to the maximum level. No stock-out statistics are kept but the contractor is highly responsive when informed of stock-out situations.

The contractor also delivers larger job orders to work sites. This can include both items from the warehouse and drop shipments directly from manufacturers for larger quantities.

The contractor provides 2,058 SJG standard material items (stock keeping units or SKUs) inventoried for SJG. These are warehoused in Glassboro and are available to be delivered to the consignment cages or to be drop shipped to work sites. Each item has both a SJI part number and a contractor part number. There is a price set for each of the standard inventoried items that includes transportation and delivery charges.

SJI can also purchase any non-stocked item the contractor carries for other customers. For non-stocked items, a price and delivery quotation is requested from the contractor. The price typically includes both the price of the item and the additional freight cost. SJI made 266 non-stock purchases from the materials contractor in 2020.

An ongoing project is the harmonization of the standard material items between SJG and ETG. Currently there is an approximate 15 to 25% difference between the standard items between the two companies.

There are no specific warehousing policies and procedures other than for meters. Meter inventory management has a minimum/maximum quantity for each meter type at each division warehouse that is followed by the materials contractor. In addition, Internal Audit conducts an annual 100% meter inventory. The 2020 meter audit discovered small exceptions to be corrected but concluded that adequate internal control exists.

Information Systems

The legacy purchasing system used by SJG will be replaced in 2021 and 2022 by the more modern and integrated system used by ETG. The new system is better integrated with other financial modules and operations systems and will require fewer manual data entries. The new system has several features that will be highly beneficial to SJG, including:

- Interactive visibility of all contracts with proactive alerts for expiring contracts
- Improved vendor management capabilities and increased leverage with vendors
- Better integration with other systems for more efficient operation
- Better coordination with contract users

SJI has a contract tracking and management system developed and implemented by the Legal Department in 2017. The system has a defined process with assigned roles and responsibilities for Category Management and Procurement, Legal, the Business Line (department) user representative, and others. The system stores all relevant documents and tracks all required reviews and approvals from all SJI involved departments. Information for each contract includes the SJI company responsible, the counterparty, dates, and the status of all reviews and approvals. All contracts are tracked in the system. Proposed contracts are entered into the tracking system for reviews and approvals by Legal and all other involved parties. Once approved, Legal assigns a contract number. All releases against the contract through the purchasing system must include the contract number. This existing system will be replaced by the new contracting and purchasing modules of the financial system.

The Managed Service Provider initiative is a software platform to manage SJI's staff augmentation contractors who are regularly used by Information Technology, Accounting, Security, and others. Its scope includes requisitioning, managing, reporting, paying and assessing the contractors. It will be implemented by the first quarter 2021.

SJI will also install a module of its new financial system in the first quarter of 2021 to assist with vendor management. SJI is evaluating whether to implement additional modules of the system.

SJI is also implementing a new system to automate the RFP process. It will be used for SJG RFPs starting in the first quarter of 2021.

E. TRANSPORTATION

BACKGROUND

Fleet Management is a SJI level function responsible for all of SJI's, including SJG's, vehicles, equipment, and compressed natural gas (CNG) filling stations. A Category Manager Lead, Fleet/CNG, is the de facto Fleet Manager. The Fleet Manager reports to the SJI Manager, Category Management, who reports to the SJI Vice President, Shared Services, who reports to the SJI Chief Financial Officer. The Fleet Manager has one direct report, a Category Management Assistant who focuses on fleet management administration.

SJG has a fleet of 513 vehicles and pieces of equipment. The mix of vehicles includes utility trucks, street trucks, vans, pick-ups, dump trucks, SUVs, and cars. The mix of equipment includes backhoes, arrow board electric signs, boats, compressors, trailers, trenchers, welders, and woodchippers. Of the vehicles, 168 are CNG powered, 43 are diesel powered, and 185 are gasoline powered. 35 of the 396 vehicles were acquired in 2019, indicating an approximately 11-year replacement cycle.

All fleet maintenance work is contracted to a single vendor. The contractor provides all preventive and repair maintenance for SJG vehicles and equipment. Each of the five division work centers has a garage staffed by the fleet contractor. The contractor also provides roadside assistance. In 2020, SJI spent a total of $2.0 million on fleet services.

There is a committee for vehicle standards. The SJI Vehicle Committee meets bi-monthly. It is organized by the Fleet Manager and includes 11 representatives from both SJG and ETG. Members of the committee represent Category Management, Natural Gas Vehicle Business Development, Utility Services, Field Operations, Utility Services, and Contract Construction Operations. It plans to add union representatives in 2021. The Committee discusses both planning and budgeting and current fleet problems and concerns.

The current vehicle replacement program is not formalized but is a consensus developed program based on capital budget availability and condition of the vehicle as indicated by mileage, hours, repair history, and visual assessment. However, Fleet Management is currently working on a total cost of ownership initiative, including examining the utilization of existing vehicles, identifying excess inventory, and evaluating the need for new equipment. A replacement plan will be developed as part of this initiative.

SJI has a current, formal Fleet Policy and Procedures for employee use of company vehicles. It is a nine-page document that covers vehicle assignment, procurement, maintenance, operating guidelines, and disposal at end of useful life. Other than the section on Disposal of Retired Vehicles, it is not intended as guidance for the Fleet Management function.

F. REAL ESTATE AND LAND MANAGEMENT

BACKGROUND

The real estate and land management functions are performed within the SJI Business Support department, which reports to the SVP and Chief Financial Officer.

Business Support maintains records of real estate property by county, municipality, block/lot numbers, assessed values, address, size (acreage), and use or purpose. SJG identified real estate assets with a total assessed value of $19,154,800 as of 2019.

Business Support buys and sells property assets. SJG stated that in making the decision to lease or buy a property, it assesses the following data points: timing, length of the need, cash outflows, recurring costs, tax implications, property value, and business equity.

In 2019, land in the township of South Harrison was purchased for a SJG compressor station for $940,000. In 2018, land was purchased for construction of SJG Headquarters, in Atlantic City, for $2,979,736. In 2018, Business Support sold two parcels, one Hamilton township to the New Jersey Transportation Authority for runway protection for $5,000, and another parcel of 118 acres surrounding SJI headquarters in Folsom to Joseph Shelli Properties LLC for $574,697.

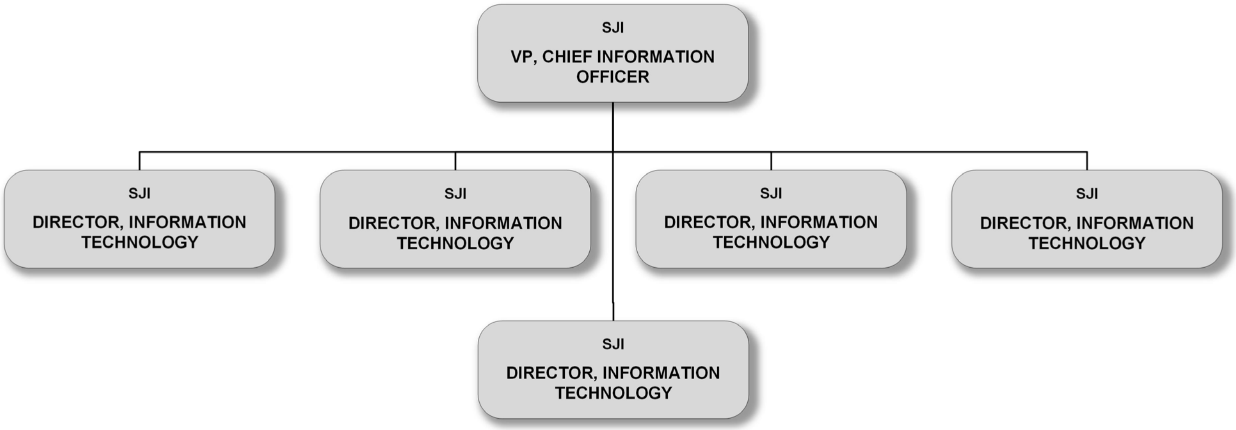
Business Support also manages rental properties. “Rental Income” for SJI (for property owned by SJG and leased or rented to others) varied from about $7,000 to $14,000 per year during the period 2013 to 2019. “Facility Expense Recovery-SJIS Rent” (SJG is receiving reimbursement for all or part of their rental expense from SJI and SJIS) totaled $356,702 for the period 2013 to 2018.

G. COMPUTER SYSTEMS AND SERVICES

BACKGROUND

Computer systems and computer services that support the operations of the South Jersey Gas Company (SJG) are the responsibility of South Jersey Industries’ (SJI) Information Technology Department. This department is responsible for the information systems that are used by SJI and all of its subsidiaries. The organization chart for the Information Technology Department is shown in the following exhibit.

South Jersey Industries' Information Technology Department Organization



This organization is under the direction of SJI's Information Technology VP, Chief Information Officer (CIO), reporting directly to the President and CEO of SJI. The CIO, who has been with SJI since 2017, has organized this department into five functional areas, informally referred to as: Plan, Build, Run, Protect, and Report.

APPLICATION AND PROJECT GOVERNANCE (PLAN)

This work group, with a director and five support staff, is described as the office of the CIO and is responsible for operating the IT Project Management Office (PMO), IT budgeting, and compliance. This work group manages the IT projects with internal and external staff and is responsible for performance management with SJI business partners ensuring that the correct and necessary changes to applications are made.

This group resources the IT component of capital projects, generally staffing the projects with contractors. This work consists of overseeing the staffing and budgeting of projects, or the IT component of capital projects. There is also an Enterprise Project Management group that has been in place for ten months that looks at prioritization of capital projects. Prior to this office starting up, IT would work with members of the senior SJI Team on project prioritizations.

Another function of this group is business relationship management which involves working with SJIU (utility shared services) and the utilities (SJG and ETG) in an effort to realize the full value from work that is performed. Contractors representing customer experience, finance, and human resources are utilized to perform this work. The work is approximately 70% project management and 30% business relationship management.

This work consists of understanding what business units want and matching it to what the systems can do. The purpose is to become trusted business partners with the business units and help lay out a road map to shape demand for the business. This work may also consist of helping to document the system requirements, tracking capabilities, helping to put together a RFP, and providing the RFP to the vendors.

Prior to 2017, there was limited cross-functional engagement with regards to evaluation of application solutions. Under the guidance of the CIO, a cross-functional team was put in place to select a finance application for ETG and SJIU. This practice has continued to expand with the onboarding of the business relationship management function. External advisory firms like Gartner are utilized to gain data about market leaders for various software. The teams partner with Procurement for development of RFPs and contract negotiations upon product selection. IT. Implementation will be the responsibility of IT.

In 2018, as part of the Elizabethtown and Elkton gas companies' acquisition, Management engaged PriceWaterhouseCoopers (PwC), as an independent and unbiased 3rd party, to assist with and facilitate the general ledger evaluation and selection process. Workday and Oracle were identified as industry leaders for cloud core financial management suites according to the Gartner Magic Quadrant Report, June 19, 2017. PwC provided the vendors with defined criteria for scenarios to present during their application demonstrations and provided Management with evaluation questionnaires.

Management's decision was based on an evaluation of the following:

- Functional Criteria
- Pricing
- Technical Criteria
- Maintenance and Support
- Business Criteria
- References

Building on the success of the Workday Human Resources & Payroll implementations for SJI and SJG, both the Human Resources & Payroll module of Workday were implemented at ETG; Time is tracked in Workday for employees and contractors.

The IT Capital Budget development process starts in the August/September time period. The IT capital requests are gathered from the business units and then discussed in meetings between the business units and IT management. Capital projects require a business case; this includes new capital to be spent on personal computers (PCs), cyber security, management tools, , and the enterprise data warehouse and other strategic application investments

BUSINESS SYSTEMS SUPPORT (BUILD)

This work group is headed by a director with 3 Managers and 2 High Technical Resources. staff and seven different vendor partners workers and is responsible for modifications and enhancements to the portfolio of applications for all regulated and non-regulated companies.

A good portion of this work is done with contractors on long-term (one year) Managed Service Contracts (augmentation-type contracts).

Systems supported by this work group include enterprise management asset systems, business systems, customer experience systems, and other systems.

- Enterprise Management Asset Systems
  - Maximo
  - Oracle Real-Time Scheduler (ORS)
  - ORACLE Mobile WorkForce Management System (MWM)

Maximo is a work management system while ORS and MWM are dispatch systems. SJG uses ORS, while ETG uses Mobile Workforce Management (MWM). Both dispatch systems work with Maximo.

- Business Systems
  - Lawson
  - PowerPlan
  - PowerTax
  - Endur
  - Workday
  - Hyperion
  - Perceptive
  - Salesforce

Lawson Financials modules will be replaced by Workday Financial. The rationale behind the decision to replace Lawson as the financial ERP system for SJG was prompted by the fact that the version Lawson installed for SJG was no longer supported by the vendor.

Workday is already in place for ETG and SJIU. The business subject matter experts are also considering adding the Treasury module of WorkDay. All systems, with the exception of Lawson, have been upgraded to the latest versions of the system. As noted above, the Payroll module has already been moved off Lawson and the functionality is provided by Workday. The non-regulated entities currently use Lawson for their accounting system but will switch to the new WorkDay financial system in 2022.

There is also a web developer function that is performed in-house. This is used for all web-based, like Oracle Hyperion which is used for budgeting and forecasting.

- Customer Experience Systems
  - Oracle Customer Care & Billing System (CC&B)

There are two CC&B systems, one for SJG and one for ETG. SJI's plan is to eventually merge these into one system. When ETG was acquired, it was determined that the cost and learning curve involved in trying to merge customer care systems was too great, and it would be easier to stand up two systems rather than to merge them at that time. SJG uses FERC accounting, and ETG uses "natural" accounting. Also, SJG is a union shop, while ETG's customer care personnel are non-union. The Customer Service Center for SJG is in Atlantic City, and the Customer Service Center for ETG is in Union, NJ. Overall, the Oracle CC&B system is working well; SJG and ETG are pleased with the product. The CC&B went live for SJG in 2014 and for ETG in 2019.

- Other Systems
  - Solve-It-Now
  - Perceptive
  - Salesforce
  - GIS

ServiceNow, branded as Solve-It-Now For SJIis a ticketing system (supported by IT Run); requests for changes to systems are input to this system. The Perceptive application is maintained by the IT Run work group, since no changes are made by SJI; all changes and enhancements are made by the vendor. Salesforce is used to track contacts and create new and upgraded gas installations opportunities. This application will be upgraded to the Lightning version. GIS is now handled by an outside vendor, this will be brought in-house; additionally, this will be upgraded and will leverage the GIS system currently being utilized by ETG.

The leak survey process will be improved by the integration of Maximo and GIS. Tracing and traceability will be accomplished using GIS; SJG will be able to know where assets are in the ground and bar codes will be attached to new assets. This will be done for ETG first, and functionality will be implemented for SJG.

ENTERPRISE SYSTEMS (RUN)

This work group with a director, twenty-four IT staff, five contractors, and several seasonal interns, is responsible for the two SJI data centers, one in Valley Forge and the other in the Philadelphia Navy Yard. Both data centers are run by outside firms using SJI hardware and software. This group is also responsible for Office 365, SharePoint, the IT patching process, and backup data.

The primary work functions of this group include:

- Helping with setup and support for all applications that employees use (e.g., Office 365 Suite, Share Drive, One-Drive, e-mail).
- Providing application support and back up for all applications
- Triaging support requests to determine what level of support is required and if the problem can be fixed in-house or must be referred to outside consultants
- Maintaining all IT infrastructure at 23 physical sites
- Developing the Capital Hardware Budget for IT

The IT Help Desk will send trouble or change tickets to the Change Management System; requested enhancements will be triaged in the Build function.

A listing of all SJI applications is shown in the following exhibit.

Name and Description of SJI Applications

Item No.	Application Name	Application Usage
1	CCB Labs Transactions (Web)	A website for running CCB Labs Transactions stored procedures (SSIS package). The user supplies Start and End dates for the report, then clicks the submit button. The website back end calls the stored procedure using the selected dates.
2	QAS	Address Validation application used by CCB and SalesForce
3	Cisco Finesse – ETG Agent Desktop	Allows an agent to see incoming calls from the IVR.

Item No.	Application Name	Application Usage
4	Price Upload Automation (Process)	An Excel "Basis" file contains macros and equations for daily Natural Gas market transactions. The excel workbook ("Basis") performs operations on the data, and then outputs the results to a CSV file. The Basis file needs to be opened, saved, and closed in order for this data to be analyzed. Price Upload Automation retrieves the data from the marketplace, populates this data into a SQL database, then performs the open, save, close on the "Basis" file
5	Transportation	App portal for accessing reports for South Jersey Gas (Allocations, Reports, Nominations)
6	Bill 2 Pay	Application that works in conjunction with KeepTrack portal to process customer payments that are made through the Keeptrack portal
7	Customer Portal (Meridian – Keep Track)	Application to provide a customer portal to allow customers to enroll in ebill and check their account information
8	Powerplan	Asset accounting and time allocation
9	Synergi	Asset Integrity Mgmt
10	IBM Maximo Asset Management	Asset Management
11	Oracle Hyperion	Budget, Forecast Platform
12	Calabrio	Call center workforce management tool
13	Metretek	Collects meter readings for industrial accounts
14	SalesForce – CNG tracking	Compressed Natural gas tracking application
15	ApplicationXtender	Contract management approval workflow and repository
16	Fieldbook	Current SJG GIS and Document Finder Application
17	Virtual Hold Technologies	Customer call back
18	CC&B – Billing	Customer Care and Billing – maintains customer information to allow for billing customers
19	Contributions	Desktop app for determining whether customer contributions are necessary for natural gas installations. Includes documents for Payment, Main Extension, and Service
20	Stub Service	Desktop app for determining whether Stub Service is necessary for natural gas installations. Includes documents for Payment, Stub Service Agreement, and Stub Service Letter
21	Microsoft Endpoint Configuration Manager	Digital Workspace Software
22	Citrix XenDeskop	Digital Workspace Software
23	Citrix XenApp	Digital Workspace Software
24	Sharepoint	Doc and Process mgmt
25	ENDUR	Energy Trade Risk Management System

Item No.	Application Name	Application Usage
26	AutoCAD	Engineering
27	Meridian EDMS	Enterprise data mgmt. suite – data staging and CI/CD solution
28	Oracle SmartView	Enterprise Performance Mgmt
29	PowerPlan Asset Management	Finance, Tax, and Regulatory Platform
30	Lawson Financials	Former ERP Solution
31	Endur Price Repository	Gas purchase and Pricing repository
32	ICE	Gas Trading Gateway
33	ARCGIS	Geographic information system used to visually represent SJG assets, locations, and work orders on a SJG territory map
34	Workday (HR/Payroll/Financials)	HCM, Payroll, Procurement, and Financial ERP Solution
35	Service Award Web	HR uses this app quarterly to generate a list of employees who have work anniversaries (5, 10, 15, etc.) for the next quarter. The app displays the results in a Table which can be exported to Excel. HR sends the excel file to O.C Tanner for processing.
36	Hyperion Actuals Load	Hyperion is a budgeting and forecasting tool by Oracle. Users can use this web form to automatically load Lawson or Workday Actuals directly into Hyperion and run the related rule set
37	GeoWorx SYNC	Interface used to move assets, locations, work orders, material, etc. to outside GIS vendor (MM) for process and updating Maximo and fieldbook application
38	AP Invoice Approval Matrix)	Interface used to move assets, locations, work orders, material, etc. to outside GIS vendor (MM) for process and updating Maximo and fieldbook application
39	Hyland Perceptive Invoice Management	Invoice Management
40	Active Directory Management (Web)	IT Administrators can view active directory through a web application portal. Dropdowns allow for sorting the results by Account Type, Active Status (Enabled/Disabled), Manager, and OU (Organizational Unit).
41	ServiceNow	ITSM and HRSM and ITOM
42	SalesForce	Lead and Sales management Solution
43	Platts	Market Price Data Platform
44	Marketer Portal	Marketers for natural gas use this portal to see Reports, Meter readings for customers, Nominations, and Totals by the gas pipeline. The production site is public facing
45	Customer Portal	Meridian Managed Web Portal for Customer and call center management
46	MRI MRE	Meter Read files
47	ITRON FCS	Meter Reading Data Platform
48	IBM Data Stage	Middleware

Item No.	Application Name	Application Usage
49	IBM IIB – Msg Bkr	Middleware
50	ors (oracle)	Mobile Workforce and real time scheduler
51	Telog	Monitor remote pressure endpoints
52	SolarWinds	Monitoring Platform
53	CC&B – MTM (EDI)	MTM is a module of CC&B that allows for processing of EDI transactions to/from marketers
54	Contractor Expiration Notifer (Process)	Notifies when contractors are approaching the end of their contracts with the company
55	Oracle Enterprise Manager	OEM
56	Office 365	Office Suite
57	CC&B – Credit and Collections	Part of CC&B configuration to address late payments and collections
58	CC&B – Meter Reading	Part of CC&B that creates and reads meter reading files that are sent back and forth from ITRON
59	CC&B Marketer Billing	Part of CC&B to address billing of marketer accounts on a bi-monthly basis
60	CC&B LABS Billing	Part of CC&B to address Large Accounts Billing – requires separate rate configurations
61	CC&B – Loans	Part of CC&B to address loan accounts with specific monthly installments
62	CC&B Payment Processing	Part of CC&B to address payment from various vendors
63	CC&B – HomeServe	Part of CC&B to address sending and receiving files from HomeServe and billing their charges
64	CC&B – Assistance programs	Part of CC&B to address state and federal assistance programs such as USF, LIHEAP, and FreshStart
65	CC&B Bill Print	Part of CC&B to create a bill extract file to address the printing of retail, LABS, and marketer bills
66	Send Word Now SYNC	Process to send employee contact information to Cloud application "SendWordNow" for sending out Mass Notifications in the case of an emergency
67	Honeywell TDS	Provide end users (Billing, Sales, Transportation, etc) with a portal to view Industrial Billing Usage
68	AIRP / COMP Projects	Real-Time Maximo Work Orders showing AIRP / COMP projects by status to gain spatial intelligence of work
69	SSRS/SSIS/SSAS	Reporting Platform
70	SalesForce – contractor damages	Risk Application that tracks contractor damage recovery
71	UC4	Scheduler
72	RSA Authentication	Security Software

Item No.	Application Name	Application Usage
73	ServiceCards (MottMcDonald)	Service record cards are stored on FTP site then vendor partner (Mott MacDonald) will process the data.
74	Sendout Web App	Similar look and feel to Transportation Portal
75	Lawson Add-Ins	Skelta BPM and EMC ApplicationXtender
76	GIS Utility Model	Spatial Enterprise Oracle Database schema in which all Gas Assets are housed with associated attribute data and spatial reference. Other assets located within database for landbase data: parcels, roads, streams, etc.
77	SCADA	Supervisory Control and Data Acquisition software for system monitoring
78	ALM	The specification, design, development, and testing of SJIs software applications.
79	Payment Locator (home grown)	This is a web service that is used by IVR to return payment locations based on zip code and distance
80	Radar	This is an in house developed access data base used by gas supply to capture capacity releases information.
81	Cameo Outbound Dialer	Tool used to administer outbound calls to customers.
82	Cisco CUCM	Unified Communications Manager (core telephony)
83	Cisco UCCX	Unified Contact Center Express (call management, routing, etc.)
84	Cisco CUIC	Unified Intelligence Center (reporting)
85	WASP Updater	Updates WASP daily with Employees and Contractors information (Name, Email, Employee Number). Application is no longer being used
86	Nuance speech server	Used by Payment locator for text to speech
87	TFS	Version Control Software
88	Cisco Unity Connection	Voice Mail system
89	Cisco Anyconnect	VPN
90	Netmotion	VPN connectivity
91	SJI Locations On Line Maps	Webpage on SJI Today that contains Bing maps for all SJI Locations
92	Contractor Management (Web)	Website where managers can login to see the contractors they have reporting to them. A grid displays the contractor term info and the ability to Extend the term. Managers have the ability to extend terms and alert if there is a contractor they do not manage displayed in the list.
93	CSC Corptax System Solution	Provision and compliance tax software
94	IVR	Interactive voice response is a technology that allows humans to interact with a computer-operated phone system through the use of voice and DTMF tones input via a keypad
95	Kubra	Outside vendor used for printing customer bills and bill inserts

Item No.	Application Name	Application Usage
96	Eastern Region Blanket Work	GIS web-based application used for tracking the status of Eastern Region Blanket Work
97	EFV in Floodzones	GIS web-based application used for locating EFV in Floodzones
98	Gas Service Request	GIS web-based application used for tracking the status of Gas Service Request
99	Live Leak Locations Maps	GIS web-based application used for tracking leaks in an operating status
100	Marketing GIS DashBoard	GIS web-based application used marketing department to locate potential gas customers
101	Printable Maps	GIS web-based application used for print hardcopy of maps
102	Sharp II EFV	GIS web-based application used for tracking the status of Sharp II EFV work
103	Transmission Map GPS Critical Valves -Pipeline	GIS web-based application used for locating critical transmission valves
104	Web Map Applications	GIS web-based application used by SJI employees and vendor partners to locate assets
105	Western Region Blanket	GIS web-based application used for tracking the status of Work Western Region Blanket Work
106	AD Exception Notifier (Process)	This process scans all account in Active Directory to make sure all rules are followed when accounts are created. These rules include: All accounts must have a manager All accounts must have a password Contractor accounts must have an expiration date Account expiration dates must not exceed a maximum
107	AD Group Maintainer (Process)	This process automatically maintains certain security group and distribution list memberships based on a predetermined naming convention
108	AD/Workday Sync (Process)	This process pulls all accounts from the Human Resources API in Workday and updates specific attributes in Active Directory based on properties in the corresponding Workday worker account.
109	Workday Payroll Integrations (Web)	Pulls payroll data from Workday and transforms this data before sending to ML, TD Bank, etc.
110	Citrix	Virtual desktop protocol used by vendor partners for accessing SJI applications.

All applications in the above exhibit are new since 2013 with the exception of number 30, Lawson Financials.

SECURITY AND TECHNOLOGY ARCHITECTURE (PROTECT)

This work group, headed by a director with four staff and several contractors, is responsible for Cyber Security including firewalls, cyber security audits, vendor evaluations, training associates in cyber security, and combating phishing attempts. A review and evaluation of this function is contained in Chapter 18, Cyber Risk Mitigation/Cyber Security.

DATA AND ANALYTICS SERVICES (REPORT)

This work group, with a director, three SJI staff, and one contractor, is responsible for storing and reporting all data, database administration, and the IT Dashboard.

The analytics function in this group is responsible for reporting, creating dashboards, data transfer, and database management capabilities. Business requirements come from the business leads through the IT Plan Function, and this group executes requests and creates reports and dashboards, manages databases, and stores data in a retrievable format. Reports are automated and maintained by the database team which also remediates any issues that may arise. Dashboard development is still in the early stages. This work group also designs databases and helps bring them on-line and is responsible for loading, capacity, report location, database management, and monitor performance. There are 859 databases across the SJI organization, including Oracle, SQL Server, and DB2. Oracle databases drive transactional services.

For both contractors and in-house employees, 30% of personnel time will be spent on capital projects and 70% will be charged to O&M projects. Contractors are used on the majority of capital projects.

CONTRACTORS

SJI outsources their service desk, patching function, some security function, performance management, and development work. Contractors – for CC&B and Maximo are resources from PWC in India, or the United States. Contractors may work on O&M activities or Capital projects based on incoming requests. Contractors come from a number of resource providers. SJI issues RFPs for contractors for new applications. Contractors have always been used for larger system implementations; SJI retains the project management/project manager role. The Information Technology group primarily uses Crowdstaffing as a vendor to bring in IT contractors. Crowdstaffing, formally known as Zenith Talent Corporation, is a staffing, recruitment, and job placement company; it posts for positions and brings in applicants. Additionally, the group may source IT contractors with specialized skillsets directly from vendors known for those specialized skills.

There are seven contractor or vendor partners, including PwC, and their employees show up on the organization charts as "Contingent Workers." Vendors are acquired through the Vendor Management Office (VMO), managed by SJI's Procurement Department. Work can be on-site day-to-day or remote. The bidding process for IT work was previously handled by IT (during the 2017–2019 time period) but is now being handled by Procurement.

The selection of contractors for projects is based on business (90%) and technology (10%) knowledge, not necessarily on the framework of the project being staffed, but whether the contractor has the knowledge to drive successful delivery of the project.

H. RECORDS MANAGEMENT

Records management is normally a function of all departments at companies, including utilities. Records management for non-physical assets includes the Human Resources (HR), Financial Planning and Analysis (FP&A), and Customer Experience (CX) Departments and is discussed below. See Chapter 6, Distribution and Operational

Management, for discussion of records management of physical assets such as distribution and transmission pipe.

Human Resources Records Management

HR has records management policies for 14 categories of employee records including personal information, job history and actions, claims, illness and injury, benefits, disputes, and similar. Each of the categories has a specified retention period ranging from one year to the life of the corporation (e.g., employee exposure to toxic substances, handling of hazardous materials).

HR follows regulatory and industry standards, including National Association of Regulatory Utility Commissioners (NARUC), Code of Federal Regulations (CFR), and the United States Code (USC).

In addition, HR completes a review in support of Information Privacy each year. This review consists of validating access rights to systems containing employee information to ensure appropriate access to employee records and data is verified and minimized.

Financial Planning and Analysis

FP&A has a records retention policy for budget reports (financial operating results) that adheres to NARUC and FERC standards. In addition, FP&A has access to salary information to support budgeting and forecasting payroll expenses. This access is limited to certain individuals within FP&A who are required to sign a non-disclosure agreement.

Customer Experience Records Management

The CX department has retention policies for 18 categories of records including customer accounts, meter records and history, work orders, complaints, collection agency reports, uncollectible, and similar. Each of the categories has a specified retention period ranging from one to nine years. CX uses regulatory and industry standards, including NARUC, FERC, and the New Jersey Administrative Code. In addition, CX maintains customer call recordings for a minimum of three years.

CX completes a review in support of information privacy each year. This review consists of validating access rights to systems containing customer information, including the Customer Care and Billing system, My Account Portal, and the Customer Contact Center's SharePoint.

I. SECURITY OF INFRASTRUCTURE

BACKGROUND

SJG has extensive natural gas infrastructure including city gates, transmission and distribution pipelines, an LNG plant, transmission and distribution regulator stations, and customer service lines and meters. It also has multiple facilities including SJI and SJIU/SJG headquarters, five division work centers, payment centers, a transmission pipeline work center, and a compressor station. All are vulnerable to security incidents, such as terrorist attacks, personal threats, property damage, and theft.

The Security unit is an SJI level function serving SJI and its regulated and unregulated subsidiaries. The head of Security, the Security Specialist Lead, reports to the SJI Vice

President, Shared Services. The Security Specialist Lead has two direct reports, a Senior Security Specialist and a half-time Project Assistant. Security work is largely contracted.

The Security Specialist Lead is a retired police officer. The ‘Security Specialist Lead is an individual contributor and handles security issues for SJI, SJIU, and SJG. The Senior Security Specialist is also a retired police officer and focuses on security issues for ETG.

The Security Specialist Lead and/or Senior Security Specialist individual contributor functions include:

- Contracting and contractor management
- Developing and implementing security policies, procedures, exercise plans, and budgets
- Participating in contractor developed security exercises
- Physical security upgrade project management
- Some employee security training, such as a 2019 program on active attackers
- Reviewing, approving, and processing badging and access requests
- Responding to regular and after-hours alarms if called by one of the five division work center personnel responding or the security alarm monitoring contractor (security alarm calls go first to the on-call division personnel assigned to respond to the calls)
- Site visits and security inspections

Security Specialists are not involved in theft-of-service investigations or check and credit card fraud investigations.

The half-time Project Assistant handles badging and invoice payment processing. The Assistant is shared with Facilities Management.

Most security functions are provided by contractors:

- A contractor provides uniformed, unarmed guards at the Atlantic City, Folsom, and the ETG Union headquarters. No other sites are staffed with guards, including division work centers, payment centers, and satellite offices. The contract also provides for the dispatch armed security for ad hoc reasons, such as a hostile employee, site surveillance, or suspicious circumstances. In 2019 and 2020 there were a total of 14 instances of armed guard dispatches. Emergency situations are referred to the relevant local police force.
- A contractor provides alarm, access control, and video installation and maintenance. The contractor also does alarm monitoring for SJI, SJG, and ETG, for sixteen secured facility sites. The contractor refers the calls to the Utility Services dispatchers who refer them to the call out list from SJG operations. ETG alarm calls go to the Facilities department. SJG alarms are received by the alarm monitoring contractor and called to the Utility Services Dispatch unit. The Dispatchers forward the alarm to the designated call out personnel in the relevant division. Responding division personnel then notify Security of the incident by phone, email, text, in-person contact or through the incident reporting system. Serious incidents are called to Security promptly.

- Two different contractors develop and implement security exercises. As examples, one of the contractors provided a simulated intruder exercise for an SJG division and the other provided a security exercise at a transmission pipeline regulator station.
- Another contractor does security assessments and plans as needed.

SJI has an incident tracking system that is shared with the Environmental and Safety departments that allows employees to enter a security incident that is then automatically routed to Security for review and investigation. However, Security relies on a spreadsheet with manual inputs for incident tracking.

There is a SJG Physical Security Committee. Members include:

- Vice President, SJI Shared Services, Chair
- Vice President, SJG Operations
- Security Specialist Lead
- Director, System Planning, Engineering, and System Integrity
- Manager, Transmission Integrity Management and Distribution Integrity
- Manager, Gas Production
- Director, Field Operations
- The two Managers, Field Operations
- SJG President
- Senior Security Specialist

The Physical Security Committee meets quarterly. Agendas are sent with the email invitations. Formal presentations are prepared, and minutes are kept.

SJI and SJG have a formal, current, confidential Physical Security Plan. It follows the Transportation Security Administration (TSA) Guidelines for natural gas pipeline security plans. The plan calls for a wide variety of security measures, including fences, locked gates, locked valves, security lighting, video surveillance, 24-hour monitoring, door alarms, warning signs, and back-up power supplies. Important facilities and critical above ground stations are identified for enhanced security. Responsibilities and responses to security incidents are specified.

SJI also has formal, current, confidential security policies and procedures covering anti-violence, contractor background, vehicle transmitter gate access, and identification badges/key cards.

Security also plays a key role in several SJI plans.

- Crisis Management Plan (confidential) – Incident Support Team member(s) who provide subject matter expert input into planning and incident response.
- Business Continuity Plans (confidential) – Receive reports of incidents and make appropriate notifications, declare facility related emergencies as needed and specify level of response (e.g., evacuation or shelter in place), and provide additional ad hoc security services, as needed.

- Site Security Plans (confidential) – annual review and update of the SJG Physical Security Plan and manage the associated program; support the Facility Risk Analyses and Facility Criticality Assessments; conduct Security Vulnerability Assessments of designated critical facilities; develop and implement supporting security policies and procedures; manage the installation, testing, and maintenance of associated security equipment; and liaise with federal, state, and local agencies and industry associations on security threats and responses.

J. FINDINGS

19-1 SJI's insurance broker contract does not include a Service Level Agreement or any performance metrics.

SJI's broker negotiates with insurance companies to secure commercial insurance policies and to negotiate the terms of existing policies. The contract lacks a Service Level Agreement that typically would include metrics that would allow SJI to evaluate the broker's performance, such as securing competitive premiums, timeliness of payment transfers, the frequency and quality of audits of the carriers, and percent of claims paid versus claims made.

19-2 The insurance broker evaluation form and process is highly subjective, except for two timeliness factors.

The company has said "Timeliness is measured and tracked though communications as follows: (1) Email and phone communication, timely refers to a response received within 24 hours and (2) Pre-renewal process, timely refers to minimum bi-weekly communication while gathering data and refers to strategy meeting within 60 days of renewal. There are no other measurable service level or performance metrics that are tracked."

19-3 Not all SJG-related internal legal services are provided by the Office of General Counsel.

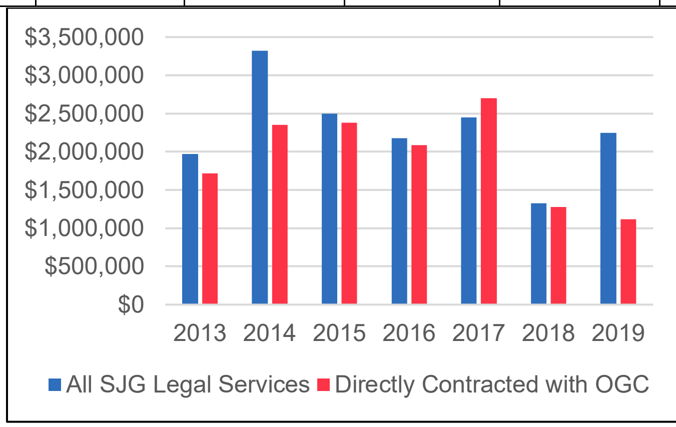
Two regulatory attorneys report to the VP, Rates and Regulatory. There are two attorneys for labor relations who work for Human Resources. The VP of Clean Energy and Sustainability and the Interim Regulatory Affairs Counsel also provides regulatory support to the regulated utilities.

19-4 Outside counsel is procured by departments other than the Office of General Counsel.

The exhibits below show External Legal Services for SJG. The first row shows the costs of all legal services arranged by other departments and services directly engaged by the OGC. The second row shows the only the costs of legal services directly engaged by OGC.

SJG External Legal Services Costs

	2013	2014	2015	2016	2017	2018	2019
All SJG Legal Services	$1,966,989	$3,318,967	$2,495,355	$2,174,648	$2,448,502	$1,327,845	$2,250,436
Directly Engaged by OGC	$1,718,336	$2,354,853	$2,381,915	$2,083,540	$2,703,070	$1,274,733	$1,119,680



The costs for all legal services do not show a clear trend; and the 2017 and 2018 are an anomaly. As discussed below, there is a recent downward trend for the costs of services directly contracted by OGC.

SJG explains that the "procurement" data provided for the total SJG external legal costs will be different than the costs for services directly engaged by OGC. The procurement data includes legal costs incurred by other departments (for example, Human Resources and Insurance). Another reason for these amounts not reconciling is that the procurement data is based on when the payment was made, and the OGC data is based on date of service.

SJG legal costs for services that have been directly engaged by OGC were reduced in 2018 and 2019; and are lower than in 2013. One law firm, Cozen O'Connor, accounted for much of SJG's expenses for outside counsel: 64% in 2013, 60% in 2014, and 46% in 2015. The largest driver was rates and regulatory filings, followed by debt issuance, construction, and litigation matters. The Cozen O'Connor expenses decreased over the years because more matters are being assigned to in-house counsel. For matters that were assigned to Cozen O'Connor in recent years, in-house counsel has worked to reduce costs. The number of OGC in-house legal staff has remained relatively constant during this period.

19-5 With the changes after the pandemic, it may be possible to consolidate SJI and SJG headquarters.

SJI, SJIU, and SJG are evaluating the lessons learned from the pandemic work-from-home period. No administrative offices were occupied during the pandemic and video meetings, email, and voice calls substituted for in-person meetings. Business continued, and there were few serious adverse effects reported. Among the pandemic lessons learned are that some employee positions can work from home effectively and efficiently. It is likely that SJI, SJIU, and SJG will conclude that fewer employees need to be in the office on a day-to-day basis and that less total administrative space will be needed. More "hotel" offices for work-from-home employees visiting the office can substitute for more permanent offices for everyday employees. The total demand for office space will likely be significantly less.

The Organization section of Chapter 3, Organizational Structure recommended that the SJI and SJIU levels be consolidated at the SJI level and that the management of SJG and ETG Operations and Customer Experience be consolidated. Further, the principal clients for the current SJI staff functions are SJG and ETG. Physical separation from their principal clients at a different headquarters is not optimal. Utility operating functions would benefit from close proximity to important support functions like Human Resources, Information Technology, Materials Management, Fleet Management, Facilities Management, and Contracting and Procurement.

It would be more effective and efficient to have all of the senior management, including the utility operating functions of Customer Experience, Gas Supply, and Operations, collocated with the SJI CEO and all shared support services. With the reduction in demand for office space and the organization consolidation, it may be possible to vacate one of the headquarters sites and collocate all SJI senior leadership, shared support services, and utility operations headquarters personnel.

19-6 Facilities Management has a number of energy and water conservation programs.

In 2020, SJI spent a total of $5.0 million on utilities. Facilities Management makes energy efficiency a part of all projects at SJG locations. Examples include:

- At the Folsom headquarters renovation and the Atlantic City Headquarters construction, mechanical systems were installed using the latest technology to achieve the most efficient result with both heating and cooling. Management of the mechanical systems can create both occupied and unoccupied modes with resulting schedules to establish off-hours for maximized efficiency and reduced utility costs.
- All new lighting control systems are equipped with occupancy sensors and LED lighting. Renovation of existing facilities follow similar standards. Whenever possible, lighting systems (both interior and exterior) are converted to LED with controls for either dusk to dawn or occupancy sensing.
- In 2020, SJG installed solar arrays at four operating division work centers. These arrays will be on-line in the summer of 2021 and will reduce energy cost. SJG is reviewing all company-owned real estate parcels to determine the feasibility of future solar projects.

SJG has also implemented water saving programs. Water for irrigation systems is supplied by owned wells wherever possible. In addition, timers and controls for irrigation systems are managed with rainfall indicators that adjust the amount of water needed based on current conditions. SJG has also converted most bathroom facilities to include motion activated faucets that reduce water usage. In addition, the Atlantic City building includes waterless urinals in the men's rooms that also lower water usage.

19-7 Facilities Management does not have an automated system for managing facilities work.

Facilities Management does have a new online ticket system for facilities requests and complaints. Users can enter their needs in the system and the requests are routed to Facilities Management for resolution. However, Facilities Management tracks all work on a spreadsheet with manual inputs. Facilities face similar management challenges as the natural gas transmission and distribution system. There are many interrelated sites, systems and components, capital additions, and maintenance histories; and customer service orders are important. SJG has a modern set of integrated GIS, asset records, work management, and customer service scheduling systems that could also work well for Facilities Management.

19-8 SJI has made good progress in developing the systems contracting function in the last three years, but more is needed.

SJI, SJIU, and SJG are heavily reliant on systems contractors. SJI contracts most work on:

- Materials
- IT development and implementation
- IT help desk
- Facilities
- Security
- Fleet

SJIU contracts most work on:

- Clean Energy program implementation
- Leak surveys
- Damage prevention (line locates)
- Environmental site remediation

SJG contracts most work on:

- Design engineering
- Construction
- Shut-offs for non-payment (contracted by Customer Experience)

In addition, SJG contracts for some of the Rockford Eclipse valve replacements, customer request turn-offs, light-ups, and meter replacements.

According to the 2019 SJI Spend Analysis, SJI, including all subsidiaries, spent the following amounts on contractor related categories:

2019 SJI Spending on Contractor Related Categories

Category	Spend ($000,000)
Construction	$164.4
Operations Services	$57.5
Professional Services	$52.0
Materials	$29.3
Information Technology	$15.7
Marketing	$4.7
Environmental, Health, and Safety	$3.0
Legal	$2.2
Facilities	$2.0
Fleet Services	$.7
Employment Services	$.7
Transportation and Warehousing	$.2
Total	**$332.40**

SJI's spending on contractor related categories in 2019 was $332 million.

In the last three years, SJI has created the systems contracting function (Category Management) and added positions. It has developed and implemented standard templates for its standard documents and has adopted the Legal Department's contract tracking system. It is currently modernizing the procurement and contracting information systems support. It is implementing a Supplier Optimization Program that will right-size the number of suppliers and streamline operations. It is also working with a consultant to improve vendor management and information accuracy.

Further, it has evolved some contracts from time and materials pricing to better practice unit pricing and has moved toward bidding more individual projects rather than just award them to the blanket contractor.

However, the large scale of systems contracting in SJI could justify additional resources to steepen the learning curve and accelerate the implementation of better practices such as a formal vendor evaluation process and systems.

19-9 There is no SJI Supply Chain Manager position.

The Vice President, Shared Services, and the managers of Category Management and Procurement together operate SJI's and SJG's supply chain. However, the Vice President and Category Manager have other responsibilities as well. The Vice President, Shared Services, also supervises Accounts Payable, Facilities, and Security. The Category Manager also supervises the Fleet/CNG function. These extra duties dilute their attention on the supply chain.

It is common for enterprises with the contracting and procurement scale of SJI ($1.3 billion annual spend and $332 million to contractors) to have a dedicated Supply Chain organization staffed with highly qualified and experienced supply chain professionals. The scope of the supply chain responsibilities normally includes all contracting, contract administration, procurement, and materials management. They do not typically include the actual management of the contractors, which is normally done by the user departments.

19-10 SJI does not have a policy on rebidding systems contracts.

SJI does not have a policy on rebidding multi-year contracts. While it is a good practice to have multi-year systems contracts for functions like fleet, materials, facilities, security, design engineering, and construction, it is also a good practice to rebid the contracts periodically. While SJI has rebid some contracts like design engineering and construction contracting in recent years, it has also simply extended existing contracts without rebidding them, possibly in response to a lack of contracting resources. For example, the materials contract has been in place since 2006 without a rebid and without formal extensions of the original three-year contract (2006–2008).

The new purchasing system being installed now will provide visibility of the contract term ending dates for each existing contract and will allow SJI to rebid the contract before the existing contract expires.

19-11 SJI has a formal vendor qualification process but does not have a formal vendor evaluation program.

There is a structured process to qualify vendors for inclusion in the purchasing system and to make them eligible to receive contracts or purchase orders. This includes credit checks, tax certificates, insurance verification, and on-site contractor identity verification and background checks. Once qualified, the vendor is assigned a vendor number that must accompany all invoices.

While there is no formal vendor evaluation program, SJI is planning to implement one in the future. In the meantime, vendor assessment and feedback does occur in various forms, such as regularly scheduled planning and review sessions with existing contractors. Prior contractors are also informally evaluated before being invited to participate on new RFPs.

19-12 SJG has made progress in increasing its purchases from diverse suppliers.

The following exhibit shows the trends in expenditures with diverse suppliers including minority owned businesses (MBE), Women Owned Business Enterprises (WBE), Veteran Owned Business Enterprises (VBE) and Disabled Veteran Owned Business Enterprises (DVBE).

Diverse Supplier Expenditure Trend ($ million)

Category	2013	2014	2015	2016	2017	2018	2019
Diverse Supplier Spend	4.0	29.5	8.8	5.4	5.7	29.0	36.5
Total Spend	145.0	309.5	433.0	278.1	303.9	448.3	375.4
Diverse Supplier as a Percent of Total	2.8%	9.5%	1.9%	1.9%	1.9%	6.5%	9.7%

The absolute dollar amount and the percentage of total spend placed with diverse suppliers has increased dramatically from 2017 ($5.7 million and 1.9%) to 2019 ($36.5 million and 9.7%).

19-13 There is no inventory management function within SJI.

With the arrangement with the materials supply contractor, inventory management is fairly simple. SJG Operations sets the minimum and maximum levels of inventory for each item at each of the division consignment cages. When the inventory level for an item falls below the minimum, it is replenished to the maximum. SJG is able to change the minimum and maximum levels as needed. SJG Operations simply requests the change through the Category Manager who instructs the contractor to make the change. Typically, minimum and maximum levels are increased when higher use is expected. However, there is no inventory management function within SJI and there is no regular review of items stocked in the consignment cages and the minimum and maximum levels for each item.

Part of the cost SJG pays to the materials contractor is for inventory carrying costs. The more inventory, the higher the costs. With no regular review of stocked items in the divisions and no regular review of minimum and maximum levels, the total amount of inventory could be higher than necessary and, in turn, the inventory carrying costs would be higher than necessary.

19-14 There is no audit of the materials contractor's proformas that determine the "Return on Sale" refund each year.

The materials contract provides for a "return on sale" refund each year if the SJI payments to the contractor exceed its costs and return rate after tax and for an additional payment if the payments did not meet the contractor's costs and return rate. The return rate increased from 3.5% to 4.5% on August 1, 2020. The contractor provides a proforma each month showing the payments, costs, and return rate. The proformas are single page reports with just 17 line items for sales and costs. There is no detail provided including for $659 thousand in "Corporate Admin," which is 15% of the total expenses.

The following table shows the return on sale refund amounts from 2013 through 2019. From 2013 through 2018, the amounts are for SJG only. 2019 includes both SJG and ETG.

Return on Sale Amounts from the Materials Contractor

Year	Refund or (Additional Payment)
2013	$162,430
2014	$2,486
2015	$587,907
2016	$113,288
2017	$(72,314)
2018	$(149,202)
2019	$398,679

From 2013 through 2016, and again in 2019, SJG received refunds. In 2017 and 2018, SJG had to make an additional payment. The highest refund was $588 thousand in 2015 and the highest additional payment was $149 thousand in 2018.

No one from SJI audits the materials contractor's proformas to ensure accuracy. Because significant sums of money are involved, errors can reduce the refunds to SJI and SJG. It would be a better practice to have regular audits of the materials contractor's proformas.

19-15 The SJI fleet management function is underdeveloped.

The Fleet Manager is new and does not have a background in fleet management, and neither does the supervisor. SJI does not have a fleet management system or policies and procedures. There are no written plans to develop the fleet management function. However, there are several planned initiatives:

- Develop a formal vehicle onboarding process covering requisition for a new vehicle from receipt and up-fitting through placement in service
- Develop a Quality Assurance/Quality Control program for Fleet Management, including audits of the five garages operated by the contractor
- Survey fleet users on fleet management issues
- Develop a total cost of ownership program including fleet replacement standards

Fleet management at companies with large fleets is typically a well-developed function with professional fleet managers, a modern fleet management system, and well-developed policies and procedures. SJI Fleet Management lacks these important attributes. While the current initiatives are admirable, there should be an aggressive, written plan to quickly bring the fleet management function up to industry standards.

19-16 SJI has a strong initiative in promoting CNG vehicles.

Fleet Management builds and operates the CNG stations. The Natural Gas Vehicle (NGV) Business Development Manager is responsible for developing the business through a combination of fleet conversions and station construction. SJG builds and operates CNG filling stations through two contractors. There are currently eight stations. SJG may add one additional CNG station in 2021. Seven of the CNG filling stations serve both SJG vehicles and other, non-affiliated, external customers. Only one of the stations is exclusive to SJG use. The largest category of public use is for refuse trucks. Of the 396 SJG vehicles, 168 or 42% are CNG.

The SJG rate schedule, Natural Gas Vehicle – Company Operated Compressed Natural Gas Vehicle Service at Company Operated Fueling Stations, permits SJG to dispense CNG to external (non-SJG) customers. The cost to operate and maintain the stations is recovered through the volumetric Compression Charge rate component, which is included in the total dispenser rate. The total dispenser rate per gasoline gallon equivalent (GGE) includes normal natural gas commodity costs, the compression rate, and the Federal Excise Tax as a dollar per gallon charge. The December 2020 GGE rate for CNG including NJ sales tax was:

- Delivery charge – $.081635
- Distribution charge – $.294716
- Compression charge – $.819624
- BGGS – $.50029
- Rider I – $.108894
- Federal Excise Tax - $.1830000
- Total Cost per GGE - $1.98816

There was no NJ Motor Fuels Tax included.

SJIU estimates that using CNG rather than gasoline results in a 22% reduction in CO2e emissions. CO2e is sum of CO2 (carbon dioxide), methane (CH4), and nitrous oxide (N2O) after each are multiplied by their respective global warming potential values. The 2020 estimated reductions in emissions are shown in the following exhibit in total and on a gallon of gasoline equivalent (GGE) basis.

Emissions Reductions from CNG versus Gasoline

Fuel Type	CO2e, Tons	CO2e, Tons/GGE
Gasoline	2,258.36	0.0088
CNG	1,770.09	0.0069
Reduction	488.27	0.0019
Percent Difference	22%	22%

SJIU estimates that its CNG program saved 488.27 tons of CO2e emissions in 2020.

19-17 The SJI Information Technology Department is organized to deliver services to SJG in an effective manner.

The SJI Information Technology Department has been organized into five functional areas that reflect the primary functions of the department – Plan, Build, Run, Protect, and Report. These functions appear to cover the required responsibilities expected of an information technology department in support of the operations of SJG and its affiliates.

19-18 SJG's and SJI's business units are appropriately involved in the development and modification of new business and operating systems.

The Plan function work group is tasked with understanding what business units want and need and combining these wants and needs with what the new or existing systems can do. This helps lay out the road map to shape or react to the demands of the business. Previously, new applications were entirely an IT decision. For the past few years this is the responsibility of the business units. For example, the Finance Department was responsible for the selection of Workday Financials, a finance ERP to be used for ETG and SJIU, with assistance and input from IT. Generally, a business function will bring the need for a new system to IT, who will get Procurement and outside advisory companies (Gardner) involved. Procurement will send the RFP to the Vendors and negotiations will be led by the responsible business group with advice from IT, although system implementation will be the responsibility of IT.

19-19 The selection of a financial ERP for SJG was based on a reasonably thorough process.

The selection of Workday for ETG and SJIU was a primary influence in the selection of Workday for SJG. However, the selection of Workday Financials for the finance ERP of ETG and SJIU did not include the issuance of a request for proposal. The selection decision was whether to use Workday or Oracle. SJI relied on a contractor, PwC, to assist in the evaluation of Workday and Oracle, which had been identified as industry leaders for this type of financial management suite of applications. The evaluation criteria and the process undertaken to select Workday are relevant and appear to be reasonable for the selection of this important financial application.

19-20 A significant portion of information technology work is performed by contractors.

SJI outsources their service desk, patching function, some of their security function, performance managers, and development work. Contractors can be from overseas or the United States, and the work includes capital and key O&M expense projects. Contractors, shown on organization charts as "contingent workers," can be on relatively long-term contracts of one year or more.

19-21 HR recently improved records management by converting its records from paper to digital format.

An effort was started to scan paper employee records but was not completed. The plan was to use SharePoint (file maintenance, retrieval and sharing software) for HR files management. In August 2020, DocuVault was commissioned to electronically scan paper files that were stored in the HR Hammonton North office. Scanning was completed in December 2020 and DocuVault delivered an external hard drive with all scanned documents. In January of 2021, HR worked with IT to establish a secured SharePoint site to store the documents, with access granted to a limited number of HR employees.

19-22 While a relatively new function, Security has quickly implemented or enhanced good security practices.

Since its inception in late 2017, Security has implemented many good practices, including:

- Physical Security Committee
- Security Plan
- Security Policies and Procedures
- Security Training for Employees
- Enhanced physical security measures
- Security Drills and Exercises
- Facility and Station inspections

Security has additional plans for enhanced surveillance systems, further hardening of protected sites, increased staffing, geographic tracking of third-party crime statistics, improved badging and access systems, and the possible establishment of a Security Operations Center.

19-23 SJG has had relatively few serious security incidents in the last three years.

There have been 171 security incidents reported in the Security tracking system from 2018 through 2020 (the only years available). The categories of reported incidents include: alarm; armed person; criminal mischief; dissatisfied or irate customer; harassment; threat or assault; medical emergency; property damage; resignation/suspension/termination (possible irate employee); and suspicious persons, vehicles, or items. However, only 54, or 32%, have resulted in a referral to law enforcement. Two-thirds of the incidents were resolved by the contract security personnel with follow-up by the Security Specialists.

19-24 SJG does not have a formal program to establish and maintain relationships with state and local law enforcement agencies.

Security does not have a formal program to establish and maintain relationships with state and local law enforcement agencies. While many informal relationships exist between Security personnel and former law enforcement colleagues and many informal relationships exist between Division field personnel and local law enforcement, there is no organized program to encourage coordination and cooperation.

19-25 There is no Security Operations Center.

SJI, SJIU, and SJG have a Gas Control Center and a Utility Services Dispatch Center that operate seven days per week, 24 hours per day. SJI does not have a Security Operations Center. The current structure of having a contractor monitor alarms and alert Utility Services Dispatch is highly economical and seems to be effective. However, it adds an extra link in the chain from alarm to response.

K. RECOMMENDATIONS

19-1 Negotiate the next insurance broker contract to include a Service Level Agreement. (See Finding 19-1)

The Service Level Agreement should incorporate performance metrics, including cost-effectiveness and service quality. Examples are evidence of securing competitive premiums, timeliness of payment transfers, the frequency and quality of audits of the carriers, and percent of claims paid versus claims made.

19-2 Modify the insurance broker evaluation form and process, establish quantifiable metrics with a focus on cost-effectiveness and quality performance, and include a Service Level Agreement in the broker contract. (See Finding 19-2)

The insurance broker evaluation form should be modified to include performance metrics that are related to the new metrics that are negotiated in the next insurance broker contract. Examples include evidence of securing competitive premiums, timeliness of payouts, the frequency and quality of audits of the carriers, and percent of claims paid versus claims made.

19-3 Coordinate all internal legal services and in-house counsel through the Office of General Counsel. (See Finding 19-3)

There are several benefits for coordination of in-house attorneys who do not report to the OGC:

- Ensure consistency of corporate legal policies and standards
- Avoid possibly inconsistent multiple outcomes
- Avoid duplication of work and encourage more efficient use of legal resources
- Encourage consistent professional development
- Unify cost and performance tracking among OGC and other departments.

19-4 Coordinate all external legal services through the Office of General Counsel. (See Finding 19-4)

It is necessary that departments other than OGC be able to identify the need for legal services and be able to procure those services as appropriate from outside counsel. There are several reasons why procurement of outside legal services should be centrally coordinated, and these reasons are consistent with those of the coordination of in-house attorneys:

- Ensure application and consistency of corporate legal policies and standards
- Avoid possibly inconsistent multiple outcomes
- Avoid duplication of work and encourage more efficient use of external legal resources
- Unify payment/cost and performance tracking among OGC and other departments.

19-5 Study the possibility of consolidating the SJI and utility headquarters personnel into one headquarters site. (See Finding 19-5)

Based on the results of the return to office analysis, the potential consolidation of SJI and SJIU staffs, and the potential consolidation of the management of SJG and ETG Operations and Customer Experience, it may be possible to collocate both SJI and utility headquarters personnel in one of the two headquarters buildings and free the other for sale or lease. SJI should study this possibility and implement it if practical.

19-6 Consider using the Utility Operations GIS, asset records, work management, and scheduling systems for facilities. (See Finding 19-7)

Facilities Management would likely benefit from use of the modern, efficient, and effective utility operations GIS, asset management, work order, and scheduling systems. There is deep expertise in these systems from SJIU and SJG personnel available to the Facilities Management, and SJI should investigate the systems and consider implementing a simplified version for Facilities Management use.

19-7 Establish a high level SJI supply chain function focused on contracting, purchasing, and materials management. (See Findings 19-8, 19-9, 19-10, and 19-11)

The function should be at the Vice Presidential level with adequate staff for professional management of contracting, purchasing, and materials management. It may be necessary to recruit established supply chain professionals from the outside or engage supply chain consultants to match the professionalism of the function to the scope of the supply chain function at SJI. It should not have ancillary responsibilities such as the management of shared service functions like Fleet, Facilities, and Security. These can be assigned to a separate shared services group, like the SJIU Shared Utility Services unit.

This function should be charged with implementing all of the planned systems and establishing appropriate policies and procedures.

19-8 Develop and implement a policy and procedure on rebidding contracts. (See Finding 19-10)

SJI's needs change and the contracting market changes over time. It is prudent to reevaluate the SJI needs and survey the contracting market from time to time, typically months before the end of the term of each existing contract. This reevaluation should include a fresh make-or-buy analysis on whether to continue contracting or perform the work with employees.

19-9 Expedite the development and implementation of a formal vendor evaluation program. (See Finding 19-11)

A formal vendor evaluation program will improve the quality of vendors and contractors over time. The evaluations should include vendor performance on delivering the products and services in a timely fashion, quality of work, responsiveness, and administrative compliance and accuracy.

19-10 Implement inventory management. (See Finding 19-12)

While SJIU, SJG, and ETG have a well-developed materials standards program, no one is assigned to manage the inventory levels of the SJG stocked standard materials. Because stocking excess materials increases the inventory carrying cost paid to the materials vendor, the Operations department or an SJIU staff function, working through the Materials Category Manager, should develop and implement an inventory management function. This function would likely reduce the inventory carrying costs and may also reduce the incidents of stock-outs that can delay work order completions.

19-11 Audit the materials contractor's proformas. (See Finding 19-14)

Because the "Return on Sale" refunds can be significant amounts, (e.g., $400 thousand in 2019), the SJI Internal Audit department should be tasked with audits of the contractor's proformas that determine the amounts of the "Return on Sale" refunds. The results of the first audit can guide the frequency of future audits. If significant issues are found, annual audits may be indicated. If significant issues are not found, less frequent audits may be appropriate.

19-12 Accelerate the development of the fleet management function. (See Finding 19-15)

The acquisition and maintenance costs of the SJG fleet are a substantial expense. However, having appropriate, available equipment to utility workers is even more important. Having the correct vehicles and equipment readily available is critical to worker safety and productivity.

SJI should develop and implement a written plan for developing the fleet management function in a timely fashion, possibly with the aid of a fleet management consultant. The plan should cover the development and implementation of a modern fleet management system, development and implementation of fleet management policies and procedures, and professional development of the fleet management staff through professional continuing education, including possible fleet manager certification and active participation in fleet management professional associations.

19-13 SJI should evaluate its use of IT contractors to determine the appropriate mix of contractor and in-house personnel for day-to-day activities (Refer to Finding 19-20).

SJI uses contractors for a significant portion of its day-to-day activities. The cost of contractors is normally greater than the cost of in-house personnel. Most companies will use in-house personnel for most of its daily activities and employ contractors only when additional expertise is needed or adequate numbers of in-house personnel are not available, generally for new or very large projects. SJI Information Technology should review, from a cost and benefit basis, the appropriate mix of contractors and in-house personnel for normal operating activities.

19-14 Consider establishing a Security Operations Center. (See Findings 19-22 and 19-25)

SJI is currently considering establishing a seven days per week, 24 hours per day Security Operations Center (SOC). This is an initiative worthy of serious investigation. It could be added to the Atlantic City or Folsom headquarters that are already staffed with contract security personnel or it could be collocated with the Gas Control Center or Dispatch Center.

Expanding the responsibilities of the current security contractor to include operation of the SOC at a currently staffed site may be the most economical solution. However, consideration should be given to an employee-staffed SOC collocated with the Gas Control Center or the Dispatch Center. Security monitoring is a complementary function for both existing centers. It may be possible to add incremental staff to one or the other center and accomplish security monitoring while increasing the capability of the host center. In general, additional personnel in seven by twenty-four centers improve personnel security and morale and, with cross-training, can provide emergency back-up for the other functions at the center.

19-15 Working with Security, Government Relations, and the Division operating personnel, develop and implement a formal program to establish and maintain relationships with state and local law enforcement agencies. (See Finding 19-24)

Regardless of who actually establishes each law enforcement relationship, the Security department should see that the program is developed and that it is maintained each year. Over time, this should result in earlier identification of potential problems and faster response to incidents.

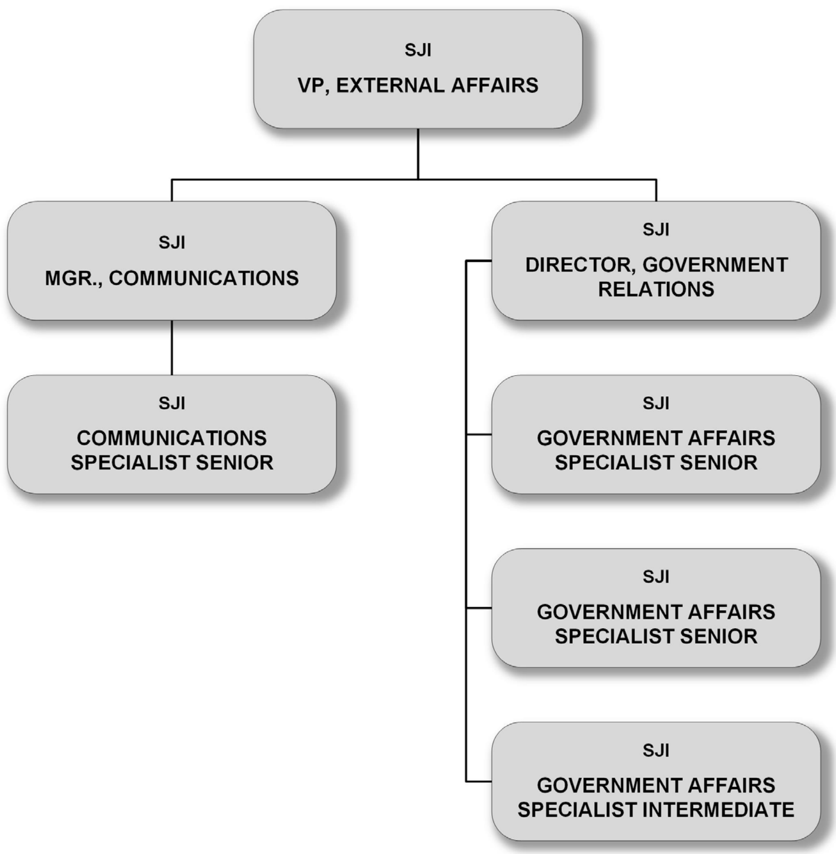
20. EXTERNAL RELATIONS

A. BACKGROUND

External Affairs is a new department initiated in 2020. External Affairs is a South Jersey Industries, Inc. (SJI) function reporting to the SJI CEO. The External Affairs Vice President position is a new position. However, the remainder of the External Affairs staff is comprised of existing positions transferred in from other departments. External Affairs costs are allocated among SJI and its subsidiaries, including SJG and ETG.

The organization structure for External Affairs is shown in the following exhibit.

External Affairs Organization Structure



The External Affairs Vice President has two direct reports: the Director of Government Affairs with three subordinates and the Manager of External Communications with one subordinate. Both the External Affairs Vice President and the Government Affairs Director are licensed attorneys, but they do not practice law for SJI. They may make comments to the BPU on issues but make no filings. The SJG legal relationship with the BPU is handled by the Rates and Regulatory department attorneys.

The Government Affairs function handles state and local government relationships. It makes monthly reports on state and local government issues and ad hoc reports on current topics of interest, such as the PennEast pipeline and the NJ Energy Master Plan. The Government Affairs Director is focused on state government (executive and legislative) as an individual contributor and supervises the three government affairs subordinates. The Rates and Regulatory department has the principal responsibility for the BPU relationship and Government Affairs assists as needed.

The three Government Affairs subordinates primarily handle local government relationships in the SJG and ETG service territories. One handles the eastern region of the SJG service territory, another handles the western region of the SJG service territory, and the third handles the ETG service territory. Government Affairs represents SJG and ETG to "local units" which are municipalities, townships, counties, and utility authorities in the SJG and ETG service territories. These representatives liaise with the Construction Operations division on projects of interest to local governments, principally projects involving streets and roads. The three government affairs subordinates also engage in work at the State level, from time to time, as needed.

One local Government Affairs position also coordinates the SJI, SJG, and ETG corporate giving program. In 2020, SJI gave $522,558 to 55 different community organizations. In 2020, SJG gave $28,300 to 12 different community organizations. In addition, SJI (not SJG) is a member of 15 chambers of commerce and related economic development organizations. SJI paid $47,784 in dues to these groups in 2020. One of the local government affairs positions also manages the relationships with these chambers of commerce and economic development organizations.

Government Affairs has three contractors. Two of the contractors perform legislative branch and executive branch lobbying, with each having varying relationships within NJ State government. The third contractor engages in "strategic communications" on behalf of the company and supports the SJI external communications team as well. The total budgeted cost for the three contractors in 2020 was $240,000.

The External Communications function focuses on positioning SJI's brand in energy delivery and clean energy innovation, as well as promoting SJI's core values of safety, diversity and inclusion, service, and community engagement to key external stakeholders. The communications strategy includes media pitches, press releases, video communications, events, SJI social media, SJI's website, the ESG report, the SJI annual report, print publications and an online newsletter. A proactive SJI social media strategy is in place, rotating SJI's key messages on a regular basis. Social media for the utilities (SJG/ETG) is handled by the Marketing team.

The scope of External Affairs includes:

- Media
- State legislature
- State regulatory agencies
- State executive branch – executive orders (like the moratorium on utility shut-offs during the pandemic)
- Local governments
- Chambers of Commerce
- Economic development agencies
- NJ Utilities Association

- Community groups such as charities
- Political influencers
- Union influencers
- Election Law Enforcement Commission lobbyist compliance
- Support for the Investor Relations team
- Support for the ESG function
- Social media for SJI

The scope of External Affairs does not include:

- Customers, except that External Affairs supports other corporate functions in communicating with customers
- Investors, except that External Affairs supports other corporate functions in communicating with investors
- Industrial development
- Unions – labor relations
- Marketing and advertising, except that External Affairs supports the Marketing team, as needed
- Environmental, Social, and Governance (ESG), except that the External Affairs team supports the ESG team, as needed
- Clean Energy, except that the External Affairs team supports the Clean Energy team
- Social Media for SJG and ETG

Currently, the only federal level involvement for SJI is the PennEast pipeline. External Affairs monitors federal level actions relevant to this project through the American Gas Association Washington DC office but does not have a proactive federal external Affairs effort, except through a loose partnership with other energy companies around the country seeking federal tax credits for renewable natural gas and green hydrogen.

External Affairs does have involvement with SJI non-regulated subsidiaries in terms of developing messaging and branding for SJI Energy Enterprises.

B. FINDINGS

20-1 There is no formal External Affairs working group.

The scope of the new External Affairs function does not include Investor Relations, Customer Experience, Internal Communications, the new ESG function, Sales and Marketing/Advertising, or Clean Energy, all of which have significant external relationships aspects. While External Affairs works closely with these groups individually on an informal basis, there is no coordinated External Affairs interest group.

20-2 There is no official brand manager for SJI and SJG.

While two of the External Affairs initiatives are to, “Define the brand we want SJI to represent in the industry and region,” and “Identify and activate external brand ambassadors to create and reinforce positive brand recognition,” External Affairs is not formally responsible for the SJI and SJG brands. It is a good practice to have a centralized, formal brand management function. While brand management is often a marketing function, given the challenges of the natural gas industry, it could be a good fit for the External Affairs group.

20-3 The social media function is divided between External and Internal Communications.

Currently, SJG social media monitoring is done by Internal Communications and External Communications is developing a proactive social media plan for SJI and SJG. While social media is important to internal communications, it is even more important for external relationships. It would be a better practice to have all social media functions centralized in one group with clear responsibility and authority for social media.

C. RECOMMENDATIONS

20-1 Establish an External Affairs interest group. (See Finding 20-1)

There are multiple functions within SJI that have external relationships aspects. It would be a good practice to establish an External Affairs interest group led by the External Affairs Vice President for communication and coordination. The group should include all SJI, SJIU, SJG, and ETG functions that have an impact on external relationships such as Investor Relations, Customer Experience, Internal Communications, the new ESG function, Sales and Marketing/Advertising, and Clean Energy.

20-2 Establish a formal brand management function. (See Finding 20-2)

It is a good practice to have a formal brand management function responsible for the public image. SJI should establish a formal brand management function with specific responsibilities and authorities. It could be in either the Sales and Marketing department or the External Affairs department. However, since the greatest challenges are currently from government relationships, it may be best to make External Affairs responsible for SJI and SJG brand management.

20-3 Establish a social media function in External Communications. (See Finding 20-3)

It is a good practice to have a centralized social media function with defined responsibilities and authorities. SJI should assign External Communications the responsibility of developing a modern, proactive social media function that includes monitoring both SJI internal and external social media.

21. CONTRACTOR PERFORMANCE

This Chapter is presented in four sections:

A. Line Locate Contractor Management
B. Construction Contractor Management
C. Findings
D. Recommendations

A. LINE LOCATE CONTRACTOR MANAGEMENT

BACKGROUND

The South Jersey Gas Company (SJG) Operations Support unit manages the line locate contractor (see Chapter 6. Distribution and Operational Management, for the organizational structure chart). The Director of Operations Support reports to the SJG Vice President of Operations. The Manager of Leak Survey and Damage Prevention reports to the Director of Operations Support and is responsible, along with two Mark-out Specialists, for managing the line location contractor.

A single contractor provides all of the SJG line location (mark-out) services for all five divisions. This is with a long-established contractor under a three-year, unit price contract which ends in 2022. The contract was extended in 2019 with the incumbent contractor. This contractor also does line location for other utilities, such as electric, cable, and water in the SJG service territory.

There is a New Jersey statewide one call program for damage prevention. The SJG mark-out contractor receives the line location request ticket and dispatches a mark-out technician when SJG facilities are shown in the involved grid. The mark-out technician does the mark-out, takes photographs, and provides a positive response confirmation to the requestor. The contractor also investigates dig-ins of SJG facilities.

All mark-out requests received into the New Jersey (NJ) One Call center are transmitted to facility operators and the locate contractor to respond. If it is discovered that SJG facilities are not identified within the scope of a mark-out ticket request, SJG still pays for the cost of the ticket to the locate contractor to review and status the ticket. SJG also pays a cost to NJ One Call center for ticket generation and processing the mark-out ticket.

There is one Support Services Mark-out Specialist assigned to the three SJG eastern divisions and one to the two western divisions. The Specialists solve day-to-day problems, assist with the damage prevention program, oversee contractor investigations of dig-ins, and conduct frequent field audits of the line locate contractor's performance.

B. CONSTRUCTION CONTRACTOR MANAGEMENT

BACKGROUND

The SJG Construction Operations group manages the contractors who build almost all new distribution system facilities and conduct the distribution system replacement and renewal program. The Construction Operations group is responsible for all contractor work on distribution facilities: mains, services, regulator stations, and new meter installations.

The Director of Construction Operations reports to the SJG Vice President of Operations. The Director, in turn, has two Managers of Contract Construction who manage the distribution construction contractors, one for the three divisions in the west and the other for the two divisions in the east. Each of the five divisions has a Contract Construction Supervisor who oversees the Contract Construction inspectors.

There are two construction contractors for blanket work (new business and smaller renewals), one in the east and one in the west. Larger scale projects are bid to the two blanket contractors and four other approved contractors. The contracts are unit priced to the lowest bidder based on estimated units. About half of construction work is done on blanket contracts and half is done on bid projects.

The following exhibit shows the total expenditures for SJG construction work contractors of all types for 2013 through 2019.

SJG Construction Work Contractor Expenditures ($ million)

Factor	2013	2014	2015	2016	2017	2018	2019
Number of Contractors	17	10	16	21	17	16	21
Total Expenditures	$69.2	$159.1	$98.6	$104.7	$156.7	$148.0	$172.8

Construction contractor expenditures increased from $69.2 million in 2013 to $172.8 million in 2019, an increase of 150% or a simple average of 25% per year. In 2019, four contractors accounted for $143.6 million of the $172.9 million total expenditures, or 83%.

C. FINDINGS

21-1 The current line locate contract has appropriate documents.

The current line location Master Service Agreement was signed on December 16, 2019, and covers a three-year period, 2020 through 2022, for line locations for both SJG and Elizabethtown Gas (ETG). The contract consolidated and extended prior individual contracts between the same contractor and SJG and ETG. The contract is between South Jersey Industries Utilities (SJIU) and the contractor.

The line location contract is for work required by the New Jersey Underground Facility Protection Act as administered by the NJ One Call Center. The contract was signed for SJIU by a SJG Vice President. The Master Service Agreement is accompanied by a Scope of Work that specifies details of the relationship including pricing and performance targets. Pricing is on unit rates except for hourly rates for requested high risk surveillance, standby time, testimony, or other work not covered by the unit rates.

The Master Service Agreement and Scope of Work include provisions for liquidated damages and reimbursements for contractor liable damages and failed audits of the contractor's work. Audit failures include not marking according to BPU standards, mismarks, and not adequately marking nearby transmission lines.

21-2 SJG, through the SJIU Standards Department, has comprehensive line location standards which are reviewed annually and updated as necessary.

The line location standards are part of the SJG O&M Procedures. SJG has a 27-page comprehensive Damage Prevention Program, O&M Procedure 1.16, that includes line location standards. The procedure covers:

- Adherence to the NJ One Call Damage Prevention System in compliance with the NJ One Call Law
- Mark-out of pipelines and documentation of mark-outs
- Underground warning tape
- Public notification – educational outreach to excavators and the public
- On-site inspection
- High risk excavations and blasting
- Directional drilling
- Facility damage reporting
- Weekly auditing

The SJIU Standards Department reviews the line location procedures annually. It monitors Pipeline and Hazardous Materials Safety Administration (PHMSA) Notices of Proposed Rulemaking, collaborates with NJ regulators, reviews responses to incidents, and considers industry best practices and employee suggestions in updating the procedures. Since 2013, several updates have been made to the procedures as a result of the annual review.

ETG's corresponding line location standards are similar to SJG's but not exactly the same. Both are fully compliant with federal and state code requirements but there are differences, such as the use of sub-surface marking tape, documentation requirements, public awareness communications, removal of aboveground structures, and specific locating equipment and methods.

21-3 SJG has typical line location contractor field audit procedures.

The SJG Mark-out Specialists perform regular audits of the contractor's line locates. There is a contractual SJIU Damage Prevention Audit Form. The two Mark-out Specialists' work is divided geographically between the east and west divisions. They coordinate the mark-out contractor's work, and each does 30 to 60 field audits of mark-outs per week.

The procedures utilized for reviewing the accuracy and detail of mark-out field audits are:

- Review the excavation mark-out ticket to determine the scope of work that is being described.
- Use a locating device to tone the gas line.
- Ensure the gas line tones out where the locating contractor has indicated with appropriate gas markings in accordance with requirements.

- Ensure all markings and flags used to complete the mark-out ticket are in accordance with the BPU-N.J.A.C. 14:2.
- Ensure the full scope of the work area as indicated in the description of the mark-out request was fully marked.
- Review SJG field records to ensure that no gas lines were missed.
- Ensure appropriate photos have been uploaded by the contractor and are attached to the ticket to confirm an accurate completed mark-out.
- Failed field audits are reviewed with the locate contractor for appropriate corrective actions.

21-4 In addition to providing for the State required mark-outs of SJG facilities, SJG has a proactive and adaptive damage prevention program.

Before the pandemic, SJG would co-host, with other members of the New Jersey Common Ground Alliance (NJCGA), annual Contractor Safety Breakfast events. These events were held to educate excavators about safe digging practices and NJ 811 (one call) laws. The same presentations were given to individual contractors and municipalities onsite with their employees.

Additionally, team members would participate at community events, as well as retail stores such as Home Depot and Lowes, by setting up display tents to promote damage prevention public awareness, safe digging practices, and NJ 811. Distribution of public awareness brochures were left at businesses that rent excavation equipment, greenhouses, and nurseries, as well as municipalities.

During the pandemic, all Contractor Safety Breakfast events and individual contractor meetings were initially put on hold, and then eventually cancelled. The community events and retail store set ups had to be cancelled and many businesses were closed or not allowing entry to leave safety brochures.

During the month of May 2020, the SJI corporate communications team assisted SJG in the development and delivery of a communication to all the municipal mayors in the service territory, asking for their assistance in promoting public awareness to their employees and constituents. In addition, a social media announcement promoting the same message was broadly distributed.

Beginning in October 2020, SJG was able to host the NJCGA meetings virtually and participants and excavators were invited to join remotely. With assistance from the NJ One Call Center, excavators were advised they could independently contact facility operators directly to request a virtual presentation for their company. SJG has recently been able to give presentations in person to several excavation companies, while ensuring proper CDC guidelines are followed.

Beginning in April 2021, SJG has been able to resume public awareness events at local retail stores promoting damage prevention, safe digging, and NJ 811 laws.

On a continual basis, the SJG Mark-Out Coordinators are in the field meeting with excavation contractors and facility locators to provide real time assistance in addressing issues as they arise.

SJG has a sound damage prevention program in normal times. During the pandemic, SJG successfully adapted its damage prevention program to the Covid restrictions. This damage prevention program is likely reducing the number of dig-ins resulting from an excavator, landscaper, or homeowner not calling for a line location before beginning work around SJG facilities.

21-5 The effectiveness of the SJG damage prevention program is improving; however, the number of third-party damages is too high.

Third party damages are caused when an excavator, landscaper, or property owner digs into SJG facilities and damages them. The principal defense against dig-ins is the timely and accurate marking of SJG facilities before third party work commences.

Prior to beginning excavation, a locate request is required be submitted to the NJ One Call program. Then, the utilities, including SJG, are responsible to accurately mark their facilities within a time window before work commences.

The following exhibit shows the SJG third party damage trends and the associated locate marking results. Several of the statistics were not kept before 2016.

SJG Third Party Damage and Locate Marking Trends

Factor	2013	2014	2015	2016	2017	2018	2019
Number of Locate Tickets	106,392	108,081	118,113	122,671	159,020	161,801	165,147
Number of Field Audits	N/A	N/A	N/A	501	1,073	1,155	1,372
Percentage of Field Audits	N/A	N/A	N/A	0.41%	0.67%	0.71%	0.83%
Number of Failed Audits	N/A	N/A	N/A	12	80	232	198
Percentage of Failed Audits	N/A	N/A	N/A	2.40%	7.46%	19.48%	14.14%
Number of Locates Mismarked	N/A	N/A	N/A	3	72	183	147
Percentage of Locates Mismarked	N/A	N/A	N/A	0.002%	0.045%	0.113%	0.089%
Total Number of Third-Party Damages	424	398	442	422	393	339	370
Third Party Damages as a Percentage of Locate Tickets	0.40%	0.37%	0.37%	0.34%	0.25%	0.21%	0.22%
Number of Mismarks Resulting in SJG Facility Damage	108	118	117	104	104	77	76
Percentage of Third-Party Damages Caused by Mismarks	25.5%	29.6%	20.6%	24.6%	26.5%	22.7%	20.5%
Amount of Contractor Payments for Mismark Damage ($ thousand)	175	106	163	146	144	160	208
Number of SJG Third Party Damages without a Locate Request	123	105	131	129	110	126	118
Percentage of Third-Party Damages without a Locate Request	29.0%	26.4%	29.6%	30.6%	28.0%	37.2%	31.9%
Number of Late Marks Resulting in SJG Facility Damage	0	1	0	0	0	0	0

The number of locate tickets each year is an indication of the amount of construction activity. From 2013 to 2019, the number of locate tickets increased from 106,392 to

165,147, or 56%, indicating a significant increase in construction activity in the SJG territory.

However, both the number of third party damages and their percentage of total locates declined. The number of third party damages declined from a high of 442 in 2015 to 370 in 2019, a 16% decline. Further, with the increase in construction activity, the third-party damages as a percentage of locate tickets declined from 0.40% in 2013 to 0.22% in 2019. Even with more locates, the rate of third party damage was less. However, the number of third-party damages in 2019, 370, is still too high. Third-party damages can result in injuries or death from explosions or fires and they cause damage to SJG and, sometimes, to private property.

A common problem with third party damages is work proceeding without a locate request. This is most common with small business landscapers and homeowners as construction contractors are generally well aware of the one call requirement. From 2013 to 2019, the number of third party damages without a locate ticket stayed relatively constant between 105 and 131 per year and accounted for between 26% and 37% of total damages.

Another common problem with third party damages is late or inaccurate marks. There was only one reported instance of a damage caused by a late mark, but SJG experienced a number of damages from mismarks. The damages from mismarks generally decreased from a high of 118 in 2014 to a low of 76 in 2019. Further, the percentage of damages caused by mismarks has fallen from 30% in 2014 to 21% in 2019.

The improvement in the rate of damages from mismarks is likely due to SJG's locate audit program. The number of field audits increased from 501 in 2016 to 1,372 in 2019 and the percentage of failed audits increased from 0.41% to 0.83%, likely from greater scrutiny in each audit. The locate contractor management program also increased its collections for damages caused by mismarks from $146,000 in 2016 to $208,000 in 2019, encouraging the contractor to improve locate accuracy.

21-6 SJG has a well-developed process for managing its construction contractors.

The two Contract Construction units manage the distribution construction contractors. Each of the five divisions has a supervisor reporting to the relevant manager and the Construction Inspectors report to the supervisors. There are a total of 28 construction inspectors. Construction Operations can move inspectors among divisions to match workload.

Inspector candidates must have three years of experience in physical street work (Field Operations) and pass a test to be eligible for appointment as an inspector. The most senior qualified person is selected for any vacant position. New Inspectors receive seven days of Operator Qualifications (OQ) training for the inspector position. Inspectors must maintain appropriate OQ certifications including annual OQ requalification, two field OQ audits per year, and regular work management system, standards, and safety training.

Inspectors are home dispatched. They are on the road at 7:00 AM. They are responsible for units of production, quality, schedules, and safety of contractor work. Inspectors are not responsible for materials inventory and usage. However, most production units are tied to materials, such as feet of main and service pipe, valves, and meters.

Construction inspectors are also responsible for coordination with local government inspectors. Each inspector typically has several projects each day. Inspectors work five 8-hour days while its contractor resources work four 10-hour days during the summer months or as daylight permits. Inspectors often work overtime during the longer contractor days.

A construction inspector is assigned to every construction contractor main job. SJG requires that critical tasks on main installations are witnessed by construction inspectors on each job, including tapping, tie-ins, pigging, pressure testing, abandonments, and purging. Service installations are audited daily as well. Further, the Contract Construction Supervisors regularly audit each construction inspector's work and the SJIU Quality Assurance department conducts regular audits as well.

21-7 The SJG Construction manual includes a detailed definition of Construction Inspector job responsibilities.

Section 8.1 of the SJG Construction Manual is a four-page, detailed description of the construction inspector job responsibilities. It covers:

- Conformance to the Code of Federal Regulations
- Inspector authority
- Pre-construction tasks
- Inspection tasks during construction to ensure the scope of work is met
- Post-construction tasks

The authority assigned to the inspectors to stop any job at their discretion is consistent with their broad responsibilities for system integrity and public safety.

21-8 SJG inspection forms are typical for the industry.

SJG utilizes inspection forms that are typical for the industry. They include:

- Billing Record – identifies quantities installed on a given day that are agreed to be paid.
- Restoration Record – identifies quantities and types of excavations performed and the associated restoration that is needed for a project.
- Supervisor Audit Inspection Form – identifies areas of audit for reviews of a Construction Inspector's work, such as, proper use of personal protective equipment, job site set-up, housekeeping, contractor safety, adherence to procedures (e.g., documentation and installation), proper use of tools and equipment, correct materials installed, and condition of vehicle.
- Quality Control Inspection Checklist – similar to the Supervisor Audit Inspection Form and covers specific elements of the job, such as trench clearance, mark-out accuracy, fusion procedures, materials installed, tools and equipment condition, testing and purging procedures, meter sets, and restoration of the site.

The forms used are comprehensive and typical for the industry.

D. RECOMMENDATION

21-1. Continue to enhance the damage prevention program. (See Finding 21-5)

While the damage prevention program has improved significantly in recent years, the number of third-party damages is still too high. Third-party damages can result in injuries or death, and they cause damage to SJG and, sometimes, to private property. SJG should continue to enhance its damage prevention program through:

Expanded contractor, landscaper, and property owner education programs to reduce the instances of no mark-out requests

Additional and more thorough line locate audits to reduce the number of mismarks

Increased efforts to collect damages for mismarks to encourage the contractor's focus on correctly marking SJG facilities

SJG can also increase the emphasis on damage prevention in its performance management and employee incentive programs.

22. REMEDIATION COSTS

A. BACKGROUND

From the early 1800s to the mid-1900s, manufactured gas plants (MGPs) were operated nationwide to provide gas from coal or oil for lighting, heating, and cooking. MGPs were rendered obsolete by the construction of natural gas transmission and distribution systems. As part of the MGP gas manufacturing and purification processes, these former plants produced by-products or gas plant residues that included tars, sludges, lampblack, light oils, spent oxide wastes, and other hydrocarbon products. Although many of these by-products were recycled, excess residues (residuals) remained at MGP sites.

South Jersey Gas (SJG) owned and operated former MGPs. Residuals associated with the operations of MGPs were discovered in the soil and ground water of the former SJG sites. These residuals contained chemical contaminants in concentrations above the New Jersey Department of Environmental Protection regulated limits. Because SJG owned the properties and operated plants that created these residuals, per the New Jersey Spill Act - N.J.S.A. 58:23.11, et. seq., SJG is a responsible party. Under the Spill Act, SJG is jointly and severally responsible for the remediation of the contaminants found. Although the Spill Act is the primary driver for costs incurred, there are other State and Federal laws that require the remediation of these residuals.

SJG currently has 13 remediation projects:

- Bridgton
- Egg Harbor
- Florida Avenue
- Glassboro
- Hammonton
- Kirkman Boulevard
- Michigan Avenue
- Millville
- Penns Grove
- Pleasantville
- Salem
- Swedesboro
- Vineland

The remediation projects managed by the SJIU Environmental Affairs Department (EAD) range from minor discharges of petroleum products to the ground surface to complex impacts to soil, groundwater, and sediments. None of the sites are currently an integral part of the operations of SJI. SJG is reimbursed by its ratepayers for environmental liabilities associated with its obligations to remediate the former MGP sites under SJG’s Societal Benefit Clause.

ORGANIZATION STRUCTURE

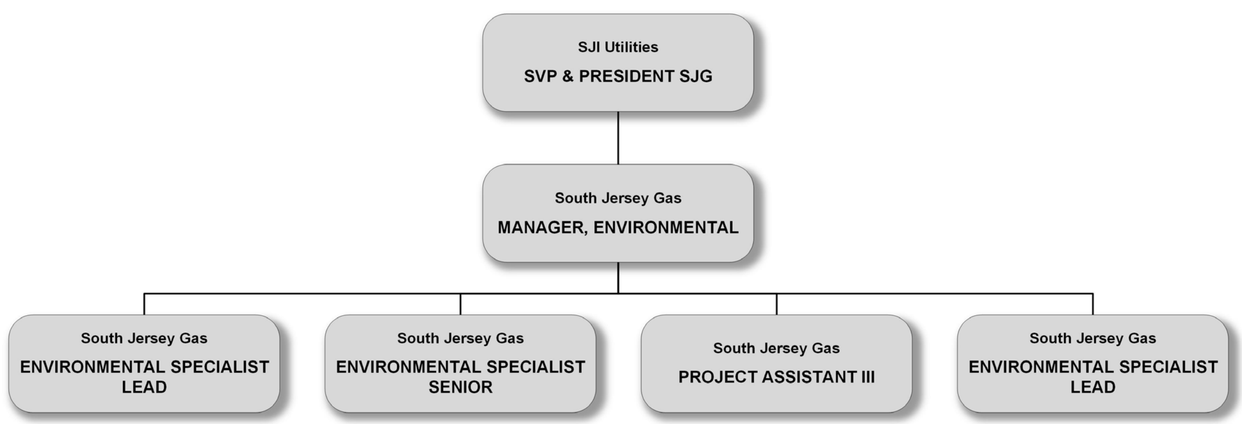
The Environmental Affairs Department (EAD) is responsible for managing the remediation of the SJG and ETG MGP sites, among other responsibilities. EAD is a SJIU organization primarily serving SJG and ETG. However, it also handles all SJI non-regulated entity environmental issues. For example, the former SJI Fuel Distribution Company had some sand mining operations that require inactive remediation for 30 years.

There are four primary functions for the EAD:

- Remediation – for SJG, ETG, and SJI discontinued operations. Cleaning up former MGPs and other sites requiring remediation. There are a total of 31 current remediation sites. SJG owns 13, ETG 6, and SJI discontinued operations 12. For each of the remediation sites, EAD is in the process of either removing source material or taking aggressive measures to contain material.
- Environmental Compliance – assuring SJI-wide compliance with environmental regulations for water, air, and waste management.
- Construction Compliance – assuring compliance with regulations to limit contaminants in linear pipeline construction. This regulation requires EAD to look at historic use of the site, determine worker protection needs, and take air and ground samples.
- Sustainability – this is the environmental portion of the SJI ESG initiative and includes collecting data and quantifying the company's current and future emissions.

The EAD organization structure is shown in the following exhibit.

Environmental Affairs Department Organization Structure



The Manager, Environmental reports directly to the SVP, SJI and President, SJIU. The Manager has four direct reports:

- Environmental Specialist Lead, Environmental Health and Safety – non-regulated remediation and compliance and also assists with SJG and ETG compliance
- Environmental Specialist Senior – SJG remediation and linear pipeline construction reviews

- Project Assistant III – administration, data entry, accounts payable, purchase and service orders, and agreements
- Environmental Specialist Lead – ETG remediation and compliance

The Manager can also work as an individual contributor on large or complex projects. Contractors perform virtually all the remediation work. EAD manages the contractors.

COSTS

SJG remediation costs are substantial. The following exhibit shows the remediation costs for 2013 through 2019.

SJG Remediation Costs ($)

SITE	2013	2014	2015	2016	2017	2018	2019
A.C. BUS LOT - ATL, MICH, ARK, FLEMIN Total	821,086	777,791	200,571	192,182	666,546	619,386	884,023
ENVIR EXP - GLASSBORO PLANT Total	633,132	666,948	752,716	1,842,626	11,147,906	15,230,144	7,932,362
ENVIR EXP - EGG HARBOR CITY Total	56,767	84,294	77,448	50,928	50,105	106,683	145,782
ENVIR EXP - BRIDGETON Total	951,500	193,790	164,072	190,621	799,883	770,545	789,746
FLORIDA AVENUE - ATLANTIC CITY Total	1,540,036	2,860,395	5,937,869	7,850,241	13,668,699	23,398,162	10,600,056
ENVIR EXP - SALEM Total	273,827	148,1034	103,5078	124,0889	128,7156	73,898	120,767
PENNSGROVE - PITMAN AVE Total	89,342	41,464	28,985	102,273	136,829	49,390	58,260
MILLVILLE - 1211 N 2ND ST. Total	1,573,151	529,591	945,994	1,305,329	1,834,772	1,151,092	1,153,246
ENVIR EXP - HAMMONTON Total	497,042	522,321	836,044	19,339,057	5,724,822	1,873,575	301,019
GEN EXP ENVIR (CURRENT) Total	88,170	41,913	166,532	58,641	24,473	67,453	364,840
ENVIR EXP - VINELAND Total	4,330,293	6,931,840	447,334	368,562	109,956	128,055	71,261
ENVIR EXP - PLEASANTVILLE Total	563,535	856,974	761,914	4,777,861	8,363,844	10,627,864	16,277,794
ENVIR EXP - SWEDESBORO Total	970,623	710,322	10,956,833	1,061,895	710,142	125,747	65,495
Grand Total	**12,388,503**	**14,365,747**	**21,379,817**	**37,264,304**	**43,366,692**	**54,221,994**	**38,764,652**

Total SJG remediation costs increased from $12.4 million in 2013 to a high of $54.2 million in 2018 before decreasing to $38.8 million in 2019.

The New Jersey Board of Public Utilities (BPU) annually audits the expenditures associated with SJG's former MGP sites as these expenditures are recoverable from SJG's ratepayers through the Societal Benefits Clause.

CONTRACTORS

EAD utilizes multiple contractors to perform the SJG remediation work. From 2013 through 2019, SJG paid 84 different contractors $190 million for remediation work. Five of the contractors received total payments over $10 million. Typical payments were for:

- Air monitoring
- Attorney fees
- Engineering services
- Utility line relocations
- Property maintenance
- Remediation services
- Environmental consulting
- Traffic control
- Data storage
- Waste disposal
- Fencing
- Drilling
- Surveys

Other, non-contractor remediation expenses included payments for taxes, utilities, permits, leases, settlement costs, and property purchases.

B. FINDINGS

22-1 EAD has a well-developed process for managing SJG remediation projects and costs.

All the SJG remediation projects were initiated before 2013 with an initial conceptual remediation strategy. Therefore, the ongoing remediation management process is one of reassessment and adjustment as new information is discovered.

Annual Cost Projections and Adjustments

During the third quarter of each year, EAD staff meets with a group of senior environmental external experts to develop future cost projections associated with the known sites with environmental remediation matters. The cost projections are finalized during the fourth quarter. During the discussions, changes to a site understanding resulting from findings during the previous year or changes in regulations are evaluated to determine if the conceptual remedial strategy remains applicable. If necessary, the conceptual remedial strategy is modified. Once the conceptual strategy is established, technical assumptions are developed and input into the appropriate cost model. The model utilizes projected units and unit rate costs for various line items to generate an overall projected cost. The unit rate costs are compiled from various sources including annual bids received for services, market surveys, and cost reference manuals and are benchmarked against completed projects. The cost model unit rate inputs are also reviewed during the annual group discussion.

Once the cost model is applied for each site, schedules are developed and/or revised to develop a timeline. Once the costs and schedules are completed for each site, the schedules are merged and normalized with the overall program. As discussed below, actual expenditures are then compared to projected expenditures on a quarterly basis.

The cost projection package is then presented to senior SJI management. Once accepted by management, the cost projection package is presented to the SJI Board of Directors. These presentations are documented in meeting minutes. Once approved by the Board, the projections are forwarded to accounting where the Accounting Manager prepares a journal entry.

On a quarterly basis, EAD, with assistance from the environmental consultants, reviews the data collected to determine if any change to the understanding of the site has occurred. If a change has occurred that affects the conceptual remedial strategy in either the technical approach or magnitude of the remediation, the resulting change is estimated and incorporated into the future cost projection. This information is communicated in the form of a memorandum and appropriate changes to the environmental liability accrual are made.

On a quarterly basis, EAD, with assistance from the environmental consultants, reconciles the actual expenditures on the SJG MGP sites against those projected expenditures generated as described above.

Calendar and Procedures

Annual cost projections are developed to comply with adjustments to established authorizations in accordance with SJI's Authorization Procedure. The annual projections are developed as follows:

- Review Site Data with Consulting Team(s)
    - Identify changes to site understanding
    - Review existing conceptual remedial strategy and evaluate relative to any changed site understanding
    - Review/revise unit cost inputs into costing model
- Develop/Revise Technical Assumptions for Cost Model Input
- Run Cost Model
- Develop/Revise Project Schedules
    - Develop Timeline
    - Identify/Assign Resources for upcoming year
    - Normalize individual site schedules with overall program

On a quarterly basis, the status of each Project is reviewed to determine if there are changes to the site model which would change the anticipated conceptual remedial strategy. If additional information has been obtained that results in a change to the remedial strategy (either in scope or magnitude), appropriate modifications to the long term projection are made. Authorizations are changed, if necessary, due to changes in scope.

On an annual basis the EAD:

- Projects future environmental liabilities for the known SJG sites
- Bids the environmental services as needed based on contract terms or adjusts unit rates as per pre-determined indices

On a quarterly basis the EAD:

- Reviews project status to determine if changes to accrued environmental liabilities are necessary
- Re-estimate environmental liabilities, if warranted, to change the accrued amount
- Adjust short term (balance of calendar year) cost projections
- Reconciles the actual expenditures for a given task with the projected expenditures to establish variances
- Provides description of those variances greater than ten percent of the projected task
- Performs audits of facilities for compliance with existing environmental regulations

On a monthly basis, the EAD:

- Reviews for approval invoices from vendors of environmental services

Process Deliverables

The deliverables for these activities are shown in the following exhibit.

Deliverables

Deliverable	Purpose	Preparer	User
Annual Cost Projections Summary	Documents future estimate of environmental liabilities for known sites	Environmental Department, Outside Environmental Consultant	Environmental Department
Quarterly Cost Projection Memorandum/Email	Documents changes to future liabilities based on a quarterly review of project status	Environmental Department	Environmental Department, Senior Management
Bid Comparison Memorandum	Documents competitive bid evaluations for consulting and contracting environmental services	Environmental Department Outside Environmental Consultant	Environmental Department

22-2 The internal controls and flow of information ensure that all gas remediation costs are properly recorded and controlled.

MGP remediation project accounting is governed by the SJI accounting policies, standards, procedures, internal controls, systems, and audits. See Chapter 15, Accounting and Property Records, for an evaluation of SJI accounting. Findings from that chapter apply to remediation cost accounting and control going forward:

- Accounting functions are performed in an efficient and timely manner and produce results in the form of financial records and statements that appear to be accurate, reliable, and certain.
- Internal controls are assured by use of detailed process flow diagrams, reflecting all accounting functions, which are reviewed and verified against actual processes by Internal Audit and the external auditors and included in Sarbanes-Oxley (SOX) controls that are tested at least annually.

Accurate accounting for remediation efforts is facilitated by individual site projects with work predominately done by contractors. There are separate projects against which costs are collected for each site. There is an EAD project manager for each job. The engineering and consulting costs are defined by task, and costs are tracked separately for each task. Internal time for EAD staff is collected on Reallocation Time Sheets every week. Data entry of job costs and the accuracy of each cost is the responsibility of each project manager.

Approved contractor invoices are charged to the appropriate remediation site and project. This establishes a good audit trail for all costs associated with each site and project.

In addition to the following SJI accounting requirements, EAD has developed some additional process flows and procedures to enhance its project management and tracking:

- Environmental Process Flowchart for Quarterly High/Low Projections which covers the steps and responsibilities to develop environmental cost projection packages to be presented to the Board of Directors
- Environmental Process Flowchart for Monthly Accruals which covers the steps and responsibilities to develop the monthly accruals for project costs
- Environmental Process Flowchart for Retainage Reconciliation which covers the steps and responsibilities to achieve approved retainage reconciliation and supporting documentation
- Quarterly comparisons of actual cost to forecast cost for each remediation site including variance explanations
- List of all contractors and the work performed at each site
- Annual cost projection reviews with high and low cost projections for future years by site (significant projected continued expenditures for SJG sites through 2024)

22-3 The only reported example of SJG's negotiation with the Department of Environmental Protection (DEP) was successful.

The only reported interaction with the DEP from 2013 to 2019 was regarding a negotiation with the DEP on an alternative approach to treatment at the Millville MGP site. DEP normally requires removing all Non Aqueous Phase Liquids from the site. Removal is an expensive undertaking. EAD and its consultant proposed an alternative containment solution. After negotiation with DEP, the alternative was accepted and is expected to cost $20 million less than the full removal approach.

22-4 The use of outside contractors and the methods of selecting outside contractors for environmental remediation work are reasonable but can be improved.

As with many SJI, SJIU, and SJG functions, EAD relies on contractors to accomplish the bulk of the remediation work. EAD contracted work includes both long-term systems contracts for repetitive services and single purpose contracts for unique needs:

- Multi-Year Systems Contracts for Repetitive Consulting and Construction Services
  - Bid for unit costs to minimum of three firms for a period of three years (with mutually agreed upon one-year extensions) with unit rates adjusted annually by pre-determined indices
  - Input unit cost bids into actual example consulting invoices for bid evaluation purposes.
  - Develop bid comparison memorandum. For each bid there is a Bid Comparison Memorandum indicating who bid, the selection criteria, and the recommendations for each bid.
  - Select winning contractors
- Single Purpose Contracts as Needed
  - Scope specific request for bid developed for services outside annual systems contracts
  - Evaluate bids and document with bid comparison memoranda
  - Select winning contractor

Monthly invoices from contractors are reviewed by EAD staff and consultants, adjusted as necessary, and approved.

Remediation work that is performed is reviewed by external engineering consultants. There are three nationwide companies with which SJI has Master Service Agreements (MSAs) for engineering support and to review and certify the remediation work performed.

These MSAs have been in effect for five to seven years. They are now on a one-year extension and have had two extensions so far. There is an inflation factor in each MSA to increase pricing automatically. The terms and conditions are the same for all three firms, although they may have different rates.

In accomplishing the remediation work through contractors, EAD follows the SJI procurement and contracting policies, procedures, internal controls, systems, and audits for its contracting and contractor management. For example, EAD periodically requests proposals for a variety of environmental services including environmental consulting, engineering, drilling, and laboratory services. In addition, EAD uses SJI standard Master Services Agreements for long-term contracts with key service providers.

The SJI contracting and contractor management process is reasonable but can be improved. Please see Chapter 19, Support Services, for an evaluation of SJI procurement and contracting. That report chapter has three recommendations that will benefit contracting and contractor management for remediation projects in the future:

- Establish a high level SJI supply chain function focused on contracting, purchasing, and materials management.
- Develop and implement a policy and procedure on rebidding contracts.
- Expedite the development and implementation of a formal vendor evaluation program.

Each of these recommendations is applicable to remediation project contracting and contractor management and will benefit that effort going forward.

C. RECOMMENDATIONS

None. However, the management of remediation projects will benefit from the recommendations for Accounting and Materials Management made in other chapters of this report.

23. CLEAN ENERGY

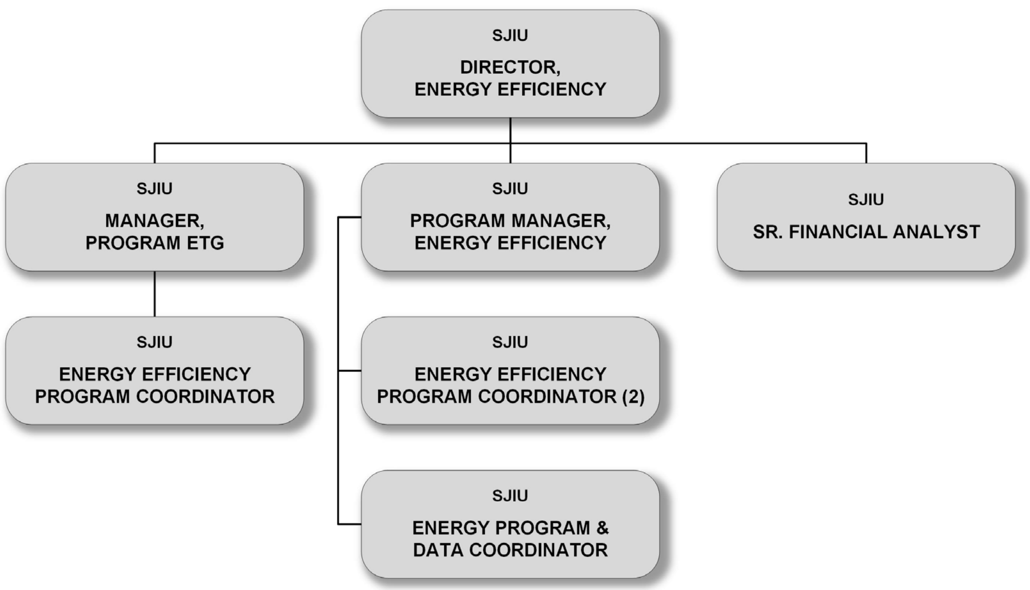
A. BACKGROUND

The SJI Utilities, Inc. (SJIU) Energy Efficiency (Clean Energy) organization develops and implements programs in compliance with the New Jersey Clean Energy Program (NJCEP) for both South Jersey Gas Company (SJG) and Elizabethtown Gas Company (ETG). Energy Efficiency (EE) programs are now mandated by the State. Until the Clean Energy Act of 2018 (CEA), the programs were largely NJCEP driven and voluntary for utilities. SJG had a large set of robust programs costing approximately $32 million per year. The CEA now requires all NJ electric and gas utilities, including SJG and ETG, to implement energy efficiency programs.

ORGANIZATION

The Energy Efficiency Program is managed by the Director of EE who reports to the Vice President, Rates, Regulatory, and Sustainability who, in turn, reports to the SJIU President. Energy Efficiency is a SJIU organization that serves both SJG and ETG. The organization structure for this group is shown in the following exhibit.

SJIU Energy Efficiency Organization Chart



The Director of EE has three direct reports. One manager and one coordinator handle ETG programs, and one manager and three coordinators handle SJG programs. There is also a Senior Financial Analyst who handles all budgeting, invoicing, and compliance reporting for both SJG and ETG.

The EE unit's primary mission is the development and implementation of SJG's and ETG's Energy Efficiency programs. The EE department also administers the Conservation Incentive Program (CIP). Under the CIP, SJG agreed to spend $500 thousand of shareholder money per year on conservation programs. SJG sponsors non-profits promoting EE like Sustainable New Jersey, and PowerSave Schools program

The EE department also validates SJG customers for participation in the New Jersey Comfort Partners Low Income program.

The SJIU Marketing department also assists with the Energy Efficiency program through its Trade Allies program in educating Heating, Ventilation, and Air Conditioning (HVAC) contractors and others on SJG EE programs that might benefit their customers.

NEW JERSEY CLEAN ENERGY PROGRAM

The NJCEP began as part of an economic stimulus push. The New Jersey Board of Public Utilities (BPU) approved several utility administered EE programs in 2009. These were voluntary programs. Since 2009, SJG has invested more than $110 million in EE programs.

In 2018, the CEA was passed and made effective. The CEA requires each NJ utility to reduce the use of electricity and natural gas in its territory. The CEA directed the BPU to require that, “each natural gas public utility achieve within its territory by its customers, annual reductions in the use of natural gas of at least 0.75% of the average annual natural gas usage in the prior three years within five years of implementation of its gas EE program.”

The SJI 2019 10-K summarized the SJG EE program’s recent funding:

> *<u>Clean Energy Program (CLEP)</u> - The CLEP recovers costs associated with SJG’s energy efficiency and renewable energy programs required under the New Jersey Clean Energy Program. For the preceding three years, regulatory actions regarding the CLEP were as follows:*
>
> *June 2017 - The BPU approved a NJCEP funding level of $344.7 million through June 2018, of which SJG was responsible for $12.7 million.*
>
> *June 2018 - The BPU approved a NJCEP funding level of $344.7 million through June 2019, of which SJG is responsible for $12.7 million.*
>
> *August 2019 - The BPU approved an update to the NJCEP funding level of $344.7 million through June 2020, of which SJG is responsible for $13.2 million.*

SJG filed for a $167 million enhanced program in September 2020 in response to the June 2020 BPU order implementing the CEA. It was approved on April 7, 2021. The Board order implementing the CEA calls for a decrease of 1.1% natural gas use within five years. There are no penalties or incentives for the first three years of the program, but there may be penalties or incentives for years four and five after year six.

The SJG EE programs can promote any energy savings including electric and water. The programs are not focused on reducing natural gas use alone. However, participants must be SJG customers and SJG cannot use the program to promote conversions to natural gas.

The SJG EE program Operations & Maintenance (O&M) and capital costs are recovered through an Energy Efficiency Tracker Rider which is trued up annually with the BPU.

SJG ENERGY EFFICIENCY PROGRAMS

SJG has several current programs and has proposed an expanded set of programs to comply with the CEA and the associated BPU order. The new set of programs will take effect in July 2021. The total current program cost is about $25 million per year, with 90% of that for rebates, grants, and other direct incentives.

The proposed expansion is for eleven programs plus several pilot programs (e.g., residential and commercial demand response and building operator efficiency certification). The cost, as proposed, is for $154.1 million of capital and $12.8 million of O&M expense over five years.

Several of the proposed programs are mandated by the BPU: Core Programs- Residential Efficient Products, Existing Homes Home Performance with Energy Star (HPwES), Multi-family, and Direct Install for Business and Prescriptive and Custom program. The other Utility-led programs are SJG initiatives: Residential r Behavior program, Quick Home Energy Checkup (QHEC) for Existing Homes, Weatherization for Moderate Income Existing Homes, Energy Saving Trees, Engineered Energy Solutions for Business, and Energy Management Solutions for Business.

SJG implements its EE programs through contractors. There are multiple contractors for the various energy efficiency programs. Some contractors serve more than one program. In 2019, SJG spent $1.4 million with clean energy contractors.

All EE program costs are recovered through a rider paid by all (residential, commercial, and industrial) customers. This is a public benefit program.

B. FINDING

23-1 The SJG EE programs are projected to produce substantial energy savings, reduced emissions, and increased jobs.

The SJG EE Program was approved by the BPU on October 29, 2018, for a three-year term ending December 2021 and is comprised of an investment budget of $72.1 million and an O&M expense budget of $9.2 million. This Program consists of the following residential and commercial subprograms:

- **Residential Efficient Products Program** – provides customers with access to a SJG online portal designed to raise awareness and increase access to low and moderately priced energy efficiency products including, low-flow water devices, smart thermostats, and energy saving tips.
- **Residential Home Assessment with Direct Install Program** – offers customers with single-family homes a subsidized home energy assessment for $49 that includes the installation of low-cost measures such as LED lighting, low-flow water devices, and smart power strips at no additional cost, along with personalized recommendations to further expand on energy efficiency measures.
- **Residential Retrofit Weatherization Program** – offers low-to-moderate income customers an energy audit, energy education and weatherization services that includes direct install of measures like insulation and air and duct sealing, as needed and at no cost.

- **Online Energy Audit** – offers homeowners a customized, real-time energy audit based on behavioral patterns to help customers better understand their energy usage and provides easy to implement recommendations to reduce consumption and improve energy-efficiency.
- **Home Energy Reports** – Customers receive home energy reports which provide information on current energy usage and recommendations on how to reduce usage in the future.
- **Commercial and Industrial Engineered Solutions Program** – provides municipalities, universities, schools, hospitals, and non-profit facilities tailored EE solutions and financing assistance to take on largescale energy-efficiency projects.
- **Office of Clean (OCE) Program Residential and Commercial Financing** – SJG has been providing low to no interest loans for eligible residential and commercial customers for OCE programs including high efficiency HVAC equipment, Home Performance with Energy Star, Direct Install and Smart Start.

The SJG EE program lifetime energy savings from these programs is expected to be 15.6 million dekatherms and 829 thousand metric tons of CO2 emissions.

Looking ahead, SJG made a filing on September 25, 2020, with the BPU to establish new Energy Efficiency Programs for a three-year term commencing July 1, 2021, and is comprised of a total investment budget of $154.1 million and an O&M expense budget of $12.8 million. The program was approved on April 7, 2021 and will replace the current energy efficiency programs effective July 1, 2021.

The implementation of the proposed program is expected to result in approximately $201 million in customer bill savings, 482 thousand metric tons of avoided CO2 emissions, and the creation of nearly 3,000 jobs over three years.

C. RECOMMENDATIONS

None.

24. RECOMMENDATIONS AND REVIEW OF PREVIOUS AUDIT

A. BACKGROUND

The previous Audit of the Affiliated Transactions Between South Jersey Gas Company and its Affiliates and a Comprehensive Management Audit of South Jersey Gas Company report was dated September 2013. (Docket No. GA11050310) The audits produced 91 recommendations. The Board of Public Utilities ordered implementation of 85 of the recommendations in its May 19, 2015, Order of Implementation.

The audits were based on 46 interviews and 776 data requests. The 85 recommendations directed for implementation were in 27 categories:

- Affiliate Overview and Analysis – 9
- Cost Distributions – 3
- Services and Cost Distributions to SJG – 3
- Executive Management and Corporate Governance – 5
- Strategic Planning – 3
- External Relations – 2
- Finance – 3
- Risk Management – 3
- Accounting and Property Records – 4
- Gas Procurement and Supply – Gas Supply – 5
- Gas Procurement and Supply – Gas Hedging – 6
- Gas Delivery and Operations Management – 3
- Contractor Performance and Damage Prevention – 3
- Customer Service and Meter Operations – 5
- Human Resources – Organization and Staffing – 1
- Human Resources – Workforce Management – 1
- Human Resources – Compensation – 2
- Human Resources – Training and Development – 2
- Human Resources – Benchmarking – 1
- Human Resources – Labor Relations – 1
- Remediation Costs – 1
- Support Services – Materials Procurement and Management – 5
- Support Services – Fleet Management – 2
- Support Services – Facilities Management – 4
- Support Services – Legal – 5
- Support Services – Insurance Claims – 1
- Information Technology – 2

South Jersey Gas Company (SJG) disagreed with eight recommendations. Of these, two were ordered for implementation. These were:

- Recommendation 2-6 EDECA Compliance and Competitive Bidding – Millennium Account Services – Given that MAS's owners have had complete control of MAS's pricing and that the pricing has never complied with the traditional regulatory pricing standard for affiliate services (lower of cost or market), Overland recommends SJG document and demonstrate the benefits it currently receives from its relationship with MAS. Specifically, we recommend SJG file testimony and cost-benefit data in its next rate proceeding supporting the assertion that, under the pricing and terms of its current Services Agreement, SJG continues to benefit in the form of a net savings from paying MAS to read its meters.
- Recommendation 2-7 EDECA Compliance and Competitive Bidding – Millennium Account Services – EDECA Section 14:4-3.5(t)(6) requires that "transfers of services [to a utility] not produced, purchased or developed for sale on the open market" be priced at "the lower of fully allocated cost or fair market value." Through ACE and SJG's process of soliciting competitive bids in 2012, MAS adjusted the rates charged to the two utilities for meter reading services to reflect current fair market value. However, in order to fully comply with the EDECA regulation in this section, Overland recommends that MAS determine what its fully allocated cost would be to provide meter reading services to SJG and charge the utility the lower of fully allocated cost or fair market value, ensuring compliance with this EDECA standard. If MAS is unable to comply with the standard, Overland further recommends that the NJBPU prevent amounts charged to SJG that exceed the lower of fully allocated costs or fair market value from being passed on to SJG's ratepayers by requiring SJG to record the excess charges below-the-line.

The six recommendations that the South Jersey Gas Company (SJG) disagreed with and were not ordered to implement were:

- Recommendation 2-4 Cross Subsidization – Millennium Account Services (MAS) – Overland recommends modifying the Services Agreement between SJG and MAS to remove the requirement that SJG bear any risk relating to any liquidation of MAS. Specifically, the requirement that SJG pay "reasonable costs" in the event of a "termination for convenience" should be removed. If SJG successfully argues to the NJBPU that modifying the agreement is not possible, we recommend the NJBPU prevent such costs from being passed on to SJG's ratepayers by prohibiting SJG from recording them, should they be incurred, in regulated, above-the-line accounts.
- Recommendation 2-10 EDECA Standards – Millennium Account Services – Overland recommends that SJG list Millennium Account Services as an RCBS in SJG's Affiliate Standards Compliance Plan.
- Recommendation 6-2 – In the spirit of full disclosure, the company should reveal in its proxy statement the outside relationships that Directors Campbell, Hartnett-Devlin, and Petrowski have. As the board becomes aware of new relationships that could (by a reasonable person) be viewed as a conflict of interest, such relationships should also be disclosed in the company's proxy statement. If

applicable, the board's rationale for concluding that any reported relationship is not an actual conflict of interest should also be disclosed.

- Recommendation 6-3 – We recommend that Directors Campbell, Hartnett-Devlin, and Petrowski recuse themselves from any discussions or decisions that the SJI board or its subsidiary boards or executive committees make concerning any matters involving the markets in which they have a specific outside interest and/or relationship. The same would apply to any other director whose outside relationships are specifically disclosed by the company. By doing this, concerns that such directors might not act in the best interest of SJI and its subsidiaries or that such directors might give preferential treatment to the companies in which they have an outside interest or relationship will be alleviated.
- Recommendation 8-2 – The "government" component of Government Regulatory Affairs (GRA), handled primarily by the General Manager, Government and Community Relations, is a corporate function performed on behalf of SJI and all of its subsidiaries. SJI should consider incorporating this function in its parent organization or in SJI Services, instead of in SJG.
- Recommendation 9-4 – The dividend policy for SJG should be revised such that SJG's dividends are not linked, directly or indirectly, to the financial performance of the unregulated affiliates.

B. FINDINGS

24-1 SJG reported implementation of all 85 of the recommendations ordered for implementation.

SJG was directed to file quarterly reports with the BPU Division of Audits regarding the status of all recommendations. SJG filed quarterly reports for the second, third, and fourth quarter of 2015, the first quarter of 2016, and a final report on May 17, 2016. In these reports, SJG reported full implementation of 82 recommendations and deferral until the next base rate case of three recommendations.

24-2 Some of the recommendations from the prior audit have continued viability; however, most have been implemented or are no longer relevant.

The table below presents a list of the 85 recommendations with the results of the SAGE consulting team's review. Each recommendation has a determination of its continued viability and a comment by the relevant SAGE team member. A recommendation has "continued viability" only if it has not been implemented and is still relevant. Recommendations that were implemented or are no longer relevant do not have "continued viability."

Continued Viability of Past Audit Recommendations with SAGE Comments

Recommendation	Continued Viability (Y/N)	Comment
2-1: Payments by SJG on Behalf of Affiliates - Apart from off-system sales of gas, most of the billings by SJG to affiliates during the audit period were to obtain reimbursement for payments SJG made to vendors on behalf of the affiliates. Overland understands there are efficiencies achieved by having a single affiliate pay for vendor services provided to multiple affiliates. However, the parent company, SJI, or the service company, SJIS, should fund these payments and seek reimbursement from subsidiaries, not the utility.	Y	This practice continued from 2013 through 2019; see Chapter 8, Affiliate Relationships, Finding 8-2 and Recommendation 8-1.
2.2: Appliance Services - South Jersey Energy Services Plus (SJESP) SJESP should add the disclaimers to the front page of its website in accordance with Electric Discount and Energy Competition Act (EDECA) Standards Section 14:4-3.S(k).	N	Disclaimer now appears on the front page of SJESP's website.
2-3: SJG should charge SJESP for its use of company garages to maintain SJESP vehicles. SJESP should also be charged for its use of a storeroom in SJG's materials and supplies storage facility.	N	Has been implemented.

Recommendation	Continued Viability (Y/N)	Comment
2-5: Competitive Bidding - MAS - Given the circumstances under which MAS obtained its most recent contract to provide meter reading to SJG and Atlantic City Electric (ACE), we recommend the BPU do the following: 1) Enforce the "re-bid" price per Pad, which essentially represents MAS's match of a lower initial bid by competitor Accu-Read, and ensure that it has not been adjusted to a higher price since the contract went into effect. 2) Prohibit MAS from "negotiating" with SJG to raise its price at the end of year three of the five year contract in order to recoup the revenue lost by having to resubmit its initial bid at a lower price. 3) Given the inherent conflict of interest between MAS and its utility customers created by common ownership, monitor all future MAS contract bid processes to ensure that they are competitive and impartial, or limit the amount of meter reading expense incurred from MAS that SJG records in above-the-line (regulated) accounts to either a) a price based on cost plus a regulated investment return or b) the inflation-adjusted amounts in the re-bid price-per-read submitted in the current contract.	N	Has been implemented.
2-6: EDECA Compliance and Competitive Bidding - Millennium Account Services - Given that MAS's owners have had complete control of MAS's pricing and that the pricing has never complied with the traditional regulatory pricing standard for affiliate services (lower of cost or market), Overland recommends SJG document and demonstrate the benefits it currently receives from its relationship with MAS. Specifically, we recommend SJG file testimony and cost-benefit data in its next rate proceeding supporting the assertion that, under the pricing and terms of its current Services Agreement, SJG continues to benefit in the form of a net savings from paying MAS to read its meters.	N	Handled in the last rate case.

Recommendation	Continued Viability (Y/N)	Comment
2-7: EDECA Compliance and Competitive Bidding - Millennium Account Services - EDECA Section 14:4-3.5(t)(6) requires that "transfers of services [to a utility] not produced, purchased or developed for sale on the open market" be priced at "the lower of fully allocated cost or fair market value." Through ACE and SJG's process of soliciting competitive bids in 2012, MAS adjusted the rates charged to the two utilities for meter reading services to reflect current fair market value. However, in order to fully comply with the EDECA regulation in this section, Overland recommends that MAS determine what its fully allocated cost would be to provide meter reading services to SJG and charge the utility the lower of fully allocated cost or fair market value, ensuring compliance with this EDECA standard. If MAS is unable to comply with the standard, Overland further recommends that the NJBPU prevent amounts charged to SJG that exceed the lower of fully allocated costs or fair market value from being passed on to SJG's ratepayers by requiring SJG to record the excess charges below-the-line.	N	Covered in the last rate case.
2-8: Prior Audit Recommendations - SJG should encourage the BPU to rule on relevant, outstanding issues from the 2005 audit and any matters that are contested in the current audit. For any recommendations not implemented, the company should file a status report with the BPU every three months until a final decision is rendered.	N	SJG complies with regulatory requirements.
2-9: EDECA Standards - SJESP Plumbing Service - South Jersey Energy Service Plus Plumbing Service should be listed as an RCBS in the SJG Compliance Plan.	N	This is now in the SJG Compliance Plan.
2-11: EDECA Standards - Millennium Account Services - Overland recommends that SJG terminate any Joint advertising and marketing agreements that it has with MAS (including utility advertising shown on the side of MAS vehicles) in order to be in compliance with EDECA Standard 14:4-3.5(0)(2).	N	SJG does not have joint advertising and marketing agreements with MAS.

Recommendation	Continued Viability (Y/N)	Comment
3-1: SJI should immediately develop the reporting capability to show how costs incurred in the parent organization are incurred, by function (department) and cost type, how functional costs are directly charged and to what subsidiaries, which of the functional costs are pooled for allocation and how allocable costs by function are distributed to each subsidiary. The current reporting process does not provide an audit trail from costs incurred by function to the ultimate affiliates to which such costs are directly charged or allocated. Parent company cost allocation reporting should permit the identification, for each SJI function and major cost type (e.g. loaded payroll, outside services, etc.), of the costs that are directly charged to each subsidiary, and the costs that are allocated to subsidiaries through the MSF allocator. The applicable MSF allocation percentages and amounts allocated to each subsidiary should also be identified.	N	SJI has the required reporting capability to show how costs incurred in the parent organization are incurred, by function (department) and cost type, how functional costs are directly charged and to what subsidiaries, which of the functional costs are pooled for allocation, and how allocable costs by function are distributed to each subsidiary. An audit trail now exists.

Recommendation	Continued Viability (Y/N)	Comment
3-2: SJI should update and improve its Cost Allocation Manual to provide a complete description of the various steps involved in calculating the three-factor formula which is used to distribute a majority of the costs it incurs. A majority of the costs SJI incurs within the parent organization are allocated to subsidiaries through the Management Service Fee (MSF) using the three-factor formula. During the years 2009 through 2011, the three factor allocator distributed an average of more than $10 million annually, more than three-fourths of which was allocated to SJG. Calculating the individual components of the formula requires multiple steps and involves assumptions, none of which are explained or justified in the CAM. SJI's CAM should be enhanced to include a full description of the steps and assumptions used to calculate the three-factor formula, including the basis for changing the amounts for assets, revenues, cost of service or payroll data as found in consolidating financial data or the books of individual subsidiaries. Any changes in the calculation, such as the change that occurred between the 2009 and 2010 allocation years in the way SJRG's and SJE's revenues were treated (pre-tax vs. after tax), should be separately highlighted in a section entitled "changes in calculation methods or assumptions from the prior year."	N	The CAM has been updated to explain the calculations and methodologies used to allocate costs using the three-factor formula.
3-3: SJI should correct the template used to calculate the payroll component of the three-factor formula to prevent assigning payroll from unregulated holding company South Jersey Energy Services to the payroll component factor used to distribute costs to SJG. As explained in findings above, in calculating the payroll component of the three-factor formula, the calculation works such that a majority of payroll percentage from SJES that remains unassigned after amounts are "allocated out" is added to SJG's share of the formula's payroll component factor. SJES' payroll is not attributable to SJG, and therefore should not serve to increase SJG's share of the three-factor allocator's payroll component. SJI should correct this error in its three-factor formula worksheet template.	N	This has been corrected; payroll from SJES is no longer allocated to SJG.

Recommendation	Continued Viability (Y/N)	Comment
4-1: Overland strongly recommends that SJIS develop (or be required to develop) reporting that shows the following on a monthly and an annual basis: 1) SJIS costs incurred by function and account, 2) how functional costs are classified for distribution by cost distribution method (i.e. the amounts, by function, directly charged or allocated using each allocation method), and 3) how these SJIS functional costs are distributed and billed to each affiliate (i.e., show the amounts for each method allocated to each affiliate). It should go without saying; however, it is important to emphasize that the totals for each function in items 1, 2 and 3 above should tie with one-another, both on a monthly as well as an annual basis. That means either South Jersey Industries Services (SJIS) will have to incorporate the full cost collection and distribution process into one system, or perform the monthly analysis necessary to identify functional amounts as incurred, as pooled for distribution by method, and as distributed to each affiliate, such that the total amounts reported for each SJIS function at each stage of the process equal one-another for a given timeframe.	N	This company was dissolved January 1, 2014, and all services previously handled by SJIS were provided by SJI. Details of cost allocations are present for SJI.
4-2: SJIS should improve support for allocation factors to include 1) support for current year (as opposed to previous years') factors for all allocators and 2) the input data used to calculate each affiliates share of all allocators.	N	This company has been dissolved. Support for SJI allocation factors is adequate.

Recommendation	Continued Viability (Y/N)	Comment
4-3: 'SJI should improve Cost Allocation Manual (CAM) documentation of the SJIS allocation process. Specifically, documentation in the CAM should be expanded to include the following: (1) A description of the functions performed by SJIS at least equivalent to the descriptions contained in this report. Currently, the descriptions of "Services Provided by SJI Services, LCC, to SJG," span,1ing parts of pages 9 and 10 of the CAM dated at year-end 2011, consists of a very limited amount of information. The CAM should list, by function, the responsibilities of each function equivalent to those listed in this Chapter, to provide a reasonable understanding of what services are actually provided to affiliates. (2) An end-to-end description of the process by which SJIS incurs costs, identifies them for direct charging or pools them for distribution, and distributes and bills them to affiliates, including the basis for various allocators used to distribute "billable to multiple clients" costs. To the extent current procedures remain in place (notwithstanding other recommendations discussed above), the CAM should describe how timecard data is collected and input into the Lawson system, and the other recurring journal entries required to produce an SJIS affiliate billing, and the purpose of each. In the current CAM, descriptions of various SJIS processes and items are scattered throughout the CAM and various exhibits and attachments. This scattered approach inhibits an understanding of the process as a whole.	N	SJIS has been dissolved. Documentation of the SJI allocation process in the Cost Allocation Manual (CAM) is adequate.
6-1: We recommend the SJI board maintain an up-to-date, comprehensive catalog of each board member's experience on all corporate boards, including, but not limited to, committee assignments, committee chair assignments, lead independent director assignments, etc. Time periods served in each capacity should be tracked. Not only is this information needed in assessing compliance with NYSE rules, but it also important in determining the skill set that each director brings to SJI.	N	Recommended records are maintained.

Recommendation	Continued Viability (Y/N)	Comment
6-4: We recommend that the SJI Governance Committee and the entire board consider candidates who possess accounting expertise, especially those with a Certified Public Accountant or with Chief Financial Officer experience, when next adding or replacing current members. Accounting is the one area, of all key areas of expertise that the Governance Committee identified as being needed, that is missing from the current SJI board.	N	Adequate financial background maintained on the Board.
6-5: At a minimum, every other year, each SJI director should attend one external continuing education seminar, class, and/or conference on the topic of corporate governance and/or the utility industry. No more than two members should be given credit for attending any particular continuing education offering so as to encourage as much diversity of training as possible. This continuing education requirement should be disclosed in the company's annual proxy statement, and any member who fails to meet the requirement should provide a written explanation for his/her nonperformance in the proxy statement.	N	Recommendation implemented and still in effect.
6-6: We recommend the Audit Committee charter be amended to specifically state that the independent accountants report directly to the Audit Committee. This will eliminate any ambiguity surrounding the matter and more directly observe the requirements of the Sarbanes-Oxley Act.	N	Recommendation implemented and still in effect.
6-7: Until it is demonstrated that the growth in and level of SJI audit fees are reasonable, we recommend the Audit Committee either put the SJI financial statement audit up for competitive bid in an environment in which all qualified firms have a reasonable expectation of being awarded the work or significantly curtail future increases in audit fees from the incumbent firm, Deloitte & Touche.	N	Growth and level of SJG's audit fees over the seven-year period of this audit appear to be reasonable.
7-1 & 7-1 Attachment: Overland recommends that SJI track its progress toward its goals in becoming an industry leader in the areas mentioned in its vision and mission statement by making more extensive use of benchmarking studies as a basis to more effectively demonstrate its progress.	N	Benchmarking program ongoing.

Recommendation	Continued Viability (Y/N)	Comment
7-2 & 7-2 Attachment: Overland recommends that SJI documents and retains balanced scorecard information for all of its employees, complete with the results of how the employee achieved the balanced scorecard objectives and the quantitative assessment of the employee's level of achievement. This information should be retained for all years that are subject to SJI's document retention policies and guidelines.	N	Balanced Scorecard Program well-developed and linked to individual employee annual goals.
7-3 & 7-3 Attachment: The SJI five-year strategic plan should include more of a forward looking view of how the utility will operate for the five years covered by the 2011 - 2015 Strategic Plan. Included in this view should be a more detailed assessment of any anticipated regulatory filings (e.g. rate case filings) and financial metrics as they relate to credit ratings (see Chapter 9-Finance, Risk Management and Cash Management).	N	Implemented and still in effect.
8-1: SJG should record its share of corporate donations in below-the-line account 426.1, Donations Expense, instead of account 923, Outside Services Expense.	N	No longer an issue. From 2014 through 2019 corporate donations are recorded in account 426.1, Donations Expense.
8-3: The BPU should determine whether the costs incurred by employees in conducting legislative analysis, advocacy and "social investment" activities should be funded by ratepayers or by shareholders. To the extent the BPU determines that any of these activities should be funded by shareholders, SJG should record its share of the activities "below-the-line," in Federal Energy Regulatory Commissioner (FERC) account 426.4 - Expenditures for Certain Civic, Political and Related Activities.	N/A	Recommendation made to the BPU.
9F-1: The balanced scorecard for the person responsible for the Finance Department should have specific objectives that cover all components within the Finance Department, specific and detailed metrics to describe the expectation of how the objective is to be achieved, and documentation of the actual result and a comparing to the expectation, which will determine the rating for that particular objective.	N	This has been corrected by the Company.

Recommendation	Continued Viability (Y/N)	Comment
9F-2: The Company currently does not consider forecasted estimates of credit metrics in its decision-making process. The Company should develop these estimates based on internal financial forecasts and use these metrics to help guide its strategic planning decisions. This analysis should be reviewed by both senior management and the Board of Directors.	N	This has been corrected.
9F-3: Representatives of SJI and SJG should conduct meetings with the rating agencies and BPU Staff to develop a plan to enhance current ring-fencing provisions to a level sufficient to ensure that SJG's credit ratings are more reflective of SJG as a standalone company and negative influences from the activities of SJG's affiliates are minimized.	N	This has been implemented
9 RM-1 & 9 RM-1 Attachment: It appears that SJI is in the process of implementing the use of the quantitative metric, Value at Risk (VaR), to measure trading risks. Since VaR is a widely used metric in the utility industry to measure company risk, SJI should strive to obtain the information necessary to measure its VaR so that it can monitor the company's risk over time and also benchmark it against other similar utility holding companies.	N	This has been accepted and is no longer an issue.
9 RM-2 & 9 RM-2 Attachment: Mr. Lynch's balanced scorecard should contain more performance objectives that are considered stretch objectives. These objectives encourage the Risk Management function to reach higher standards of risk management relative to industry peers. Mr. Lynch's balanced scorecard should contain a description of how he performed against the objectives that were set for him at the beginning of each year.	N	This has been implemented.
9 RM-3: SJI should more extensively use benchmarking data to compare its risk management function metrics to those of its peers.	N	This is being done.
10-1: Internal Audit should perform a focused review of the SJG Property, Plant and Equipment internal control procedures, particularly in regards to the retirement of SJG assets, to ensure that these controls are effectively designed and are being adequately followed.	N	Internal control procedures are adequate.

Recommendation	Continued Viability (Y/N)	Comment
10-2: The SJI Internal Audit department should make a concerted effort to develop more accurate budgets and it should regularly report the budget-to-actual variance of its audits to members of management.	N	Budgets are adequate.
10-3: Given the increasing complexity of SJI's operations, as well as the increasing number of control deficiencies identified by SJI's external auditors, the Company should engage a third party to conduct an external quality review of the SJI Internal Audit Department.	N	This was done.
10-4: The Company should develop a comprehensive capitalization policy that could be referenced by Company employees when making complex decisions about whether to record an expenditure as an asset or as an expense.	N	This has been accomplished.
11-1: SJG should develop, and make available on its website, a comprehensive manual that could be downloaded by third party marketers interested in providing service to customers in SJG's service territory.	N	SJG has a comprehensive website for suppliers. There are more than 70 suppliers that have already provided services and therefore have experience with SJG.
11-2: SJG should enhance the information available to customers on its website regarding third-party supplier options. This would include consumer protection information as well as specific guidance on how a customer could switch suppliers.	N	SJG can only list the suppliers willing to participate in the CHOICE residential programs. Contact information is provided as well as an option for the residential entity to complete a form and submit it to those suppliers. The intent is that said supplier can return a call to the residential and further explain the various pricing options. The website further provides, on a per supplier basis, the kind of pricing options that are available.
11-3: When conducting online auctions to enter into wholesale natural gas contracts, SJG should require a minimum of two bidders before awarding the contract to an affiliate.	N	SJG made the majority of its purchases on a daily basis. For daily purchases emails are sent to suppliers who are active in the particular supply area at issue. SJG has more than 70 suppliers and while not all suppliers are active in every supply area, there are a significant number of suppliers in all areas. The traditional type RFP is forwarded for the few multi-months of supply.

Recommendation	Continued Viability (Y/N)	Comment
11-4: Regarding the additional controls implemented by the Company in response to the 2010 FERC investigation, SJI Internal Audit should perform a comprehensive review of these additional compliance measures implemented by the Company, and it should regularly test compliance with these controls every three years or more frequently if significant changes are implemented.	N	SJG's Risk Management Department audits the company's transactions on a quarterly basis. Additionally, SJG has engaged an independent law firm, specialized in FERC matters, which provides seminars and further education to the staff designated to areas where FERC activities are likely to occur. Further training and education is required on an annual basis. This audit did not find FERC violations.
11-5: The Company should annually file its FERC Compliance Manual with the NJ BPU, illustrating any changes from the previous compliance manual.	N	A FERC manual is available to NJ BPU staff members and with each training by the independent law firm the manual is revised if necessary.
11-H1: SJG should adhere to the established protocol of its non-discretionary hedging strategy. Specifically, SJG should remove the discretionary element of this program and it should increase the amount of supply that it hedges using this strategy so that it can hedge an amount closer to its stated goal of 20% of its supply requirements.	N	With the combination of Price Swaps and Futures, SJG meets its financial hedging strategy outlined in its Risk Management Processes and Procedures manual. Approximately 20% of the estimated annual requirements use non-discretionary hedges. 30 – 46% of the estimated annual requirement is hedged using derivatives and/or futures.
11-H2: SJG should establish written performance expectations for its hedging program. These performance expectations should be compared to actual results to evaluate how well SJG's hedging strategies have performed, and they should be reviewed by SJG's Risk Management Committee on an annual basis.	N	The Risk Management Processes and Procedures (RMP) manual outlines the expectations of the financial hedging program. The Risk Management Department is very involved with financial hedges.
11-H3: SJG should establish documentation requirements for its discretionary hedging program. At a minimum, these documentation requirements should fully explain the Company's basis for entering into the hedge.	N	The RMP manual is comprehensive and outlines expectations. Financial hedging guidelines are clear and descriptive. Discretionary hedges are documented as to the basis for entering the hedge.
11-H4: SJG should consider significantly scaling down, or potentially even de-activating, its discretionary hedging program and utilizing alternative hedging strategies to achieve an adequate level of hedged gas supply.	N	A significant amount of gas is hedged at the end of the month. The financial hedging program calls for 18 months into the future to be hedged; as the near month drops off during the last few days of the month and just prior to the first day of the next month, one more outer-month is hedged to ensure 18 months are still hedged using the NYMEX strip. SJG is taking the pricing that the market has to offer in order to maintain 18 months hedged at all times.

Recommendation	Continued Viability (Y/N)	Comment
11-H5: SJG management should regularly consider the criteria for secondary transactions. This consideration should be formally documented and reviewed regularly by SJG's Risk Management Committee at its quarterly meetings.	N	The RMP provides for a variety of financial instruments to reduce the cost of supplies previously hedged, especially where price drops are expected. Quarterly status reports are issued to NJBPU and to the Ratepayer Advocate identifying outstanding hedging positions and any changes to the RMP guidelines.
11-H6: 'SJG's Risk Management Committee should perform sensitivity and benchmarking analyses to test the effectiveness of its hedging program. These analyses should determine both how well SJG's hedging program has been executed, as well as how well it has been designed.	Y	Areas of SJG's hedging using futures are not managed in a way that maximizes its potential. Futures can result in rapid fluctuations of futures prices. The prices can go up and down daily or even within minutes. This price movement creates opportunities to trade in-and-out of the future contracts taking profits with the movement. SJG does not take advantage of the movement; they allow each contract to go to the final close.
12-1: The head of SJG's Customer Distribution and Operations Department is the primary SJG officer in charge with maintaining a safe and reliable distribution pipeline system. We recommend that safety-related goals represent a minimum of 20% of this individual's balanced scorecard.	N	Adequate safety-related goals are included in appropriate performance plans.
12-2 & 12-2 Attachment: SJG should institute a policy to repair Grade B Leaks within twelve months of discovery. This recommendation was originally made in SJG's previous management audit, but it was not implemented.	N	Grade B leaks are repaired in a timely fashion.
12-3 & 12-3 Attachment: SJG should integrate industry benchmark statistics into its performance targeting and should set performance targets at a "stretch" (aspirational) level.	N	A benchmarking program has been implemented.
13-1: SJG's key damage prevention metric is damages per 1,000 markout requests. We recommend that a goal to improve this statistic to "best in class" levels be reflected in the performance evaluations for employees directly responsible for damage prevention, including the Director of Work and Process Management and the Markout Coordinator.	N	Damage prevention program and goals are well-developed.

Recommendation	Continued Viability (Y/N)	Comment
13-2: The division of gas system construction and maintenance functions between employees and contractors has remained constant for at least the last 12 years. Employees perform most routine maintenance while contractors perform essentially all construction. SJG has not conducted any studies of the costs and benefits of using employees vs. contractors since at least 2009. At least for the excavation location (markout) function, which is and has been handled by a contractor, the use of employees can be considered to be a best practice because it tends to provide better control over the process. Although it may be that the status quo continues to represent SJG's least-cost alternative, we recommend that SJG perform a high-level computation of the costs and benefits of each construction and maintenance function at least once every five years.	N	The mark-out contractor marks for other utilities as well, creating an economy of scale. SJG employees only marking for SJG would not be cost competitive. Additionally, SJG's damage prevention program is well-developed and the mark-out contractor's performance is good.
13-3: Objectives to achieve damage performance metrics; most importantly, damages per 1,000 locates, should be included in the Balanced Scorecards of all employees with responsibility for contractor safety procedures, especially employees with direct responsibility for overseeing the leak survey and damage prevention processes, including the Director, Work and Process Management (Anthony Pezzulo at the time of our audit) and the Markout Coordinator (William Tappin at the time of our audit).	N	Damage prevention program and corresponding individual goals are well-developed.

Recommendation	Continued Viability (Y/N)	Comment
14-1: SJG should consider adding automated dialing and collection capability to its new phone and CIS system to enable it to initiate active collection efforts on past due amounts at an earlier stage in the account aging process. Currently available technology is capable of identifying past due accounts, dialing the associated customers automatically with payment messages, and facilitating the collection of payments from such customers over the phone, in many cases without the intervention of a live agent. This permits additional focus and effort to be applied to overdue accounts earlier in the aging process at a minimal incremental cost per collection attempt. Given that SJG is currently. in the process of implementing a new CIS, we believe it is timely to consider implementing automated dialing and collection technology. Alternatively, SJG should at least ensure that its new CIS is designed with the capability of handling automated collection in the future.	N	SJG has made improvements to its collections processes.
14-2: Overland recommends that SJG establish performance targets for the following credit and collection statistics and add them to the balanced scorecard for the Manager, Customer Accounting and Billing: 1) arrearages over 60 and 90 days; 2) bad debts as a percentage of revenue; and 3) percentage of revenue recovered for accounts turned over to outside collection agencies. To the extent statistics are available from AGA surveys of arrearages and collection activities, the AGA statistics for peer companies should be used to establish benchmarks.	N	The dashboard has been modified.

Recommendation	Continued Viability (Y/N)	Comment
14-3: Balanced scorecards for managers in the Customer Service function do not currently include performance targets for important department metrics. Assuming it is the responsibility of Customer Service managers to meet these targets, we recommend including them in the balanced scorecards for the Managers, Customer Service and Dispatch and Customer Accounting and Billing. Specifically, call answering, gas leak response, first call resolution, service appointments met and service representative courteousness and knowledgeable targets should be included in the balanced scorecard for the Manager, Customer Service and Dispatch. Targets for bad debts as a percentage of revenue, 60 and 90 day arrearage as a percentage of total outstanding accounts receivable, field collector productivity and percentage of revenues recovered by collection agencies should be added to the balanced scorecard for the Manager, Customer Accounting and Billing.	N	Balanced scorecards and targets have improved.
14-4: As noted above in the Summary of Findings, SJG's disconnection rate is between one-third and one-half of its AGA Mid-Atlantic region peers. SJG should investigate the reasons that its disconnection rates are lower than its peers during a time when its bad debts as a percentage of revenue have been increasing. Based on this, SJG should determine whether its procedures for identifying and disconnecting non-pay accounts are appropriately aggressive. To the extent SJG's reliance on credit scoring may be causing it to leave non-pay accounts connected beyond the age that such accounts are disconnected by peer companies, SJG should adjust its procedures and perhaps increase the aggressiveness of its shut-off activities.	Y	The 2020 pandemic has interrupted disconnection policies because of temporary regulatory bans on terminations.

Recommendation	Continued Viability (Y/N)	Comment
14-5: SJG should develop a written procedure describing the activities needed to systematically ensure that, to the extent possible, all customers eligible for energy assistance programs have appropriately identified and encouraged to apply for assistance. Further, the procedure should outline the processes and employee responsibilities required to ensure that all monthly billing credits due from the State of New Jersey under the State's Lifeline program are appropriately processed and collected. SJG should ensure that to the extent permitted by law, its new CIS tracks energy assistance eligibility and participation.	N	Customer assistance initiatives have improved.
15-1: When Overland requested benchmarking data from SJI in the area of Human Resources recruiting; SJI's response contained two benchmarking reports that were from October 2003 and April 2006. Assuming that the reports provided by SJI are used as benchmarks for Human Resources, then these reports should be updated on a yearly basis.	N	HR has been using recent benchmarking reports.
15-2 & 15-2 Attachment: Recommendation 15-1 SJI should ensure that each position in the company from the CEO to full-time entry level employees has an up-to-date job description documented and retained by Human Resources.	Y	See Chapter 12, Human Resources, Finding 12-6 and Recommendation 12-6 regarding job descriptions.
15-3 & 15-3 Attachment: SJI executives should incorporate more challenging base and stretch goals into their balanced scorecards in the future. This recommendation is based on the fact that SJI named executives in the 2012 Proxy achieved 95% of their performance targets.	Y	Performance goal metrics for the SVP and Chief HR Officer are not quantified. See Chapter 12, Human Resources, Finding 12-10 and Recommendation 12-8.
15-4: SJI should review the executive compensation peer group and choose companies that are relatively closer to SJI in size as well as other factors such as: utility vs. non-utility business, location, etc.	Y	See Chapter 2, Executive Management and Corporate Governance, Finding 2-6 and Recommendation 2-2.

Recommendation	Continued Viability (Y/N)	Comment
15-5 & 15-5 Attachment: Recommendation 15-1 Overland found that some balanced scorecards from 2009 – 2011 were not filled out completely and the results of the scorecards were discussed informally between the employee and the supervisor. We recommend that all exempt employees have balanced scorecards filled out in their entirety and retained electronically in the employee's file for future reference.	Y	Balanced Scorecards were discontinued for employees below the Director level.
15-6 & 15-6 Attachment: Recommendation 15-2 Overland recommends that mid-year reviews of employee performance be completed in their entirety, and formally documented, and retained electronically.	Y	Mid-year reviews are voluntary.
15-7: In general, SJI Human Resources should obtain, and more extensively utilize, benchmarking data in order to improve the effectiveness and efficiency o, the HR function.	N	SJI regularly reviews benchmarking data supplied by consultants.
15-8: Recommendation 15-1 SJI should strive to improve its relationship with the Local 76. Improving the relationship with the Local 76 might be achieved through consistent monthly meetings with the union as well as soliciting the help of outside facilitators to conduct relationship building workshops with the Company and the union.	N	The number of union grievances has remained relatively low.
16-1: The SJI Audit Committee should continue to perform annual reviews of the MGP Site remediation budget until all sites have been sufficiently repaired.	N	This has been implemented.
17 MM-1: In response to discovery request OC-506, the Company indicated that it was "unable to quantify the dollar value of goods and services [other than gas materials] procured for SJG." It stated that "payables information is not classified by goods or services, so there is not a way to pull this information directly." The employees in charge of procurement activities should be able to quantify the purchases they make for an entity by type and by vendor. We recommend SJI and SJG take whatever steps are necessary to develop the capability to quantify the scope and dollar value of all managed procurement.	Y	SJG will not be able to comply with the spirit of this recommendation until the planned implementation of the new purchasing system is complete. The annual spend analysis that is done using manual analysis of existing system data is highly variable and its accuracy is questionable.

Recommendation	Continued Viability (Y/N)	Comment
17 MM-2 & 17 MM-2 Attachment: Most utilities gauge the performance and efficiency of their supply chain process by benchmarking themselves against other utilities. Typical metrics include supply chain expense as a percentage of procurement spending, and various cost reduction and cost avoidance statistics. Survey-based benchmarking data covering supply chain activities is readily available. After it develops the capability to fully quantify the goods and services it purchases (as recommended above), we recommend SJG benchmark its supply chain costs and activities against peer utilities.	Y	Benchmarking was done. However, enough time has passed and there have been enough personnel changes to make a renewed benchmarking effort productive.
17 MM-3 & 17 MM-3 Attachment: SJI indicated that it has not attempted to survey or implement any industry best practices in the supply chain area. We recommend SJG become familiar with, and to the extent feasible, implement, industry best practices for the sourcing of gas materials and other goods and services as well as inventory management.	Y	This recommendation was implemented. However, enough time has passed and there have been enough personnel changes to make a renewed benchmarking and best practices effort productive.
17 MM-4 & 17 MM-4 Attachment: The McJunkin contract has not been rebid and its pricing has not been compared with other vendors since it was initiated in 2006. We recommend SJG benchmark the prices of outsourced gas materials procurement and storeroom management performed by McJunkin against other vendors. If benchmarking the price of equivalent services from other vendors is not possible, or if it shows that McJunkin is or may be a higher cost provider than other vendors, SJG should put the contract out for re-bid or at least use the benchmark results as a basis for negotiating cost reductions in the following year's Supply Agreement with McJunkin.	N	This is moot at this point in time as the materials contract has eight more years to run.

Recommendation	Continued Viability (Y/N)	Comment
17 MM-5 & 17 MM-5 Attachment: We recommend SJI and McJunkin adhere to all of the requirements of their Supply Agreement in the area of Key Performance Indicators (KPIs). Specifically, we recommend: A) McJunkin maintain and provide to SJG, in advance of discussions of annual performance, the "service-level KPI matrix" required in the Supply Agreement; B) McJunkin quantify cost savings at least annually, clearly show what the savings involve and how they were calculated, and show savings performance against the 3%cost reduction baseline provided in the Supply Agreement; and C) SJG and McJunkin jointly review and reset KPI targets annually, as required in the Supply Agreement, and annually document the process of doing so. Our requests for the information covered in this recommendation resulted in no evidence that any of these requirements of the Supply Agreement were performed.	N	The material contractor's performance is closely monitored and its performance is reported as good with no chronic problems.
17 F-1 & 17 F-1 Attachment: As is currently done by most utilities, we recommend the following: 1) SJI and SJG should track fleet costs and performance metrics at the per-vehicle and total function level, and 2) SJI and SJG should benchmark fleet operations and costs against peer utilities using a recognized benchmarking company such as Utilimarc and establish "best in class" performance targets using the benchmark statistics.	Y	SJG needs a fleet management system as recommended in this report to comply with the spirit of this recommendation. See Chapter 19, Support Services, Finding 19-15 and Recommendation 19-12.
17 F-2 & 17 F-2 Attachment: We recommend SJG begin to track the actual costs (ownership and operations) of its CNG fleet, and compare CNG ownership and operating costs with those of equivalent gasoline-powered vehicles.	Y	SJG needs a fleet management system as recommended in this report to comply with the spirit of this recommendation. See Chapter 19, Support Services, Finding 19-15 and Recommendation 19-12. However, SJI has documented lower fuel costs and lower emissions for CNG vehicles.
17 FM-1: We recommend SJG prepare lease agreements for SJI, SJIS and other affiliates that utilize SJG-owned facilities such as Folsom. We also recommend that SJG invoice its affiliates monthly for rent and other facilities costs owed.	N	Lease agreement between SJG and SJI for the Folsom headquarters was executed on April 25, 2016.

Recommendation	Continued Viability (Y/N)	Comment
17 FM-2: We recommend SJG track facilities' costs at the facility level, particularly for the Folsom headquarters building, which is operated by SJG and at least two affiliates.	Y	SJG needs a facility asset management system to fully comply with the spirit of this recommendation. See Chapter 19, Support Services, Finding 19-7 and Recommendation 19-6
17 FM-3: With regard to the pricing of space at the Folsom building, we recommend SJG: A) Annually obtain and review support for its market-based pricing; B) Annually compare this with the fully distributed regulated cost of the Folsom facility, which should include the return on investment and related income tax associated with the rate-based value of the building; and C) Annually charge affiliates using any SJG facilities the higher of market or fully distributed regulated cost.	N	Lease agreement requires compliance with the Cost Allocation Manual (CAM) and with any annual revisions of the CAM.
17 FM-4: SJI and SJG should participate in the International Facilities Management Association's (IFMA's) facilities benchmarking program. SJI and SJG should benchmark facilities-based costs (prepared in accordance with the recommendation above) and facility operating characteristics with IFMA benchmark statistics and identify opportunities for improvements and reductions in cost.	Y	This recommendation was implemented. However, enough time has passed and there have been enough personnel changes to make a renewed benchmarking and best practices effort productive.
17 L-1: The legal Affairs function should have its own cost center where it can track all SJI internal a11d external legal costs, as well as analyze budget and actual expenditures.	Y	See Chapter 19, Support Services, Finding 19-4 and Recommendation 19-4 about coordination of external legal services.
17 L-2 & 17 L-2 Attachment: The Legal Affairs function (or the leader of the function) should have a BSC that contains well-doc1Jmented, unambiguous, and/or quantitative metrics upon which to base the achievement of stated objectives.	N	The Office of General Counsel has good quantifiable metrics.
17 L-3 & 17 L-3 Attachment: The Legal Affairs function (or the leader of the function) should have a BSC that is updated and completed on a yearly basis.	N	The Office of General Counsel has an adequate BSC.
17 L-4 & 17 L-4 Attachment: The Legal Affairs group should obtain benchmark studies to compare its operations to other companies to find where it can make its operations more efficient.	Y	See Chapter 19, Support Services, Finding 19-2 and Recommendation 19-2 for improving insurance broker performance.
17 L-5 & 17 L-5 Attachment: The Legal Affairs group should employ a competitive bidding process when selecting the law firms it will use to provide SJI with outside legal counsel.	N	The law firm selection process has been improved

Recommendation	Continued Viability (Y/N)	Comment
17 I-1: SJI should ensure that the data provided to the benchmarking surveys are consistent and accurate according to its Insurance Schedule, where SJI's insurance policies are tracked.	Y	See Chapter 19, Support Services, Finding 19-2 and Recommendation 19-2 for improving insurance broker performance.
18-1: Overland recommends that the IT department obtain benchmarking data to determine how the help desk function at SJI performs against SJI's peers in the utility industry.	N	This has been implemented.
18-2: The IT Director's Balanced Scorecard should contain more performance objectives that are considered stretch objectives. These objectives will encourage the IT function to reach higher standards relative to industry peers.	N	This has been implemented.

C. RECOMMENDATIONS

None.