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Attachment MC- 1

1 **I. STATEMENT OF QUALIFICATIONS**

2 **Q. Please state your name, positions, and business address.**

3 A. My name is Maximilian Chang. I am a Principal Associate with Synapse Energy
4 Economics, an energy consulting company located at 485 Massachusetts Avenue,
5 Cambridge, Massachusetts.

6 **Q. On whose behalf are you submitting testimony in this proceeding?**

7 A. I am submitting testimony on behalf of the New Jersey Division of Rate Counsel
8 (“Rate Counsel”).

9 **Q. Mr. Chang, please describe your professional background at Synapse Energy**
10 **Economics.**

11 A. My experience is summarized in my resume, attached as **Attachment MC-1**. I am
12 an environmental engineer and energy economics analyst who has analyzed
13 energy industry issues for 14years. In my current position at Synapse Energy
14 Economics, I focus on economic and technical analysis of many aspects of the
15 electric power industry, including: (1) utility mergers and acquisitions, (2) utility
16 reliability performance and distribution investments, (3) nuclear power, (4)
17 wholesale and retail electricity markets, and (5) offshore wind.

18 **Q. Mr. Chang, please describe your educational background.**

19 A. I hold a Master of Science degree from the Harvard School of Public Health in
20 Environmental Health and Engineering Studies, and a Bachelor of Science degree
21 from Cornell University in Biology and Classical Civilizations.

1 **Q. Mr. Chang, have you previously submitted testimony before the Board of**
2 **Public Utilities?**

3 A. Yes. I filed testimony before the Board in several dockets, including, but not
4 limited to: I/M/O the Petition of South Jersey Gas Company for Approval of an
5 Energy Efficiency Program ("EEP") with an Associated Energy Efficiency
6 Tracker ("EET") Pursuant to N.J.S.A. 48:3-98.1, BPU Docket No. GO12050363;
7 I/M/O the Merger of Exelon Corporation and Pepco Holdings, Inc., BPU Docket
8 No. EM1406581; I/M/O the Verified Petition of Rockland Electric Company for
9 Establishment of a Storm Hardening Surcharge, BPU Docket No. ER14030250;
10 I/M/O the Merger of the Southern Company and AGL Resources, Inc., BPU
11 Docket No. GM15101196; I/M/O the Application of PSEG Nuclear, LLC and
12 Exelon Generation Company, LLC for the Zero Emission Certificate Program -
13 Salem Unit 1, BPU Docket No. ER20080557, I/M/O the Application of PSEG
14 Nuclear, LLC and Exelon Generation Company, LLC for the Zero Emission
15 Certificate Program - Salem Unit 2, BPU Docket No. ER20080558, and I/M/O the
16 Application of PSEG Nuclear, LLC for the Zero Emission Certificate Program –
17 Hope Creek, BPU Docket No. ER20080559; I/M/O the Petition of Public Service
18 Electric and Gas Company for Approval of the Second Energy Strong Program
19 (Energy Strong II), BPU Docket Nos. EO18060629 and GO18060630; I/M/O the
20 Verified Petition of Jersey Central Power & Light Company for Approval of an
21 Infrastructure Investment Program, BPU Docket No. EO18070728; I/M/O the
22 Petition of Atlantic City Electric Company for Approval of an Infrastructure
23 Investment Program, and Related Cost Recovery Mechanism, Pursuant to

1 N.J.A.C. 14:3-2A.1, et seq., BPU Docket No. EO18020196, I/M/O the Ocean
2 Wind, LLC Pursuant to N.J.S.A. 48:3-87.1(f) for a Determination that Easements
3 across Green Acres-Restricted Properties and Consents Needed for Certain
4 Environmental Permits in, and with Respect to the City of Ocean City, BPU
5 Docket No. QO22020041, and, I/M/O the Ocean Wind, LLC Pursuant to N.J.S.A.
6 48:3-87.1(f) for a Determination that Easements across Green Acres-Restricted
7 Properties and Consents Needed for Certain Environmental Permits in, and with
8 Respect to the County of Cape May, BPU Docket No. QO22050347.

9 **Q. Mr. Chang, have you previously testified before utility regulatory agencies or**
10 **legislative bodies?**

11 A. Yes. I previously testified before the District of Columbia Public Service
12 Commission, the Hawaii Public Utilities Commission, Illinois State Senate, the
13 Illinois Property Tax Appeal Board, the Maine Public Utilities Commission, the
14 Maryland Public Service Commission, the Massachusetts Department of Public
15 Utilities, and the Virginia State Corporation Commission. I also filed testimony
16 before the Delaware Public Utilities Commission, the Kansas Commerce
17 Corporation, the Illinois Commerce Commission, and the United States District
18 Court for the District of Maine..

19 **II. PURPOSE AND SUMMARY**

20 **Q. What is the purpose of your testimony in this proceeding?**

21 A. The purpose of my testimony is to review the elements of the petition (“Joint
22 Petition”) filed by South Jersey Industries Inc. (“SJI”) and Boardwalk Merger
23 Sub, Inc. (“Boardwalk”) (collectively “Joint Petitioners”) requesting approval

1 from the New Jersey Board of Public Utilities (“Board” or “BPU”) for the transfer
2 of control of SJI to Boardwalk, which will be part of the portfolio of companies
3 affiliated with Infrastructure Investment Fund United States (“IIF”). SJI consists
4 of South Jersey Gas Company (“SJG”) and Elizabethtown Gas Company
5 (“ETG”). Both local distribution companies are currently regulated by the Board.
6 The purpose of my testimony is to address the Joint Petitioners’ commitments
7 regarding employees, local management, and the state’s Energy Master Plan
8 goals. Other Rate Counsel witnesses are providing testimony on issues that I do
9 not address.

10 **Q. Please describe your understanding of the Board’s obligations in this**
11 **proceeding.**

12 A. It is my understanding that N.J.S.A. 48:2-51.1, N.J.A.C. 14:1-5.14(c) and 14:1-
13 5.10 govern the BPU’s evaluation criteria regarding the Joint Petition.

14 Specifically, it is my understanding that N.J.S.A. 48:2-51.1 requires the Board to
15 evaluate the impact of the acquisition of control on competition and rates and
16 states:

17 In considering a request for approval of an acquisition of control,
18 the board shall evaluate the impact of the acquisition on
19 competition, on the rates of ratepayers affected by the acquisition
20 of control, on the employees of the affected public utility or
21 utilities, and on the provision of safe and adequate utility service at
22 just and reasonable rates.
23

24 The language in N.J.A.C. 14:1-5.14(c) also provides:

25 The Board shall not approve a merger, consolidation, acquisition
26 and/or change in control unless it is satisfied that positive benefits
27 will flow to customers and the State of New Jersey and, at a

1 minimum, that there are no adverse impacts on any of the criteria
2 delineated in 48:2-51.1.

3
4 Thus, I understand that the statute and regulation require the Joint Petitioners to
5 demonstrate that the proposed change of control, if approved, leaves customers
6 better off than without the proposed change of control.

7 **III. PROPOSED COMMITMENTS FOR EMPLOYEES**

8 **Q. Please summarize your findings and recommendations regarding the Joint**
9 **Petitioners' proposed commitments for employees.**

10 A. I find that the Joint Petitioners' proposed commitments to benefit employees will
11 merely maintain the *status quo* for five years for employees. This is not a net
12 benefit for employees. Therefore, I recommend that the Board reject any assertion
13 that the proposed change of control would provide any benefits to employees,
14 ratepayers or the State. At the end of the Joint Petitioners' commitment period,
15 SJG and ETG employees would not be protected from involuntary workforce
16 reductions relative to forecasted workforce numbers. However, should the Board
17 approve the Joint Petition, I have recommendations to improve the Joint
18 Petitioners' employee commitments that are summarized at the end of this
19 section.

20 **Q. Please summarize the Joint Petitioners' proposed commitments for**
21 **employees.**

22 A. The Joint Petitioners claim that the change in control will not change current
23 employee benefits or materially impact the number of employees. Specifically,

1 the Joint Petitioners have made the following commitments regarding
2 employees:¹

- 3 • For a period of five years following the closing of the change of control, as a
4 result of the same, SJI will not implement any material involuntary workforce
5 reductions or changes to wages, benefits and other terms and conditions of
6 employment in effect prior to the closing of the change in control.
- 7 • SJI will honor all of ETG's and SJG's existing collective bargaining
8 agreements in effect at the time of the closing of the change in control.
- 9 • SJI will ensure that ETG's and SJG's pension obligations to employees will
10 be satisfied.

11
12 **Q. Has IIF provided similar employment benefits as part of other acquisitions?**

13 A. IIF provided a copy of its acquisition commitments to the Public Utility
14 Commission of Texas when IIF acquired El Paso Electric Company ("EPE") in
15 2020.² The language for the workforce and collective bargaining commitments
16 are virtually identical. On the issue of pension obligations, the order approved by
17 the Texas Public Utilities Commission does not mention the subject.

18 **Q. Have the Joint Petitioner represented that they would provide additional**
19 **benefits to employers.**

20 A. No. The Joint Petitioners currently do have any other concrete benefits to current
21 employees. The Joint Petitioners noted that when IIF acquired EPE, IIF instituted

¹ Joint Petition. Exhibit C.

² Attachment RCR-A-1.3.

1 a retirement incentive plan for existing employees.³ IIF further indicated that the
2 EPE retirement plan was intended to create opportunities for junior staff.

3 **Q. Have the Joint Petitioners indicated that they would provide an incentive**
4 **program for ETG and SJG employees?**

5 A. In their response to RCR-FTE-3, the Joint Petitioners describe changes to
6 employment packages following the acquisition of publicly traded companies by
7 IIF US 2.⁴ Notably, the Joint Petitioners identified the need to create an incentive
8 program for employees who are compensated with shares of publicly traded stock.
9 Such a scenario will impact the employees of ETG and SJG, since SJI will no
10 longer be publicly traded if the Board were to approve the proposed change of
11 control. At this time, the Joint Petitioners have not provided any specifics other
12 than what is currently stated in the Joint Petitioners' employee commitments.

13 **Q. Do you have any concerns regarding the Joint Petitioners' employee**
14 **commitments?**

15 A. Yes, the Joint Petitioners use the term "material involuntary workforce
16 reductions" without defining "material." I have concerns that the vagueness of the
17 language will render the commitment meaningless. To the employees, whom
18 would be subject to workforce reductions, the termination from SJI would
19 certainly be material.

³ RCR-FTE-2.

⁴ RCR-FTE-3.

1 **Q. Did the Joint Petitioners provide a more specific definition for “material?”**

2 A. Not specifically. In response to RCR-FTE-8, the Joint Petitioners describe that
3 material in the context of involuntary employment changes meant “being of real
4 importance or effect.”⁵ This definition does not appear to mean anything different
5 from the *status quo* for employees of both SJG and ETG.

6 **Q. Does ETG and SJG have current projections of future workforce
7 requirements?**

8 A. Yes. ETG and SJG have provided forecasted workforce numbers through 2027.⁶
9 The numbers are provided below.

10 **Table 1 SJG and ETG Workforce Forecast (2022-2027)**

Company	Category	Actual		Forecast			
		2022	2023	2024	2025	2026	2027
SJG	Non-exempt	306	311	315	320	325	330
SJG	Exempt	112	114	115	117	119	121
ETG	Non-exempt	268	272	276	280	284	289
ETG	Exempt	109	111	112	114	116	117
Total		795	807	819	831	844	856

11
12 **Q Should the Board approve the proposed change of control, do you have any
13 employee-related recommendations for the Board?**

14 A. Yes. Should the Board approve the proposed change of control, I recommend that
15 the Board adopt the following additional employee commitments:

- 16 • The Board should require SJI to honor all existing ETG and SJG’s pension
17 benefits so long as IIF retains ownership of SJI. Further, this commitment shall
18 not preclude IIF or SJI from: (a) making future changes to SJG and ETG's current

⁵ RCR-FTE-8.

⁶ RCR-FTE-10.

1 defined benefit plan if commercially advantageous (including, but not limited to,
2 cost effectiveness, administrative efficiency, etc.) so long as pension benefits are
3 materially equivalent, or (b) making future changes negotiated between SJG and
4 ETG as part of their collective bargaining agreement negotiations.

5 • The Board should require SJG and ETG to continue to provide the Board and
6 Rate Counsel with an updated employee count (by exempt and non-exempt
7 employees) in annual filings to the Board to facilitate Board's ability to ensure
8 that SJG and ETG maintains an adequate workforce to continue to provide safe
9 and reliable service.

10 • The Board should require SJI to provide employees subject to any involuntary
11 workforce reduction program with a separation package on a most favored nation
12 status to IIF's current portfolio of companies for a period of five years after
13 consummation of the change in control. If there are any involuntary workforce
14 reductions during the five-year period, then IIF will provide the Board and Rate
15 Counsel with a summary of separation packages across the IIF companies.

16 These recommendations are summarized in Witness Crane's Attachment ACC-2.

17 **IV. PROPOSED COMMITMENTS FOR LOCAL MANAGEMENT CONTROL**

18 **Q. Please summarize your findings and recommendations regarding the Joint**
19 **Petitioners' proposed commitments for local management.**

20 A. I find that the Joint Petitioners' proposed commitments to benefit employees will
21 merely maintain the *status quo* for five years for local management representation

1 for both ETG and SJG. There is no benefit from the merger here. At this time,
2 the local management commitments are sufficient.

3 **Q. Please summarize the Company's proposed commitments for local**
4 **management.**

5 A. The Joint Petitioners claim that the change in control will not change the current
6 management structure in place for SJIU, ETG, and SJG. Specifically, the Joint
7 Petitioners have made the following commitments regarding local management of
8 SJIU, SJG and ETG:⁷

- 9 • SJI will maintain SJIU's, ETG's and SJG's respective local core management
10 teams for a period of at least five years following the closing of the change in
11 control;
- 12 • Each of SJI's, ETG's and SJG's CEO and senior management will continue to
13 have day-to-day control over operations; and
- 14 • SJI's, ETG's and SJG's local management will remain the primary point of
15 contact for all regulatory, operational, and community engagement matters.

16 **Q Do you have any comments on the Joint Petitioners' commitment to maintain**
17 **local management?**

18 A. Yes. I find that the Joint Petitioners' proposed commitments local management
19 will maintain the *status quo* for five years for local management representation for
20 SJIU, ETG and SJG. At this time, the local management commitments are
21 sufficient. I note that having the same management team would provide

⁷ Joint Petition. Exhibit C.

1 continuity, should the Board approve the proposed change of control petition.
2 This is not a benefit of the merger, as but for the merger there would be no
3 questions regarding the local management team. The challenges and opportunities
4 facing SJI and ETG to meet the state's Energy Master Plan goals may require
5 more innovative thinking that new or additional leadership may provide.

6 **V. THE JOINT PETITIONERS' COMMITMENT TO THE NEW JERSEY**
7 **MASTER PLAN**

8 **Q. Please summarize your finding regarding the Joint Petitioners' commitment**
9 **to the New Jersey Energy Master Plan.**

10 A. The Joint Petitioners state that they are supportive of the state's goal to achieve
11 100% clean energy by 2050 and maximum electrification for the building and
12 transportation sectors. However, beyond their statements of support, the Joint
13 Petitioners do not offer any specifics as to how the proposed change of control
14 would accelerate ETG and SJG's ability to meet the 2019 Energy Master Plan
15 goals. If anything, the change of control would limit the Board's visibility of ETG
16 and SJG since the parent SJI would no longer need to file public reports once it
17 becomes a private entity. Considering that the state will need to expand
18 electrification to meet the state's Energy Master Plan goals, there will need to be
19 more planning and more transparency to ensure that long-term actions are in place
20 for both ETG and SJG. On the issue of the Energy Master Plan, I find that the
21 proposed change of control would not be a benefit for customers since there is
22 nothing that the Joint Petitioners are doing outside what SJI is already doing.
23 Should the Board approve the Joint Petition, I have recommendations to improve

1 the Joint Petitioners' Energy Master Plan commitments that are summarized at the
2 end of this section.

3 **Q. Please summarize the Joint Petitioners' proposed commitments regarding**
4 **the New Jersey Energy Master Plan.**

5 A. The Joint Petitioners' statements about the Energy Master Plan are not specific
6 commitments but statements sprinkled throughout the Petition. These include the
7 following:

8 By joining forces with IIF, SJI will be well positioned to continue
9 to serve its customers and communities, while executing on its
10 initiatives in support of New Jersey's Energy Master Plan.⁸

11
12 ETG and SJG to continue to make needed capital investments to
13 provide service to customers and to execute on SJI's strategic
14 initiatives in support of New Jersey's Energy Master Plan.⁹

15
16 SJI is committed to providing its customers with superior, reliable
17 utility service while contributing to New Jersey's social and
18 environmental goals, including those established in the Clean
19 Energy Act and Energy Master Plan ("EMP").¹⁰

20
21 Our utilities are equally committed to these sustainability goals and
22 partnering with the State to advance the objectives of the EMP.¹¹

23
24 SJI announced a comprehensive clean energy plan in 2021
25 designed to achieve a 70% carbon reduction of operational
26 emissions and consumption by the year 2030 and a 100% reduction
27 by 2040, as well as a commitment of at least 25% of annual capital
28 expenditures to support sustainability projects.¹²

⁸ Joint Petition. page 2.

⁹ *Id.* at ¶15.

¹⁰ Direct Testimony of Melissa Orsen, page 4, lines 8-10.

¹¹ *Id.* at page 5, lines 1-3.

¹² Direct Testimony of Michael Renna., page 9, lines 10-12.

1 While these statements are supportive of the Energy Master Plan, there is nothing
2 in the four merger commitments presented in Mr. Gilbert’s Direct Testimony¹³
3 and in Exhibit C to the Joint Petition which contains the Joint Petitioners’
4 commitments¹⁴ that specifically address the Energy Master Plan. Considering
5 how consequential the Energy Master Plan will be for the state, I find the lack of
6 specific commitments problematic.

7 **Q. Please summarize your understanding of the 2019 New Jersey Energy**
8 **Master Plan.**

9 A. The EMP details a high level plan for how New Jersey will achieve 100% clean
10 energy by 2050, defined as “100% carbon-neutral electricity generation and
11 maximum electrification of the transportation and building sectors.”¹⁵ The Board
12 published the Energy Master Plan in response to an Executive Order from
13 Governor Murphy who directed the Board to coordinate with other state agencies
14 to develop a comprehensive plan for how to shift the state away from energy
15 sources that contribute to climate change impacts.¹⁶

16 **Q. How does the Energy Master Plan impact natural gas utilities?**

17 A. Under the Energy Master Plan, the primary method for reducing building sector
18 emissions is electrification paired with energy efficiency. For heating, this could
19 mean increased adoption of heat pumps for heating and cooling, which would
20 impact traditional sources of heat including natural gas furnaces and oil-fired

¹³ Direct Testimony of Andrew Gilbert, page 14, line 13 through page 15, line 4.

¹⁴ Joint Petition, Exhibit C.

¹⁵ 2019 Energy Master Plan, page 11. Available at <https://www.nj.gov/emp/>.

¹⁶ Executive Order 28. Available at <https://nj.gov/infobank/eo/056murphy/pdf/EO-28.pdf>.

1 boilers. Electrification would dramatically impact the role of natural gas in New
2 Jersey over the next three decades. The Energy Master Plan states that overall
3 natural gas consumption is expected to decrease to less than one fifth of today's
4 levels by 2050.¹⁷

5 **Q. Has there been any analysis on the effects of the Energy Master Plan goals on**
6 **ratepayers?**

7 A. Yes, the BPU contracted with the Brattle Group to evaluate the rate impacts of the
8 policy strategies outlined in the Energy Master Plan, as well as the effects on
9 customers' overall energy costs in 2030 under three scenarios that modeled
10 current New Jersey clean energy programs, an Energy Master Plan achievement
11 pathway, and an ambitious pathway to accelerate the Energy Master Plan goals.¹⁸
12 The 2022 report issued by the Brattle Group ("Brattle Report")¹⁹ found that the
13 Energy Master Plan's programs would translate to natural gas for space heating
14 demand reductions of 2.4% year-over-year. Residential customers who adopt the
15 energy efficiency and electrification options enabled by the Energy Master Plan
16 will see decreases in overall energy costs in 2030 relative to the present. The
17 report also found that customers who maintain current consumption patterns by
18 not switching to electric heating will face increased natural bills in the range of

¹⁷ 2019 New Jersey Energy Master Plan, page. 17.

¹⁸ Sergici, S., Kavlak, G., Spees, K., and Janakiraman, R. 2022. *New Jersey Energy Master Plan Ratepayer Impact Study*, the Brattle Group for the New Jersey Board of Public Utilities.

¹⁹ While Rate Counsel cites to the Brattle Report with respect to achieving the goals of the Energy Master Plan, Rate Counsel does not agree with the Brattle Group's analysis in its entirety.

1 eight to 13 percent.²⁰ The expectation of a 2.4% annual decline in the demand for
2 natural gas for space heating has implications for both ETG and SJG.

3 **Q. Are there other findings in the Brattle Report that should be highlighted?**

4 A. Yes, the Brattle Report found that natural gas all-in volumetric rates would be
5 expected to increase by 14% in 2030 relative to 2020 rates.²¹ The Brattle Report
6 noted that the increase in volumetric rates was driven by increased revenue
7 requirements for the natural gas utilities being spread over a smaller volume of
8 retail sales due both electrification and energy efficiency.²² The Brattle Report
9 also assumed that customers who switched to electric heating continue to
10 maintain natural gas service for non-heating uses.²³ It is not clear, however, if the
11 Brattle Group modeled customer defection resulting from electrification or rising
12 natural gas rates.

13 **Q. Have the Joint Petitioners provided a response to the Brattle Report?**

14 A. Not that I know of at this point. The Joint Petitioners have not indicated that they
15 have reviewed the Brattle Report. The Joint Petitioners should provide the Board
16 and Rate Counsel with an analysis of how a 2.4% year over year decline in space
17 heating demand will impact the operations of ETG and SJG and how increased
18 rates may impact customer defection.

²⁰ Brattle Report, page 20.

²¹ Id.

²² Id.

²³ Id.

1 **Q. Are there other studies worth mentioning that the Board should consider**
2 **when evaluating the Joint Petitioners Energy Master Plan Commitments?**

3 A. Yes, the Board should also consider the 2021 London Economics International,
4 LLC (“London Economics”) report prepared for the Board in BPU Docket No.
5 GO19070846.²⁴ The Board engaged London Economics to assess the reliability
6 of the New Jersey natural gas system to meet future firm demand within the state
7 through 2030. The London Economics report found that the state’s firm gas
8 capacity can easily meet firm demand under normal winter weather conditions, in
9 cases of colder-than-normal weather on a scale experienced in the past, and even
10 in the case of a design day through 2030. London Economics also found that if
11 New Jersey meets even half of its building electrification goals and/or has
12 effective voluntary natural gas demand reduction through higher energy
13 efficiency program targets, then the shortfall risk associated with an extreme
14 weather situation disappears for the state under the analyses.

15 **Q. What are some of London Economics’ observations regarding how SJG and**
16 **ETG account for future energy efficiency in their respective demand day**
17 **forecasts?**²⁵

18 A. For ETG, London Economics observed that “ETG simply assumes that the impact
19 on usage per customer from conservation and energy efficiency initiatives is

²⁴ London Economics International LLC. “Final Report: Analysis of Natural Gas Capacity to Serve New Jersey Firm Customers Public Version” November 5, 2021. Available at <https://nj.gov/bpu/pdf/boardorders/2021/20211215/9B%20LEI%20Final%20Gas%20Capacity%20Report%2011%2005%202021%20Public%20Redacted.pdf>

²⁵ Demand or design day is the expected natural gas demand forecasted by a natural gas distribution company on the coldest day of the year.

1 offset by growth in new residential and commercial customers.”²⁶ For SJG,
2 London Economics observed that “the efficiency impacts are incorporated into the
3 outlooks but are assumed to be unchanged from 2019.”²⁷ In other words, London
4 Economics observed very little, if any, decrease in demand forecasts associated
5 with natural gas energy efficiency initiatives through 2030 by either natural gas
6 utility.

7 **Q. Does the London Economics report incorporate reductions in natural gas**
8 **demand consistent with the New Jersey Energy Master Plan?**

9 A. Yes. The London Economics report specifically references the New Jersey
10 Energy Master Plan and notes that the natural gas reductions envisioned under the
11 New Jersey Energy Master Plan would result in a decrease in natural gas demand
12 of 2.4% per year from 2020 to 2030.²⁸

13 **Q. What are the implications of the findings of the London Economics report**
14 **for the Board to consider?**

15 A. Taken with the more recent Brattle Report, the London Economics report shows
16 the importance of reducing natural gas demand to meet both the Energy Master
17 Plan goals and to avoid the need for additional firm capacity to meet natural gas
18 demands in the future. Any sustained reduction in future natural gas demand will
19 have implications for both ETG and SJG, and the Board should ensure that the
20 Joint Petitioners make firm commitments to the state’s Energy Master Plan.

²⁶ London Economics. page 46.

²⁷ Id.

²⁸ London Economics. page 51.

1 **VI. PROPOSED INITIATIVES IN SUPPORT OF THE ENERGY MASTER**
2 **PLAN**

3 **Q. Has SJI stated its support for the Energy Master Plan?**

4 A. Yes. As described above, SJI states that it is committed to “contributing to New
5 Jersey’s social and environmental goals, including those established in the Clean
6 Energy Act and Energy Master Plan.”²⁹ SJI states that it has several “strategic
7 initiatives” in support of the Energy Master Plan,³⁰ including a decarbonization
8 timeline for operational emissions (70% reduction of carbon emissions by 2030
9 and 100% by 2040) and commitment of 25% of annual capital expenditures for
10 sustainability projects.³¹ To implement these goals, SJI is acquiring interests in
11 fuel cells and renewable natural gas (“RNG”) production, participating in green
12 hydrogen development projects, expanding its energy efficiency programs, and
13 continuing replacement of aging pipes to reduce leaks and maintain safety.³²

14 **Q. Do SJI’s Energy Master Plan initiatives apply to SJG and ETG?**

15 A. That is not clear. The Joint Petitioners have not indicated that SJI’s initiatives
16 apply to SJG and ETG in any meaningful way beyond the SJI enterprise level
17 initiatives.³³ In several responses, the Joint Petitioners state that the
18 decarbonization timeline and capital spending on sustainability are “enterprise-
19 wide commitments at the SJI level, not the operating utility level.”³⁴

²⁹ Direct Testimony of Melissa Orsen at page 4, lines 9-10.

³⁰ Joint Petition at ¶ 15.

³¹ RCR-EMP-9.

³² RCR-EMP-9.

³³ RCR-EMP-23.

³⁴ RCR-EMP-23, RCR-EMP-24, and RCR-EMP-25.

1 **Q. Have the Joint Petitioners provided any substantive studies or analyses of the**
2 **impact of the Energy Master Plan for SJG or ETG?**

3 A. No. The Joint Petitioners have not completed any substantive studies of what
4 decarbonization would entail at SJG and ETG, nor have the Joint Petitioners
5 conducted a rate impact analysis of the effect of the commitments on ETG and
6 SJG.³⁵ In addition, the SJI commitments only apply to Scope 1 and 2 emissions.³⁶
7 According to the United States Environmental Protection Agency (“EPA”), Scope
8 1 emissions are direct greenhouse (“GHG”) emissions that occur from sources
9 that are controlled or owned by an organization (e.g., emissions associated with
10 fuel combustion in boilers, furnaces, vehicles). The EPA defines Scope 2
11 emissions are indirect GHG emissions associated with the purchase of electricity,
12 steam, heat, or cooling. The EPA notes that Scope 2 emissions physically occur at
13 the facility where they are generated, they are accounted for in an organization’s
14 GHG inventory because those emissions result from the organization’s energy
15 use.³⁷ I note that for ETG and SJG the more significant source of emissions is
16 customer combustion of natural gas, which falls under Scope 3.

17 **Q. Do SJI’s commitments for natural gas usage reduction match the Energy**
18 **Master Plan goals?**

19 A. No. The Energy Master Plan makes it clear that, “Just as New Jersey must direct
20 its electric public utilities to assess capacity in the electric distribution system, so

³⁵ RCR-EMP-23, RCR-EMP-24, and RCR-EMP-25.

³⁶ EDF-1.

³⁷ U.S. EPA. Scope 1 and Scope 2 Inventory Guidance. Available at:
<https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance>.

1 too must the gas public utilities assess the gas distribution system capacity and
2 plan for a gradual reduction in system use.”³⁸ To align with the Energy Master
3 Plan, New Jersey natural gas utilities will need to take expected decreases in
4 consumption into account, finding ways to minimize stranded costs by
5 strategically retiring distribution system infrastructure, limiting investments in
6 new infrastructure through adoption of non-pipeline alternatives, and planning
7 cost recovery of existing assets around their actual useful lifetimes. None of
8 measures that SJI is taking address the need to scale down the natural gas system
9 itself. As noted earlier, SJI’s measures include acquiring interests in fuel cells and
10 RNG production, participating in green hydrogen development projects,
11 expanding its energy efficiency programs, and continuing replacement of aging
12 pipes to reduce leaks and maintain safety. Only energy efficiency program would
13 moderate natural gas consumption. All the other measures appear to maintain the
14 demand for combustion.

15 **Q. Has SJI adequately planned for the changes to natural gas utilities that will**
16 **results from the Energy Master Plan?**

17 A. No. While the decarbonization strategy outlined the Energy Master Plan will
18 require dramatic reductions in natural gas consumption, SJI has not conducted an
19 impairment analysis to assess the plan’s impacts.³⁹ In fact, SJI’s recent demand
20 forecast assumes that natural gas demand will continue to grow. The most recent
21 customer and sales growth forecasts for ETG show the number of residential heat

³⁸ 2019 New Jersey Energy Master Plan, page. 174.

³⁹ RCR-EMP-30.

1 customers increasing by 9% between 2022 and 2029, while overall natural gas
2 sales increase by 24%.⁴⁰ Similarly, the projections for SJG show both sales and
3 number of residential and commercial heating customers increasing steadily over
4 the next 10 years.⁴¹ These growth projects are at odds with the precepts of the
5 Energy Master Plan that calls for a decrease in natural gas consumption.

6 **VII. IMPACT OF THE CHANGE OF CONTROL ON SJI'S ENERGY**
7 **MASTER PLAN INITIATIVES**

8 **Q. Would the Joint Petitioners strengthen SJI's commitments after the change**
9 **in control?**

10 A. No. The Joint Petitioners do not plan to modify or add to SJI's strategic initiatives
11 in support of the Energy Master Plan following the proposed merger.⁴²

12 **Q. Does IIF have experience meeting greenhouse gas emissions reduction**
13 **targets?**

14 A. No. IIF and its affiliate utilities have indicated that they are not subject to any
15 carbon reduction requirements and have virtually no experience establishing or
16 meeting carbon reduction requirements.⁴³ None of the state or federally-regulated
17 utilities owned by IIF have state or local carbon reduction goals.⁴⁴ IIF, its
18 affiliates, and its affiliate investment partners do not themselves have carbon

⁴⁰ Attachment RCR-EMP-31.1.

⁴¹ Attachment RCR-EMP-31.2.

⁴² S-ENG-20.

⁴³ RCR-EMP-1.

⁴⁴ RCR-EMP-2.

1 reduction requirements or goals.⁴⁵ The one exception is EPE, which has a self-
2 imposed 2045 decarbonization goal for its generation portfolio.⁴⁶

3 **Q. Does IIF have relevant expertise in the other aspects of Energy Master Plan**
4 **planning that could help address the gaps in SJI's planning?**

5 A. No. As noted above, the Joint Petitioners indicated that none of the IIF portfolio
6 of companies have a carbon reduction goal, with the sole exception of EPE self-
7 imposed carbon reduction target.⁴⁷ IIF US 2 owns Summit Utilities, a regulated
8 natural gas distribution company with operations in Arkansas, Colorado, Maine,
9 Missouri, Oklahoma, and Texas,⁴⁸ but it has not conducted any applicable studies
10 on electrification⁴⁹ or non-pipeline alternatives⁵⁰ from Summit Utilities that could
11 be applied to SJI.

12 **Q. Have the Joint Petitioners considered the impacts of electrification on the**
13 **future operation of SJG and ETG?**

14 A. No. The Joint Petitioners have not conducted or commissioned any analyses on
15 the impact of electrification on customer growth projections.⁵¹ The Joint
16 Petitioners have not investigated future permanent customer disconnections from
17 natural gas service.⁵² These two types of studies are important to understand how
18 the Energy Master Plan could impact ETG and SJG.

⁴⁵ Response to RCR-EMP-5, RCR-EMP-6, and RCR-EMP-8.

⁴⁶ RCR-EMP-6.

⁴⁷ Id.

⁴⁸ S-ENG-11.

⁴⁹ RCR-EMP-35.

⁵⁰ RCR-EMP-39, RCR-EMP-41, and RCR-EMP-43.

⁵¹ RCR-EMP-32.

⁵² RCR-EMP-37.

1 **Q. Have the Joint Petitioners established adequate frameworks for**
2 **consideration of non-pipeline alternatives at SJG and ETG?**

3 A. No. The Energy Master Plan intends to “instruct gas public utilities to propose
4 and adopt non-pipeline solutions when seeking expansion or upgrade of the
5 distribution system.”⁵³ However, the Joint Petitioners are inexperienced at
6 implementing non-pipeline alternatives (“NPA”). They do not have a formal NPA
7 framework for SJG or ETG, although they may consider non-pipeline alternatives
8 in system planning “where appropriate.”⁵⁴ The Joint Petitioners have also have
9 not conducted or commissioned a specific analysis of NPAs.⁵⁵ In response to
10 RCR-EMP-40, the Joint Petitioners indicate that they do not have plans to
11 conduct any NPA studies or develop a NPA process in the next 12 months.⁵⁶

12 **Q. Would the change in control improve SJI’s ability to meet its Energy Master**
13 **Plan commitments?**

14 A. No. The Joint Petitioners claim that the change in control will allow SJI, SJIU,
15 ETG, and SJG to “execute on SJI’s strategic initiatives in support of New Jersey’s
16 Energy Master Plan” by giving them “more efficient, lower-cost access to
17 capital.”⁵⁷ However, SJI does not have substantive programs in place to support
18 the EMP beyond what they have stated in terms of RNG, green hydrogen, energy
19 efficiency and pipe replacements. This means that easier access to capital will be
20 of limited benefit in this area. Furthermore, IIF and its affiliates lack experience

⁵³ 2019 New Jersey Energy Master Plan, page. 7.

⁵⁴ RCR-EMP-42.

⁵⁵ RCR-EMP-38.

⁵⁶ RCR-EMP-40.

⁵⁷ Joint Petition, ¶15.

1 meeting carbon reduction goals and do not plan to strengthen SJI's Energy Master
2 Plan initiatives following the merger. The change in control as filed would not
3 improve the status quo of SJI's commitments to support New Jersey's climate
4 goals.

5 **Q Should the Board approve the proposed change of control, do you have any**
6 **Energy Master Plans related recommendations for the Board?**

7 A. Yes. Should the Board approve the proposed change of control petition, I
8 recommend that the Board adopt the following commitments

- 9 • The Board should require SJI shall actively participate in the Board's efforts to
10 develop statewide energy efficiency programs to meet the state's Energy Master
11 Plan goals.
- 12 • The Board should require SJG and ETG to agree to coordinate with the Board and
13 the other New Jersey natural gas and electric utilities to deliver cost effective
14 energy efficiency programs in accordance with the New Jersey Clean Energy Act.
- 15 • The Board should require SJI to conduct or commission a bill and rate impact
16 study of meeting the Energy Master Plan goals and provide periodic updates on
17 how meeting the state's Energy Master Plan goals will impact SJG and ETG
18 customers.
- 19 • The Board should require SJI to conduct or commission an impairment analysis
20 including, but not limited to the impacts of electrification, to quantify how
21 meeting the Energy Master Plan goals would impact SJG and ETG, and a similar

1 analysis should be undertaken to determine the impacts of reliability and service
2 to ratepayers.

3 These recommendations are summarized in Witness Crane's Attachment ACC-2.

4 **VIII. CONCLUSIONS AND RECOMMENDATIONS**

5 **Q. What are your findings and recommendations?**

6 A. My findings and recommendations are summarized as follows:

- 7 • I find that the Joint Petitioners proposed commitments to benefit employees
8 will merely maintain the *status quo* for five years for employees. This is not a
9 net benefit for employees. Therefore, I recommend that the Board reject find
10 the proposed change of control on the basis that employees would see no
11 difference to SJG and ETG's current employee benefits and provide no
12 benefits to employees, ratepayers or the state.
- 13 • Should the Board approve the proposed change of control petition, I
14 recommend the Board to require SJI implement the following
15 recommendations with respect to employee commitments.
- 16 ○ The Board should require SJI to honor all existing ETG and SJG's
17 pension benefits so long as IIF retains ownership of SJI. Further, this
18 commitment shall not preclude IIF or SJI from: (a) making future
19 changes to SJG and ETG's current defined benefit plan if
20 commercially advantageous (including, but not limited to, cost
21 effectiveness, administrative efficiency, etc.) so long as pension
22 benefits are materially equivalent, or (b) making future changes

1 negotiated between SJG and ETG as part of their collective bargaining
2 agreement negotiations.

3 ○ The Board should require SJG and ETG to continue to provide the
4 Board and Rate Counsel with an updated employee count (by exempt
5 and non-exempt employees) in annual filings to the Board to facilitate
6 Board's ability to ensure that SJG and ETG maintains an adequate
7 workforce to continue to provide safe and reliable service.

8 ○ The Board should require SJI to provide employees subject to any
9 involuntary workforce reduction program with a separation package on
10 a most favored nation status to IIF's current portfolio of companies for
11 the period of five years after consummation of the change in control. If
12 there are any involuntary workforce reductions during the five-year
13 period, then IIF will provide the Board and Rate Counsel with a
14 summary of separation packages across the IIF companies.

15 • I find that the Joint Petitioners' proposed commitments concerning local
16 management will maintain the *status quo* for five years for local management
17 representation for SJIU, ETG and SJG. At this time, the local management
18 commitments are sufficient. However, I note that the SJI management team
19 will need to be innovative and creative to meet the goals of the New Jersey
20 Energy Master Plan.

21 • I find that the Joint Petitioners state that they are supportive of the state's goal
22 to achieve 100% clean energy by 2050 and maximum electrification for the

1 building and transportation sectors. However, beyond the statements of
2 support, the Petitioners do not offer any specifics as to how the proposed
3 change of control would accelerate ETG and SJG to meet the Energy Master
4 Plan goals. If anything, the change of control would limit the Board's
5 visibility of ETG and SJG since the parent SJI would no longer need to file
6 public reports once it becomes a private entity.

- 7 • Should the Board approve the proposed change of control, I recommend the
8 Board to require SJI implement the following recommendations with respect
9 to the state's Energy Master Plan goals.
 - 10 ○ The Board should require SJI shall actively participate in the Board's
11 efforts to develop statewide energy efficiency programs to meet the
12 state's Energy Master Plan goals.
 - 13 ○ The Board should require SJG and ETG to agree to coordinate with the
14 Board and the other New Jersey natural gas and electric utilities to
15 deliver cost effective energy efficiency programs in accordance with
16 the New Jersey Clean Energy Act.
 - 17 ○ The Board should require SJI to conduct or commission a bill and rate
18 impact study of meeting the Energy Master Plan goals and provide
19 periodic updates on how meeting the state's Energy Master Plan goals
20 will impact SJG and ETG customers.
 - 21 ○ The Board should require SJI to conduct or commission an impairment
22 analysis including, but not limited to the impacts of electrification, to

1 quantify how meeting the Energy Master Plan goals would impact SJG
2 and ETG, and a similar analysis should be undertaken to determine the
3 impacts of reliability and service to ratepayers.

4 **Q. Does this conclude your testimony?**

5 A. Yes. However, I understand that the Board has recently released a SJG
6 management audit and I reserve the right to submit additional testimony regarding
7 that audit or on any other additional information at a later date.

ATTACHMENT

MC-1

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PROFESSIONAL EXPERIENCE

Synapse Energy Economics Inc., Cambridge, MA. *Principal Associate*, 2013 – present, *Associate*, 2008 – 2013.

Consults and provides analysis of technologies and policies, electric policy modeling, evaluation of air emissions of electricity generation, and other topics including energy efficiency, consumer advocacy, environmental compliance, and technology strategy within the energy industry. Conducts analysis in utility rate-cases focusing on reliability metrics and infrastructure issues and analyzes the benefits and costs of electric and natural gas energy efficiency measures and programs.

Environmental Health and Engineering, Newton, MA. *Senior Scientist*, 2001 – 2008.

Managed complex EPA-mandated abatement projects involving polychlorinated biphenyls (PCBs) in building-related materials. Provided green building assessment services for new and existing construction projects. Communicated and interpreted environmental data for clients and building occupants. Initiated and implemented web-based health and safety awareness training system used by laboratories and property management companies.

The Penobscot Group, Inc., Boston, MA. *Analyst*, 1994 – 2000.

Authored investment reports on Real Estate Investment Trusts (REITs) for buy-side research boutique. Advised institutional clients on REIT investment strategies and real estate asset exchanges for public equity transactions. Wrote and edited monthly publications of statistical and graphical comparison of coverage universe.

Harvard University Extension School, Cambridge, MA. *Teaching Assistant*, 1995 – 2002.

Teaching Assistant for Environmental Management I and Ocean Environments.

Brigham and Women's Hospital, Boston, MA. *Cancer Laboratory Technician*, 1992 – 1994.

Studied the biological mechanism of tumor eradication in mouse and human models. Organized and performed immunotherapy experiments for experimental cancer therapy. Analyzed and authored results in peer-reviewed scientific journals.

EDUCATION

Harvard University, Cambridge, MA
Master of Science in Environmental Science and
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Cornell University, Ithaca, NY
Bachelor of Arts in Biology and Classics, 1992

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Resume updated October 2022