

DOCKET NO. D-1964-074-3

DELAWARE RIVER BASIN COMMISSION

**Vicinity Energy Philadelphia Inc.
Surface Water Withdrawal and Consumptive Use for Electric Generating and
Cogenerating
City of Philadelphia, Philadelphia County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) by the docket holder on September 28, 2020 (Application), for renewal of the existing Surface Water Withdrawal and Consumptive Use for Electric Generating and Cogenerating.

The Application was reviewed for approval under Section 3.8 of the *Delaware River Basin Compact*. The Philadelphia City Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on February 10, 2021.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew the approval to withdrawal surface water from the Schuylkill River through Intake No. 1 for non-contact cooling, steam generation, and fire control and the consumptive use of water for electric generating and cogenerating. This docket reduces the existing surface water withdrawal allocation associated with Intake No. 1 from 5,180 million gallon per month (mgm) to 1,860 mgm as the former Schuylkill Generating Station generating units no longer exist. The docket holder continues to provide water to two separate facilities and these projects previously described in Docket Nos. D-1995-010 CP-2 (Tri-Gen) and D-1995-032 CP-2 (Grays Ferry Co-gen) are now incorporated into this docket. Docket Nos. D-1964-074 CP-2, D-1995-010 CP-2 and D-1995-032 CP-2 will be terminated and removed from the Comprehensive Plan.

2. Location. Intake No. 1 is located in the tidal portion of the Schuylkill River which is designated by DRBC as Water Quality Zone 4. The main operations facility is located at 2600 Christian Street in the City of Philadelphia, Philadelphia County, Pennsylvania. Specific location information has been withheld for security reasons.

3. Area Served. The withdrawal will continue to serve only the docket holder's facilities described in this docket for the purpose of non-contact cooling, steam generation, and fire control. Electric power produced by the docket holder's Grays Ferry Co-gen Facility (GFCE) supplies electricity to the Pennsylvania-Jersey-Maryland (PJM) grid. The GFCE and Tri-Gen facility (Tri-Gen) serve steam heat to its local customers which includes universities, medical

schools, healthcare facilities, federal and city government facilities, office buildings, industrial facilities, hotels, and more than 10 million square feet of high-density residential apartments and condominiums. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. Design Criteria. Intake No 1. currently serves water to the GFCF and Tri-Gen for non-contact cooling, steam generation, and fire control and records an existing average and maximum water demand of 37.2 million gallons per day (mgd) and 55.6 mgd, respectively. The docket holder projects the 10-year average and maximum water demand to increase to 39.6 mgd and 60.0 mgd, respectively. The allocation of 1,860 mgm (60.0 mgd) should be sufficient to meet the future demands of the docket holder.

Non-contact cooling water (NCCW) from both GFCF and Tri-Gen, intake screen backwash and some steam condensate from GFCF is comingled and ultimately discharged to the Schuylkill River via Outfall No. 001 as described in Docket No. D-2010-040 CP-1 and Pennsylvania Department of Environmental Protection (PADEP) National Pollutant Discharge Elimination System (NPDES) Permit No. PA0011657. Effluent from the proposed reserve osmosis and ultrafiltration water conditioning facilities will be combined with NCCW and steam condensate and will also be discharged through Outfall 001. Outfall 001 is located just downstream of Intake No. 1. On average the project will discharge from 38 to 48 mgd of effluent just downstream from the point of withdrawal. The expected peak-monthly consumptive use for electrical generating and cogenerating at the GFCF is 17.2 million gallons.

The Schuylkill River is tidal at the point of withdrawal and discharge from the docket holder's facilities. Using the United States Geological Survey (USGS) Streamstats program, Commission staff estimate that the Q7-10 flow (lowest 7 consecutive day flow in a 10 year period) of the Schuylkill River is 388 cubic feet per second (cfs) or 250.8 mgd at the point of withdrawal and discharge.

Sanitary wastewater from the facility and condensate from the steam that is served to customers is conveyed to the City of Philadelphia's collection system, which ultimately is discharged to the Water Quality Zone 4 via the PWD Southwest wastewater treatment plant (WWTP), approved by DRBC Docket No. D-70-53 CP and NPDES Permit No. PA0026671.

5. Facilities.

5.1 Withdrawal Intake

The existing project surface water withdrawal intake was constructed in June of 1903 and was owned and operated by PECO/Exelon for the Schuylkill Generating Station. The intake includes a standard trash rack and is screened with both traveling and rotary screens. The GFCF and Tri-Gen facilities operate a total of three (3) and two (2) pumps, respectively that all independently withdraw water from the Schuylkill River through Intake No. 1 with the following capacities:

INTAKE NO.	WATER BODY	TOTAL PUMP CAPACITY	GFCF PUMP CAPACITIES	TRI-GEN PUMP CAPACITIES (GPM)
1	Schuylkill River	54,000 gpm	3 pumps x 17,000 gpm	1 pump x 1,800 gpm 1 pump x 1,200 gpm

A new pump with duplicate back-up will be installed for use with the improvements of the proposed water deionizing facilities described in detail in the Wastewater Discharge Docket No. D-2010-040-2. The pump and back-up pump will each have a capacity of 3,300 gpm. Only one of these pumps will operate at a given time. Withdrawals utilizing these pumps will be metered with a totalizing flow meter.

Surface water withdrawals are not directly metered. Water use is measured using a 1997 Dart II model DFCII flow meter. Data is collected by this meter at monitoring point 301 for NPDES Discharge Monitoring Reports and for quarterly DRBC surface water use reports. There are no written calibration or maintenance procedures for this meter. The docket holder is required to demonstrate the accuracy of the meter and associated water use calculation methodology. In addition, the docket holder shall provide calibration and maintenance procedures and schedules for the meter in accordance with Section C. DECISION Condition C.3.

5.2 GFCF

The GFCF consists of a dry low-nitrogen oxide combustion turbine, a natural gas-fired heat recovery steam generator, a single case steam turbine, and an auxiliary boiler whose combined power output is approximately 173 mega-watt (MW).

5.3 Tri-Gen

The Tri-Gen facility currently consists of two boilers rated 795 and 761 million Btu per hour, providing steam only to local customers for heating.

5.4 Interconnections

The docket holder’s facility receives potable water, boiler make-up water, and some process water through an approximate 5 mgd capacity interconnection with the Philadelphia Water Department (PWD). With the improvements of the proposed water deionizing facilities described in detail in the Wastewater Discharge Docket No. D-2010-040-2, water use from the PWD will be reduced in favor of treated river water withdrawn from the Schuylkill River Intake No. 1.

6. Relationship to the Comprehensive Plan. The projects described herein were included in the Comprehensive Plan as follows:

DOCKET HOLDER	DOCKET NUMBER	APPROVAL DATE
Exelon/Veolia Schuylkill Generating Station	D-1964-074 CP-2 D-2010-040 CP-1	May 11, 2011 May 11, 2011

DOCKET HOLDER	DOCKET NUMBER	APPROVAL DATE
Philadelphia Energy Corporation/Veolia TriGen	D-1995-010 CP-2	July 11, 2012
Grays Ferry Cogeneration Partnership/ Veolia	D-1995-032 CP-2	May 10, 2012

The GFCG is a Designated Unit included in EXHIBIT III of ATTACHMENT 2 of Docket No. D-1977-110 CP-19 for the Merrill Creek Reservoir.

B. FINDINGS

1. Surface Water Withdrawal Allocation

Much of the water withdrawn from the Schuylkill River for use at the docket holder’s facilities will be returned as effluent close to the point of withdrawal save for an estimated 1% of evaporative loss from non-contact cooling and the steam condensate generated from steam that is served to the docket holder’s local customers. The withdrawal allocation included in Section C. DECISION Condition C.5. is not expected to have an adverse impact on flow in the Schuylkill River.

2. Surface Water Charges

The docket holder shall pay for consumptive and non-consumptive surface water use in accordance with the provisions of 18 CFR Part 420 as described in Section C. DECISION Condition C.4.

3. Consumptive Use

The docket holder estimates that the current maximum monthly withdrawals from Intake No. 1, used for the purpose of non-contact cooling, steam generation, and fire control result in a consumptive use of up to approximately one percent (~1%) of the total water withdrawn. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the Administrative Manual – Part III – Basin Regulations – Water Supply Charges (18 CFR Part 420). The expected peak-monthly consumptive use for electrical generating and cogenerating at the GFCF is 17.236 million gallons. Section C. DECISION Condition C.6. includes an approved consumptive water use of 18.6 mgm.

4. Drought Management and Contingency Plans (DMCPs)

As the surface water withdrawal from the Schuylkill River is greater than 1 mgd, a DMCP was required for the facility. A DMCP dated September 28, 2018 was submitted to the DRBC which was approved by the DRBC Executive Director on September 11, 2019. The

DMCP also incorporated details of the Consumptive Use Replacement Plan described below in Section B.5. The docket holder shall implement their DMCP dated September 28, 2018 upon direction by the Executive Director (see Section C. DECISION Condition C.7.).

5. Consumptive Use Replacement Plan (CURP)

In accordance with DRBC Resolution 2018-5, a CURP was required for the facility. A CURP was submitted with the DMCP dated September 28, 2018 which was approved by the DRBC Executive Director on September 11, 2019. The docket holder has obtained a sublease with the Philadelphia Energy Company for storage within the Merrill Creek Reservoir. The sublease came into effect on January 1, 2018. The docket holder's sublease is for a maximum amount of 162.037 acre-feet per year. This amount has been excluded from the Exelon sublease. Exelon will continue to manage the water releases and provide administrative services under the terms of the sublease. The docket holder shall implement their CURP dated September 28, 2018 upon direction by the DRBC (see Section C. DECISION Condition C.8.).

6. Other Findings

On December 30, 2019, Antin Infrastructure Partners finalized its purchase of Veolia North America's district energy assets in the United States. Now officially named Vicinity Energy, the district energy business is comprised of steam, hot and chilled water and electricity production plants, including cogeneration, across 13 networks in 10 major cities.

The project is designed to conform to the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

C. DECISION

Effective on the approval date for Docket No. D-1964-074-3 below, the projects described in Docket Nos. D-1964-074 CP-2, D-1995-010 CP-2 and D-1995-032 CP-2 are removed from the Comprehensive Plan; Docket Nos. D-1964-074 CP-2, D-1995-010 CP-2 and D-1995-032 CP-2 are terminated and replaced by Docket No. D-1964-074-3. The project and appurtenant facilities as described in Sections A.4. (Design Criteria) and A.5. (Facilities) are approved subject to the following conditions, pursuant to Section 3.8 of the *Compact*:

Monitoring and Reporting

1. The docket holder shall continue to report to the PADEP all surface water withdrawals described in this docket in accordance with the Pennsylvania Regulations (Title 25 - Environmental Protection, [25 PA. CODE CH. 110], Water Resources Planning).
2. The project withdrawals shall be metered by means of an automatic continuous recording device, flow meter, or other method, and shall be measured to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted for surface water withdrawals by the PADEP if maintenance of the 5 percent performance is not technically feasible or economically practicable. Meters or other methods of measurement shall be subject to approval and inspection by the PADEP as to the type, method, installation, maintenance, calibration, reading and accuracy. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the PADEP annually and shall be available at any time to the Commission if requested by the Executive Director.
3. The docket holder is required to demonstrate the accuracy of the meter and associated water use calculation methodology for determining consumptive and non-consumptive water use to the DRBC within 6-months of docket approval. In addition, the docket holder shall provide calibration and maintenance procedures and schedules for the meter in accordance with Section C. DECISION Condition C.2.
4. The docket holder shall pay for consumptive and non-consumptive surface water use in accordance with *Administrative Manual – Part III Basin Regulations – Water Supply Charges 18 CFR Part 420*.

Other Conditions

5. During any month, the combined withdrawal from Intake No. 1 shall not exceed 1,860 million gallons.
6. During any month, consumptive use for electric generating and cogenerating may not exceed 18.6 million gallons.
7. The docket holder shall implement their DMCP dated September 28, 2018 upon direction by the Executive Director.
8. For the duration of a critical hydrologic condition as announced by the Commission, on a daily basis the docket holder shall cause to be released from a replacement water source approved by the Commission an amount of water equal to the amount consumptively used by the docketed facility, multiplied by the applicable relative effect factor, if assigned. For the duration of such critical hydrologic condition, the docket holder shall operate its facility only at a level commensurate with the amount of replacement water it is capable of causing to be released.

9. For the duration of any drought emergency declared by either Pennsylvania or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Pennsylvania, the Pennsylvania Emergency Management Council, PADEP, or the Commonwealth Drought Coordinator to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

10. The docket holder is responsible for timely submittal to the DRBC of a docket renewal application on the appropriate application form including the appropriate docket application filing fee (see 18 CFR 401.43) at least 6 months in advance of the docket expiration date set forth below. The docket holder will be subject to late filed renewal surcharges in the event of untimely submittal of its renewal application, whether or not DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. In the event that a timely and complete application for renewal has been submitted and the DRBC is unable, through no fault of the docket holder, to reissue the docket before the expiration date below, the terms and conditions of the current docket will remain fully effective and enforceable against the docket holder pending the grant or denial of the application for docket approval.

11. The docket holder shall implement to the satisfaction of the PADEP, a drought or other water supply emergency plan.

12. The docket holder shall implement to the satisfaction of the Bureau of Watershed Management, PADEP, a continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the Bureau of Watershed Management, PADEP, on the actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

13. The docket holder shall continue to implement its Water Conservation Plan as approved by PADEP and shall report to the PADEP on actions taken pursuant to this program and the impact of those actions as requested by the PADEP.

14. The surface water intake and operational records shall be available at all times for inspection by the DRBC.

15. The surface water intake shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

16. Each new water service connection shall include a water meter in accordance with the DRBC's Resolution No. 87-7 (Revised).

17. Sound practices of excavation, backfill and reseedling shall be followed to minimize erosion and deposition of sediment in streams from any new facilities or repair related construction.

18. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

19. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

20. The docket holder shall be subject to applicable DRBC regulatory program fees, in accordance with duly adopted DRBC resolutions and/or regulations. (see 18 CFR 401.43).

21. This approval is transferable by request to the DRBC Executive Director provided that the project purpose and area served approved by the Commission in this docket will not be materially altered because of the change in project ownership. The request shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.43).

22. The docket holder shall request a name change of the entity to which this approval is issued if the name of the entity to which this approval is issued changes its name. The request for name change shall be submitted on the appropriate form and be accompanied by the appropriate fee (see 18 CFR 401.43).

23. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

24. If the monitoring required herein or any other relevant data or information demonstrates that the operation of this project is interfering with or otherwise impairing existing uses of ground or surface water, or if the docket holder receives a complaint from an existing ground or surface water user within the zone of influence of the withdrawal alleging such interference or impairment, the permit holder shall immediately notify the Executive Director, and unless excused by the Executive Director, shall investigate the demonstrated or alleged impacts. For purposes of this condition, notification shall mean either (a) electronic transmittal of written notice to the Executive Director via email (using addresses posted on the DRBC website); or (b) written notice to the Executive Director and a telephone call to the Project Review Section at 609-883-9500, ext. 216. (Oral notification must always be accompanied by immediate written notification directed to the Executive Director.) In addition, the docket holder shall provide written notice to all potentially affected water users of the docket holder's responsibilities under this condition. **Any well or surface water supply that is impaired as a result of the docket holder's project withdrawal shall be repaired, replaced or mitigated at the docket holder's expense.** The scope of the options to consider for repair, replacement and/or mitigation shall not be limited solely to those that are owned, operated, or controlled by the project sponsor. An investigation report and/or mitigation plan prepared and certified by a licensed professional engineer and/or a licensed professional geologist shall be submitted to the Executive Director as

soon as practicable following notice of the demonstrated or alleged impairment consistent with this paragraph. The Executive Director shall make the final determination regarding the scope and sufficiency of the investigation and the extent of any mitigation measures that may be required. Where ground and surface waters are rendered unavailable, unusable, or unsuitable for the pre-existing use, the Executive Director may direct the docket holder to take interim actions to mitigate such impacts, pending completion of the investigative report and any long-term repair, replacement or mitigation.

25. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

26. Renewal of this docket does not resolve violations, if any, by the docket holder that may have occurred prior to this renewal or that may be ongoing ("prior or ongoing violations") of provisions of the *Delaware River Basin Compact* ("*Compact*") or of any rule, regulation, order or approval duly issued by the Commission or the Executive Director pursuant to the *Compact*. The Commission reserves its right to take appropriate enforcement action against the docket holder, including but not limited to recovery of financial penalties consistent with Section 14.17 of the *Compact*, for any and all such prior or ongoing violations.

27. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*. In accordance with Section 15.1(p) of the *Delaware River Basin Compact*, cases and controversies arising under the *Compact* are reviewable in the United States district courts.

BY THE COMMISSION

APPROVAL DATE: March 10, 2021

EXPIRATION DATE: March 10, 2031