

DOCKET NO. D-2008-038 CP-3

DELAWARE RIVER BASIN COMMISSION

**Constellation Energy Generation, LLC
Eddystone Generating Station
Surface Water Withdrawal
Eddystone Borough, Delaware County, Pennsylvania**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on May 15, 2023, revised May 31, 2023 for renewal of an allocation of surface water and review of a surface water withdrawal project (Application).

The Application was reviewed for continuation of this project in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Delaware County Planning Department has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on May 8, 2024.

A. DESCRIPTION

1. **Purpose.** The purpose of this docket is to renew the approval of a surface water allocation of 25,892 million gallons per month (mgm) for industrial processes and cooling at the Eddystone Electric Generating Station.

2. **Location.** Intake No. 2 will continue to withdraw surface water from Water Quality Zone 4 near River Mile 84.5 of the Delaware River in the Borough of Eddystone, Delaware County, Pennsylvania.

Specific location information has been withheld for security reasons.

3. **Area Served.** Intake No. 2 will continue to provide once through cooling water and process water to the Eddystone Generating Station. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in Section C. DECISION of this docket.

4. Design Criteria. Eddystone is a dual-fueled (natural gas and oil), steam electric generating station that operates during periods of peak demand. The facility consists of two steam electric generating units (Units 3 and 4) that are nominally rated at 790-megawatts (MW).

The Eddystone Station utilizes surface water withdrawn from the Delaware River for its once through cooling needs. The intake structure has four separate intake bays that each house a cooling water pump with a rated capacity of 198 MGD and a river water pump with a rated capacity of 10.8 MGD for a total intake design flow of 835.2 mgd. Water passes under a curtain wall and through vertical-bar trash racks prior to the installed conventional traveling screens with 3/8-inch mesh. Screens are rotated once each 8-hour shift, once every 4 hours if freezing conditions, or continuously as needed during fall leaf season. Debris is removed by a high-pressure spray wash for disposal. Lateral fish passages upstream and downstream in the forebay, which can be sealed off if needed for maintenance, are located between the trash racks and the traveling screens.

The docket holder reports that the average and maximum water demands are 302.8 million gallons per day (mgd) and 835.2 mgd, respectively. Based on PADEP water usage data, the average monthly withdrawal from 2018 through 2022 was 2,807.6 mgm. Usage is dependent on generation needs.

5. Facilities. The existing project intake has the following characteristics:

INTAKE NO.	WITHDRAWAL WATER BODY	PUMP CAPACITY (MGD)	7Q10 FLOW AT INTAKE (CFS)	YEAR CONSTRUCTED
2	Delaware River	835.2	tidal	1974

Water withdrawals are calculated by multiplying pump rated capacities by the pump run time (interval needed to withdraw enough water for cooling purposes). These numbers are recorded daily and submitted to the DRBC quarterly.

Water withdrawn for cooling purposes is pre-treated to protect the equipment related to the once through cooling system. Pre-treatment includes a biocide and clamicide.

Portions of the project are located in the 100-year flood plain. The area is located in the tidal portion of the Delaware River. The docket holder reports that no flooding has been reported at the facility in its existence and the facility has a flood protection program in place to help minimize flood damage.

Potable water to the facility is provided by Aqua Pennsylvania, Inc.

6. Other. Once through cooling water and treated industrial wastewater are discharged to the Delaware River as described in DRBC Docket No. D- 1992-066 CP-3 approved on March 11, 2020. Pennsylvania Department of Environmental Protection (PADEP) issued NPDES Permit No.

PA0013714 for these discharges. The treatment facility has adequate capacity to continue to receive wastewater from the existing project.

7. **Relationship to the Comprehensive Plan.** The project was previously included in the Comprehensive Plan by the Commission in Docket No. D-2008-038 CP-1 on July 15, 2009, which was renewed and continued to be included in the Comprehensive Plan on September 8, 2014 (Docket No. D-2008-038 CP-2). Issuance of this docket will continue the withdrawal project in the Comprehensive Plan.

B. FINDINGS

1. Drought Management and Contingency Plan and Consumptive Use Replacement Provision

Section 2.3.5.1 C. of the Commission's *Rules of Practice and Procedure (RPP)*, requires industrial and commercial water withdrawals in excess of one million gallons per day to develop a contingency plan including emergency conservation measures to be instituted in the event of a Commission declared drought or other water shortage. Resolution No. 83-14 amended the Commission's *Water Code* (Section 2.1.4) to include the conservation goal of a 15 percent reduction in depletive use during drought conditions.

Additionally, DRBC Resolution No. 2018-5 requires that certain electric generating or cogenerating facilities develop or acquire sources of replacement water for use during critical hydrologic conditions as a condition of approval. The Project is subject to the consumptive use requirement as it a generating facility designed to consumptively use in excess of 100,000 gallons per day of water during any 30-day period and the primary source of water is surface water located upstream of River Mile 38 (see Section C. DECISION Condition C.8).

The docket holder's approved replacement source is the Merrill Creek Reservoir. As approved by the DRBC, the Merrill Creek Reservoir, located on Merrill Creek in Harmony Township, Warren County, New Jersey, provides supplemental storage from which releases are made during drought conditions to compensate for freshwater equivalent consumptive use of designated steam electric and combined-cycle generating units owned by members of the Delaware River Basin Electric Utilities Group. Eddystone Unit No. 3 and Unit No. 4 are included in Attachment 2, Exhibit III, as "Designated Units" in DRBC Docket No. D-1977-110 CP-19, approved on September 13, 2018.

2. Surface Water Charges

The docket holder shall pay for surface water use in accordance with Basin Regulations-Water Supply Charges 18 C.F.R. Part 420. See Section C. DECISION Condition C.3.

3. Other Findings

The docket holder estimates that the project withdrawals, used for the purpose of non-contact, once through cooling, result in a consumptive use of 0.4 percent of the total water use. The DRBC definition of consumptive use is defined in Basin Regulations-Water Supply Charges 18 C.F.R. 420.1(d).

The project is designed to conform to the requirements of the *Water Code (WC)* and *Water Quality Regulations (WQR)* 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-2008-038 CP-3 below, the project described in Docket No. D-2008-038 CP-2 is removed from the Comprehensive Plan to the extent that it is not included in Docket No. D-2008-038 CP-3; Docket No. D-2008-038 CP-2 is terminated and replaced by Docket No. D-2008-038 CP-3; and the project and the appurtenant facilities described in in Section A.4. (Design Criteria) and A.5. (Facilities) shall be continued in the Comprehensive Plan. The project and appurtenant facilities as described in in Section 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 and groundwater sources 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 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 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 shall pay for surface water use in accordance with *Basin Regulations – Water Supply Charges 18 C.F.R. Part 420*.

Other Conditions

4. During any month, the withdrawal from Intake 2 shall not exceed 25,892 million gallons. The intake shall not be pumped above the maximum rate and monthly allocation as indicated below:

INTAKE NO.	MAXIMUM RATE (GPM)*	MONTHLY ALLOCATION (MGM)
2	580,000	25,892

* Based on a 24-Hour Average

5. In accordance with 18 C.F.R. 401.8. of the Commission’s *Rules of Practice and Procedure (RPP)*, if at any future time the Project is changed substantially from the Project as described in this docket, it will be deemed to constitute a new and different project for the purposes of Article 11 of the Delaware River Basin Compact and will require Commission amendment of the Comprehensive Plan. In accordance with the same section of the RPP, whenever a change to the Project is made, the sponsor must advise the Executive Director, who will determine whether the change is deemed substantial for purposes of this provision.

6. Section 2.3.10 of the Commission’s Rules of Practice and Procedure (18 C.F.R. 401.41), limiting the Commission’s approval to three years in the absence of an expenditure of substantial funds by the project sponsor in reliance on the approval, is hereby waived for good cause shown in accordance with Section 2.9.3 (18 C.F.R. 401.123) of the same regulations. This approval shall expire on the expiration date set forth below unless prior thereto the docket holder has applied to the Commission to renew or extend this approval.

7. 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 C.F.R. 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 DRBC issues a reminder notice in advance of the deadline or the docket holder receives such notice. If 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 pending the grant or denial of the application for docket approval.

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 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. Prior to any change of the approved replacement source or consumptive use allocation described in facility's CURP, the docket holder shall submit a Consumptive Use Replacement Plan in accordance with Resolution No. 2018-5 to the Commission and receive written approval from the DRBC Executive Director.

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

11. The surface water intake shall be operated at all times to comply with the requirements of the *WC* and *WQR* of the DRBC.

12. No water service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

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

14. No new water service connections shall be made to premises connected to sewerage systems which are not in compliance with all applicable effluent limits contained in State permits and the *Water Quality Regulations* of the Commission.

15. 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.

16. 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*.

17. 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).

18. 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).

19. 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 C.F.R. 401.43).

20. 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 to ensure the proper control, use and management of the water resources of the Basin.

21. 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.

22. 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.

23. 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.

24. 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:

EXPIRATION DATE: June 5, 2034

DRAFT