

DOCKET NO. D-2008-027 CP-4

DELAWARE RIVER BASIN COMMISSION

**West Deptford Energy, LLC
West Deptford Energy Station
Surface Water Withdrawal and Electric Generating Consumptive Use
West Deptford Township, Gloucester County, New Jersey**

PROCEEDINGS

This docket is issued in response to an Application submitted to the Delaware River Basin Commission (DRBC or Commission) on September 9, 2019 for renewal of a cooling water withdrawal associated with an electric generating facility designed to consumptively use in excess of 100,000 gallons per day (Application). The project's existing discharge of industrial wastewater will continue to be regulated by the New Jersey Department of Environmental Protection (NJDEP) in accordance with NJPDES Permit No. NJ0171905, most recently approved on October 1, 2016 and in accordance with the Administrative Agreement (AA) between DRBC and NJDEP, enacted March 2015 (DRBC OP Record OP-2008-027 CP-3). The docket holder's withdrawal and consumptive use remains reviewable by the Commission and is the subject of this docket renewal. The NJDEP issued a Tri-County Water Quality Management Plan (WQMP) for Gloucester County Utilities Authority (GCUA) and WDE on February 8, 2013 detailing the modifications to the withdrawal and discharge of cooling water at the WDES.

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 Gloucester County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on November 12, 2020.

A. DESCRIPTION

1. Purpose. The purpose of this docket is to renew the approval to withdraw up to 374.914 million gallons per month (mgm) and consumptively use up to 273.7 mgm of treated effluent from GCUA's effluent pipeline for use at the West Deptford Energy Station. The project's existing discharge of industrial wastewater back into GCUA's effluent pipeline prior to discharge into the Delaware River is approved by the NJDEP and will continue to be regulated in accordance with the AA entered into in March 2015 by the Commission and the State of New Jersey (OP-2008-027 CP-3).

2. Location. The Electric Generation Facility and withdrawal of water is located adjacent to Water Quality Zone 4 of the Delaware River at River Mile 89.7. The facility is located in West Deptford Township, Gloucester County, New Jersey.

Specific location information has been withheld for security reasons.

3. Area Served. Water diverted from GCUA's treated effluent pipeline will continue to be used for industrial cooling and processes at the WDES. 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. The WDES is a combined-cycle electric generation facility that can generate up to a nominal output of 750 megawatts (MW). The primary fuel is pipeline quality natural gas. The energy facility is comprised of two combined-cycle Combustion Turbine Generators (CTG's) and two Heat Recovery Steam Generators (HRSG). Each HRSG is equipped with a gas fired duct burner that is utilized to augment power production during operation of combustion turbines. Steam generated in the HRSGs is used to power one Steam Turbine Generator.

The docket holder will continue to divert up to 374.914 mgm of treated wastewater effluent from GCUA's existing effluent pipeline for industrial cooling and processes at the facility. The primary water use is for non-contact cooling tower make-up (approximately 95 percent) with the remaining being utilized for secondary uses such as boiler makeup. The cooling towers utilize the water to reject heat and a significant quantity of water is lost through evaporation. Primary consumption is for makeup to the mechanical draft wet cooling towers that are employed to reject low grade heat remaining in the exhaust stream emitted from the steam turbine-driven electric generators which produce some of the electricity in the combined cycle facility. A continuous blowdown of a portion of cooling tower volume is necessary to limit the cycling effect of evaporation and drift loss. The cooling tower blowdown and other water not consumptively used will continue to be discharged back to GCUA's existing discharge pipe at a point approximately 720 feet from GCUA Outfall No. DSN001A. A maximum of 73 percent of the water diverted and used at the facility is estimated to be consumptively used.

5. Facilities. The major equipment and ancillary system is comprised of two combined-cycle CTGs, a 40 MMBtu/hr natural gas-fired auxiliary boiler, one engine-driven 1000 kW emergency generator with one 800 gallon diesel storage tank, a diesel engine fire pump with one 500 gallon diesel storage tank, three Black Start Generator Diesel Engines (4 MW each), each with a 3,028 gallon diesel storage tank, a 35,000 gallon aqueous ammonia (19%) storage tank, and one multi-cell cooling towers.

In addition, the energy facility includes necessary balance-of-plant equipment and systems such as natural gas metering and handling systems, plant instrumentation and control systems, water treatment and storage facilities, fuel oil receiving, storage and forwarding, high voltage electrical transformers, and an administration/maintenance building and warehouse. The facility also contains treatment equipment to treat the GCUA effluent to provide boiler feed-water and cooling tower circulating water.

Water diverted from GCUA's pipeline is metered. Water discharged back to GCUA's pipeline from the WDES is metered.

Prior to use, water diverted from GCUA's pipeline is dechlorinated using sodium bisulfate prior to Biological Aeration Filtration for ammonia reduction, disk filtered for TSS reduction, sodium hypochlorite for ammonia polishing and residual free chlorine to prevent biological growth and addition of alkalinity as needed to adjust the pH. Water used for boiler makeup is additionally treated by ultra-filtration and reverse osmosis.

Potable water is supplied to the facility by New Jersey American Water Company (NJAWC), which was approved by DRBC Docket No. D-99-73 CP on September 13, 2001 and administratively continued as part of the 2009 Administrative Agreement between NJDEP and the DRBC.

6. Other. The project's existing discharge of industrial wastewater back to the GCUA effluent pipe is approved by the NJDEP in NJPDES Permit No. NJ0171905 and will continue to be regulated in accordance with the AA enacted on March 2015 by the Commission and the State of New Jersey (DRBC OP-2008-027 CP-3).

Sanitary wastewater from WDES will continue to be conveyed to the head of the GCUA WWTP for complete treatment. GCUA's existing discharge (from which the docket holder withdraws its water) is approved by the NJDEP and will continue to be regulated in accordance with the AA enacted March 2015 by the Commission and the State of New Jersey under DRBC OP Record No. OP-1990-074 CP-5. The treatment facility has adequate capacity to receive wastewater from the WDES.

7. Relationship to the Comprehensive Plan. The WDES was included in the Comprehensive Plan upon approval of Docket No. D-2008-027 CP-2 on May 8, 2013. Issuance of this docket will continue approval of the WDES in the Comprehensive Plan.

West Deptford is included as a "Designated Unit" in Attachment 2, Exhibit III: Designated Units of DRBC Docket No. D-1977-110 CP-19 ("The Merrill Creek Owners Group Docket") approved on September 13, 2018.

B. FINDINGS

1. Surface Water Charges.

The docket holder shall pay for surface water use in accordance with Administrative Manual – Part III Basin Regulations – Water Supply Charges 18 CFR Part 420 as described in Condition 3. in the DECISION section.

2. Consumptive Use.

The docket holder estimates that the maximum consumptive use at the facility is 73 percent of the approved water use, which based on the maximum approved diversion rate is equal to 273.7

mgm. Based on withdrawal and effluent discharge data submitted to DRBC, consumptive use averages 61 percent of the total water use.

3. Consumptive Use Replacement Provision.

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.

The following provision from Resolution No. 2018-5 is included as Condition C.6. in Section C. DECISION:

“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.”

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. West Deptford is included in Attachment 2, Exhibit III, as a “Designated Unit” served by Metropolitan Edison Co. share of Merrill Creek in DRBC Docket No. D-1977-110 CP-19, approved on September 13, 2018.

4. Other Findings.

A drought management and contingency plan was submitted to the Commission on February 6, 2012.

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-2008-027 CP-4 below, 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 and are approved subject to the following conditions, pursuant to Section 3.8 of the *Compact*:

Monitoring and Reporting.

1. 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 designated agency (NJDEP) 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 NJDEP 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 NJDEP quarterly and shall be available at any time to the Commission if requested by the Executive Director.

2. The docket holder shall pay DRBC for surface water use in accordance with *Administrative Manual – Part III Basin Regulations – Water Supply Charges 18 CFR Part 420*.

Other Conditions.

3. During any month, the withdrawal from the GCUA effluent pipe shall not exceed 374.914 million gallons.

4. During any month, the consumptive use shall not exceed 273.7 mgm.

5. 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.

6. 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.

7. The facility and operational records shall be available at all times for inspection by the DRBC.

8. The facility shall be operated at all times to comply with the requirements of the WC and WQR of the DRBC.

9. 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.

10. 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*.

11. 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).

12. 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 401.35).

13. 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 401.35).

14. 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.

15. 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.

16. 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.

17. During any water emergency or other non-emergency declaration by the Governor of New Jersey, NJDEP or the Commission, water service or use by the project docket holder pursuant to this docket approval shall be subject to any order or restriction governing those non-essential uses specified by the NJDEP to the extent that they may be applicable, and to any other emergency resolutions or orders adopted by the Commission.

18. 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: December 09, 2020

EXPIRATION DATE: December 09, 2030