
# Electricity Supply Reliability Reserve Fund Progress Report

August 1, 2025

Department of Water Resources acknowledges the efforts and contributions made by leadership and staff members.

The Electricity Supply Reliability Reserve Fund Progress Report was prepared under the direction of

Delphine Hou..... Deputy Director, Statewide Energy

The following individuals supported the development of various sections of the Progress Report.

Wayne Wong.....Manager, Resource Acquisition and Development
Arslan Sabir ..... Manager, Project Development
Mindy Graybill .....Manager, Administration & Business Services
May Khang ..... Administration & Business Services
Colin Wood..... Senior Staff Counsel

## Table of Contents



## List of Tables

## I. Executive Summary

This August 2025 report details current activities undertaken by the Department of Water Resources' Statewide Energy Office (DWR SWEO) and funded by the Electricity Supply Reliability Reserve Fund (ESRRF) from March 1, 2025, through May 31, 2025. Please see prior reports for historical activities.

The following activities have taken place since the last report:

- Contracted Program Support, Professional and Technical Services, and Equipment
    - Correction of typographical error for the start and end dates of the Kiewit Power Constructors, Co. contract from 10/15/2022 through 06/30/2027 to the corrected dates of 10/21/2022 through 10/20/2027.
- State Power Augmentation Program (SPAP)
    - DWR SWEO and City of Roseville (Roseville Electric) executed a contract to move and eventually transfer title of the SPAP facility at the Calpine Greenleaf 1 site to Roseville Electric.

Table ES-1 below summarizes the total committed funds per project category, the disbursements for incremental activities between March 1, 2025, through May 31, 2025, and total cumulative disbursements.

***Table ES-1: Current Activities Reporting Period Disbursement Summary***

| Project Category | Committed Funds | Disbursed 3/1/25 - 5/31/2025 | Total Disbursed as of 5/31/2025 |
|---|---|---|---|
| Contracted Program Support, Professional and Technical Services, and Equipment | $166,050,343 | $1,007,243 | $26,034,221 |
| State Power Augmentation Program (SPAP) – Emergency & Temporary Power Generators > 5 MW | $106,983,586 | $1,223,715 | $102,006,992 |
| 2023 – 2027 – Emergency & Temporary Power Generators > 5 MW | $333,957,842 | $463,177 | $263,870,538 |
| Extended Operations of Retiring Facilities | $1,290,427,064 | $77,916,343 | $551,072,548 |
| **Total** | **$1,897,418,835** | **$80,610,478** | **$942,984,299** |

## II. Background

In June 2022, Assembly Bill (AB) 205 (Committee on Budget, Chapter 61, Statutes of 2022), AB 178 (Ting, Chapter 56, Statutes of 2022), and AB 180 (Ting, Chapter 44, Statutes of 2021) were enacted and collectively established California's Strategic Reliability Reserve (SRR). The SRR provides funding to secure additional resources to address extreme events above and beyond traditional resource planning and procurement, such as the Resource Adequacy program. The SRR includes three distinct programs, two administered by the California Energy Commission (CEC) and one by DWR. CEC's Demand Side Grid Support (DSGS) Program provides incentives to reduce customer net energy load and provide backup generation during extreme events, and the Distributed Electricity Backup Assets (DEBA) Program incentivizes the construction of cleaner and more efficient distributed energy assets that would serve as on-call emergency supply or load reduction for the state's electrical grid during extreme events. DWR's Electricity Supply Strategic Reliability Reserve Program (ESSRRP), created under Division 29 of the Water Code, contracts with, for, and/or constructs new supply-side assets, extends the operating life of resources planned for retirement, and, in 2022 and 2023, reimbursed the above-market cost for imports beyond Resource Adequacy requirements. The ESSRRP is funded by the Electricity Supply Reliability Reserve Fund (ESRRF). The Water Code makes clear the powers, responsibilities, and funding established under Division 29 are separate

and distinct from those for the State Water Project (Water Code Section 80700(b), 80711, 80720). The activities of the ESSRRP are carried out by the Statewide Energy Office (SWEO).

### A. Reporting Period

Water Code Section 80730 requires DWR to submit regular progress reports for the ESRRF to the Joint Legislative Budget Committee, first due January 31, 2023, and then every May 1, August 1, and December 1 thereafter. Such reports shall include:

*(a) Amount of funds expended;*

*(b) Purpose of funds expended;*

*(c) Status of actions funded;*

*(d) For new and expanded resources, the amount by megawatt, resource type, operational date, and expected lifetime of that capacity;*

*(e) The frequency at which resources funded by DWR have been used and the extent to which they complied with the requirements;*

*(f) In consultation with the California Air Resources Board, estimate or provide the best available information on the emissions of greenhouse gases, criteria air pollutants, and toxic air contaminants emitted by the resources funded by DWR over the period since the previous report; and*

*(g) Summary of contracts, grants, and loans issued.*

This August 2025 report details current activities undertaken by DWR and funded by the ESRRF from March 1, 2025, through May 31, 2025.

## III. Contracted Program Support, Professional and Technical Services, and Equipment

DWR entered into agreements for professional program and project management, construction and commissioning expertise, and other specialized technical services. SWEO utilizes these agreements to validate and secure viable electrical asset sites, provide services and expertise for site feasibility

studies and support, program management, site and project management, and to meet the deadlines outlined in statute, beginning with Water Code Section 80710. Table 1 below provides a listing of each agreement's term, committed funds, disbursed funds prior to March 1, 2025, amounts disbursed this reporting period (March 1, 2025, through May 31, 2025), and the total cumulative disbursed amounts. The agreements listed below support multiple objectives and efforts under the ESSRRP.

The Bureau Veritas North America, Inc (Bureau Veritas) agreement provides quality control and quality assurance inspection services for the manufacturing, procurement, design, installation/construction, and repair/refurbishment of equipment and materials in accordance with contract requirements. The EDF Trading North America LLC (EDF) and Pacific Gas & Electric (PG&E) agreements support the fuel management services for the Modesto Irrigation District (MID), Turlock Irrigation District (TID), and City of Lodi (Lodi) facilities developed under the agreement with Enchanted Rock, LLC (ERock). The EDF agreement provides purchasing and scheduling needs and the PG&E agreement finances the transportation of natural gas to each of the three facilities. The EUCI agreement provides training services for staff for topics such as power purchase agreements, regulatory compliance, and energy markets. The Kiewit Power Constructors, Co. agreement provides design, construction, and commissioning expertise, and other related technical services. The MID agreement is for the purchase of a spare transformer to replace the one used to interconnect the ERock generator at the MID site. The Qualus[1] agreement supports compliance with mandatory North American Electric Reliability Corporation reliability standards via permitting, reliability, technical engineering support, and auditing services. The Stantec Consulting Services, Inc. and Ulteig Operations, LLC[2] agreements support engineering, professional and technical programs, and project management services for all ESSRRP activities.

[1] Previously doing business as Linda Rogers & Associates, Inc.
[2] Previously doing business as Ulteig Engineers, Inc.

***Table 1: Contracted Program Support, Professional and Technical Services, and Equipment***

| Counterparty | Agreement Start Date | Agreement End Date | Committed Funds | Disbursed prior to 3/1/25 | Disbursed 3/1/25 – 5/31/25 | Total Disbursed |
|---|---|---|---|---|---|---|
| Bureau Veritas | 02/01/2023 | 02/05/2026 | $6,000,000 | $839,331 | $0 | $839,331 |
| EDF | 12/1/2023 | 12/31/2027 | $15,313,065 | $234,959 | $147,303 | $382,262 |
| EUCI | 10/01/2024 | 09/30/2026 | $49,999 | $6,216 | $3,885 | $10,101 |
| Kiewit Power Constructors, Co. | 10/21/2022 | 10/20/2027 | $120,000,000 | $18,289,281 | $224,572 | $18,513,853 |
| MID Spare Transformer | 11/16/2023 | 12/31/2027 | $2,607,294 | $2,607,294 | $0 | $2,607,294 |
| PG&E – Lodi | 12/1/2023 | 12/31/2027 | $2,381,345 | $41,957 | $133,084 | $175,041 |
| PG&E – MID | 12/1/2023 | 12/31/2027 | $2,381,345 | $47,914 | $71,299 | $119,213 |
| PG&E – TID | 12/1/2023 | 12/31/2027 | $2,317,295 | $157,361 | $12,876 | $170,237 |
| Qualus | 01/01/2024 | 12/31/2026 | $3,000,000 | $42,081 | $0 | $42,081 |
| Stantec Consulting Services, Inc. | 07/29/2022 | 06/30/2027 | $6,000,000 | $299,785 | $0 | $299,785 |
| Ulteig Operations, LLC | 07/01/2022 | 06/30/2027 | $6,000,000 | $2,460,799 | $414,224 | $2,875,023 |
| | | **Total** | **$166,050,343** | **$25,026,978** | **$1,007,243** | **$26,034,221** |

## IV. State Power Augmentation Program (SPAP)

In accordance with the Governor's Emergency Proclamation issued July 30, 2021,[3] DWR, CEC, and the California Independent System Operator (CAISO) partnered together to deploy temporary power generators likely to be online by October 2021 under the State Power Augmentation Program (SPAP). The SPAP is part of California's broader effort to safeguard the state's electric grid from climate change-induced drought, wildfires, heat waves, and other extreme

[3] Proclamation of a State of Emergency (July 30, 2021), available at https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf.

events. DWR collaborated with the CEC and CAISO to procure, install, and license the temporary natural gas fueled electric generators, which are capable of running on a blend of up to 75 percent hydrogen in the future depending on the availability of hydrogen fuel. The SPAP generators are placed at existing electric generation sites to feed directly into the electric grid to provide support during extreme events, including localized energy emergencies. The SPAP facilities became operational on September 22, 2021, meeting the challenge of the July 2021 Emergency Proclamation with the support of the CEC and CAISO, and directly supported California's electric grid during the September 2022 extreme heat event and various other electrical and transmission emergencies declared by CAISO and other Balancing Authorities.

On April 2, 2025, the Roseville City Council voted to amend the SPAP contract between DWR and Roseville Electric to relocate and transfer title of the SPAP equipment at the Calpine Greenleaf 1 site as referenced in Table 2 below. As noted in DWR's May 1, 2025, ESSRRP report, the site's capacity has been reduced from its maximum generating capability of 60 MW to 49 MW due to the expiration of an interconnection waiver from the Federal Energy Regulatory Commission.[4] By relocating the facility and eventually transferring title to the City of Roseville, the original full 60 MW generating capability can be restored and Roseville Electric has committed to continuing to operate the SPAP facility in alignment with DWR's ESSRRP resources by responding to energy emergency alerts issued by the major California Balancing Authorities until October 31, 2029. Furthermore, Roseville Electric has committed to additional long-term improvements to the SPAP facility—at its sole cost—rather than the temporary installation at the Calpine Greenleaf 1 site. The City of Roseville has experienced significant load growth with new customers such as Robert Bosch Semiconductor LLC, which plans to invest $1.5 billion to establish manufacturing and testing of silicon semiconductor chips in Roseville.[5] The Greenleaf 1 location of this SPAP facility is expected to be decommissioned by October 2025 and relocated to property owned by the City of Roseville, and recommissioned by

[4] Federal Energy Regulatory Commission, Order Granting Request for Waiver, Docket No. ER21-2753-000, September 15, 2021.
[5] City of Roseville, "Bosch completes acquisition of TSI Semiconductors," January 12, 2024. Available at: https://www.roseville.ca.us/news/what_s_happening_in_roseville/bosch_completes_acquisition_of_tsi (accessed June 19, 2025.)

summer 2026. As such, reporting on the SPAP facility will be moved to historical activities.

***Table 2: State Power Augmentation Program***

| Site | MW | Committed Funds | Disbursed prior to 3/1/25 | Disbursed 3/1/25 – 5/31/25 | Total Disbursed |
|---|---|---|---|---|---|
| Calpine Greenleaf 1 | 49.0 | $106,983,586 | $100,783,277 | $1,223,715 | $102,006,992 |
| **Total** | **49.0** | **$106,983,586** | **$100,783,277** | **$1,223,715** | **$102,006,992** |

## A. SPAP Emissions

Emissions data for the SPAP facilities are reported for informational purposes only. Emissions data includes greenhouse gas (GHG) emissions, criteria pollutants, and toxic air contaminants. SWEO staff collect data from the United States Environmental Protection Agency (US EPA) Emissions Collections and Monitoring Plan System (ECMPS) and reporting provided to local air districts, in consultation with CARB, for each site. Reporting timeframes vary by data set and source. SWEO staff collects emissions data annually for each calendar year. GHG emissions reported include carbon dioxide ($CO_2$), methane ($CH_4$), and nitrous oxide ($N_2O$). Criteria pollutants reported include carbon monoxide (CO), nitrogen oxides ($NO_x$), sulfur oxides ($SO_x$), and particulate matter ($PM_{10}$). Toxic air contaminants are only reported when there is an exceedance. Table 3 reports all emissions data from January 1 through November 1 for the facility at the Roseville Energy Park[6] and for calendar year 2024 for the facility at the Calpine Greenleaf 1 site and the operating time for each site.

[6] See DWR's December 1, 2024, Electricity Supply Reliability Reserve Fund Progress Report for further information.

***Table 3: SPAP Emissions for 2024***

| Emissions | Roseville Energy Park 1/1/24-11/1/24 Mass (Short Tons) | Calpine Greenleaf 1 1/1/24-12/31/24 Mass (Short Tons) |
|---|---|---|
| $CO_2$ | 1,271.54 | 2,462.99 |
| $CH_4$ | 0.01 | 0.05 |
| $N_2O$ | 0.00 | 0.00 |
| CO | 0.04 | 0.00 |
| NOx | 0.13 | 0.00 |
| SOx | 0.01 | 0.00 |
| $PM_{10}$ | 0.01 | 0.00 |
| **Total Operating Time (hours)** | 81.39 | 173.40 |

## V. 2023 – 2027 – Emergency and Temporary Power Generators > 5 MW

Under the authority provided in Water Code Section 80710, subdivision (b)(1)(B), DWR executed a contract with ERock and three related site use agreements with MID, TID, and Lodi, respectively, to secure new emergency and temporary power generators to support electric grid reliability during extreme events as shown in Table 4 below. Site studies, engineering design, equipment procurement activities, site certification, permitting, and project management activities began in Q4 2022. These new emergency resources are contracted to operate until 2027 to support electric grid reliability during extreme events.

As noted in the *Contracted Program Support, Professional and Technical Services, and Equipment* section, DWR voluntarily undertook environmental studies, surveying, environmental analysis, tribal consultation, and engagement with the local air pollution control districts to support the three new ERock facilities.[7] Moreover, ERock's proprietary technology, similar to those contracted by DWR, has met CARB's Distributed Generation (DG) Certification Program

[7] "Environmental Documents" for the City of Lodi, Modesto Irrigation District, and Turlock Irrigation District are available at: https://water.ca.gov/Programs/Statewide-Energy-Office.

requirements.[8] The DG Certification Program certifies electrical generation technologies that are exempt from the permit requirements of air pollution control or air quality management districts.

***Table 4: Emergency and Temporary Power Generators > 5 MW***

| Counterparty | Site Name | MW | Committed Funds | Disbursed prior to 3/1/25 | Disbursed 3/1/25 – 5/31/25 | Total Disbursed |
|---|---|---|---|---|---|---|
| ERock | City of Lodi | 48 | $113,832,881 | $91,191,744 | $236,579 | $91,428,323 |
| | Modesto Irrigation District | 48 | $104,418,556 | $84,416,159 | $114,996 | $84,531,155 |
| | Turlock Irrigation District | 47 | $115,706,405 | $87,799,458 | $111,602 | $87,911,060 |
| **Total** | | **143** | **$333,957,842** | **$263,407,361** | **$463,177** | **$236,870,538** |

## A. Emergency and Temporary Power Generators > 5 MW Emissions

Emissions data includes greenhouse gas (GHG) emissions, criteria pollutants, and toxic air contaminants. Specifically for the ERock sites, SWEO staff collect emissions data directly from ERock annually for each calendar year. GHG emissions reported include carbon dioxide ($CO_2$), methane ($CH_4$), and nitrous oxide ($N_2O$). Criteria pollutants reported include carbon monoxide (CO), nitrogen oxides ($NO_x$), sulfur oxides ($SO_x$), and particulate matter ($PM_{10}$). Toxic air contaminants are only reported when there is an exceedance. Table 5 reports emissions data from each site's commissioning date in 2024 through December 31 and the total maximum operating time for a single unit at each site.

[8] California Air Resources Board. Executive Order DG-052. *Distributed Generation Certification of Enchanted Rock LLC NGE21.9L-CA Generator*. August 2021. https://ww2.arb.ca.gov/sites/default/files/2022-05/DG-052.pdf.

***Table 5: Emergency and Temporary Power Generators > 5 MW***

| Emissions | City of Lodi Site 11/22/24 – 12/31/24 Mass (Short Tons) | Modesto Irrigation District Site 1/30/24 – 12/31/24 Mass (Short Tons) | Turlock Irrigation District Site 5/15/24 – 12/31/24 Mass (Short Tons) |
|---|---|---|---|
| $CO_2$ | 83.10 | 1,769.21 | 1,633.62 |
| $CH_4$ | 0.00 | 0.03 | 0.03 |
| $N_2O$ | 0.00 | 0.00 | 0.00 |
| CO | 0.01 | 0.26 | 0.22 |
| NOx | 0.00 | 0.07 | 0.07 |
| SOx | 0.00 | 0.01 | 0.01 |
| $PM_{10}$ | 0.01 | 0.15 | 0.12 |
| **Total Maximum Operating Time (hours)** | 4.75 | 235.10 | 202.25 |

## VI. Extended Operations of Retiring Facilities

Pursuant to Water Code Section 80710, subdivision (b)(1)(A), DWR sought to fund, reimburse, or compensate the owners of electric generating facilities pending retirement for costs, expenses, or financial commitments incurred to retain future availability. Table 6 below summarizes five such agreements executed to retain existing resources while load-serving entities are actively pursuing clean energy resources, which may be negatively affected by tariffs and other challenges, to meet traditional planning requirements.[9]

[9] Kootstra, Mark, and Nathan Barcic (CPUC). 2023. Joint Agency Reliability Planning Assessment. California Energy Commission. Publication Number: CEC-200-2023-002

***Table 6: Extended Operations of Retiring Facilities***

| Counterparty | MW | Committed Funds | Disbursed prior to 3/1/25 | Disbursed 3/1/25 – 5/31/25 | Total Disbursed |
|---|---|---|---|---|---|
| CSUCI | 27.5 | $23,000,000 | $5,862,493 | $706,190 | $6,568,683 |
| AES - Alamitos | 1,141.2 | $528,616,081 | $192,901,708 | $30,907,515 | $223,809,223 |
| AES - Huntington Beach | 226.8 | $105,799,596 | $46,526,730 | $6,090,654 | $52,617,384 |
| GenOn – Ormond Beach | 1,491.3 | $558,011,387 | $175,376,406 | $40,211,984 | $215,588,390 |
| PG&E* | - | $75,000,000 | $52,488,868 | $0 | $52,488,868 |
| **Total** | **2,886.8** | **$1,290,427,064** | **$473,156,205** | **$77,916,343** | **$551,072,548** |

*Capacity for PG&E's contract is not considered part of the ESSRRP portfolio.

### California State University Channel Islands

In 2020, California State University Channel Islands (CSUCI) submitted a retirement notice to the CAISO but was ultimately retained by the CAISO to address local reliability needs.[10] Later in August 2022, the CAISO noted that the unit was no longer needed for local electric reliability.[11] Under the authority provided by Water Code Section 80710, subdivision (b)(1)(A), DWR entered into an agreement with CSUCI to ensure the facility remained online from January 1, 2023, through 2027 to retain 27.5 MW under the ESSRRP portfolio.

### AES Alamitos, AES Huntington Beach, and GenOn

On September 30, 2022, the Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS) recommended to the State Water Resources Control Board (SWRCB) to extend the compliance date of a number of once-through cooling (OTC) natural gas fueled electric generation facilities from December 31, 2023 to December 31, 2026 in order to include these facilities in

[10] Millar, Neil. California Independent System Operator. (2020, March 18). *Decision on reliability must-run designations for Greenleaf II Cogen, Channel Islands Power and E.F. Oxnard Incorporated.* https://www.caiso.com/Documents/Decision-ReliabilityMust-RunDesignations-Memo-Mar2020.pdf.

[11] Millar, Neil. California Independent System Operator. (2022, August 24). *Decision on conditional approval to extend existing reliability must-run contracts for 2023.* http://www.caiso.com/Documents/DecisiononConditionalApprovaltoExtendReliabilityMust-RunContracts-Memo-Aug2022.pdf.

the ESSRRP portfolio.[12] Without SWRCB action, these resources with a combined capacity of 2,859.3 MW[13] would have retired by December 31, 2023 in order to comply with OTC policy.[14] The SACCWIS, which includes the CAISO, CEC, and CPUC, recommended compliance extension for the following units: Alamitos Units 3, 4, and 5 (1,141.2 MW), Huntington Beach Unit 2 (226.8 MW), and Ormond Beach Units 1 and 2 (1,491.3 MW). The SACCWIS explained that "[e]nabling DWR to contract with existing resources will allow the state to address [electric grid] reliability concerns and populate the Strategic [Reliability] Reserve more expeditiously and with more certainty while it works to secure additional resources."[15] Furthermore, the CAISO, CEC, and CPUC clarified that resources would not be considered resource adequacy resources since that "would lead to increased use of once through cooling as well as increased air emissions, which AB 205 seeks to limit."[16] Instead, the OTC "resources will only be called upon to support grid operations during extreme events (including any maintenance or test events recommended by and coordinated with the CAISO)."[17] Otherwise, these resources will remain offline. The SWRCB unanimously voted to extend the OTC compliance period to December 31, 2026, at its August 15, 2023, Board meeting.[18] DWR executed separate

---

[12] Statewide Advisory Committee on Cooling Water Intake Structures. (2022, September 30). 2022 Special Report of the Statewide Advisory Committee on Cooling Water Intake Structures. https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/saccwis/docs/20221108-final-report.pdf and Tesfai, Leuwam, et al. "Use of the Once-Through Cooling Power Plants in the Strategic Reserve." www.caiso.com, 30 Nov. 2022, http://www.caiso.com/Documents/Nov30-2022-JointLetter-CaliforniaStateWaterResourcesControlBoard-Use-Once-ThroughCoolingPowerPlants-StrategicReserve.pdf.

[13] Based on net qualifying capacity as determined by the CAISO.

[14] California State Water Resources Control Board. (2021, October 10). Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling. https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/otc_policy_2021/otc_policy.pdf.

[15] Statewide Advisory Committee on Cooling Water Intake Structures. (2022, September 30). 2022 Special Report of the Statewide Advisory Committee on Cooling Water Intake Structures, pg. 15. https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/saccwis/docs/20221108-final-report.pdf

[16] *Tesfai, Leuwam, et al. "Use of the Once-Through Cooling Power Plants in the Strategic Reserve." www.caiso.com, 30 Nov. 2022, http://www.caiso.com/Documents/Nov30-2022-JointLetter-CaliforniaStateWaterResourcesControlBoard-Use-Once-ThroughCoolingPowerPlants-StrategicReserve.pdf.*

[17] *Ibid*.

[18] State Water Resources Control Board Resolution No. 2023-0025, Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling to Revise Compliance Schedules for Alamitos, Huntington Beach, Ormond Beach, and Scattergood Generating Stations, and Diablo Canyon Nuclear Power Plant, August 13, 2023.

agreements with AES Alamitos LLC, AES Huntington Beach LLC, and Ormond Beach Power, LLC (GenOn). The term of all three contracts is from January 1, 2024, through December 31, 2026. SWEO staff collaborated with the CPUC, CEC, and CAISO staff to negotiate the agreements which added the OTC facilities to the ESSRRP portfolio to support electric grid reliability during extreme events. These assets provide 2,859.3 MW to support California's electric grid reliability as California is taking action to accelerate the deployment of clean energy resources. Costs incurred for AES Alamitos, AES Huntington Beach, and GenOn Ormond Beach during the reporting period largely reflect capacity payments for each unit's availability, which began January 1, 2024.

**Pacific Gas & Electric**

The last agreement listed in Table 6 is with PG&E, the owner and operator of the Diablo Canyon Power Plant (DCPP), which had been scheduled for decommissioning on November 2, 2024 (Unit 1) and August 26, 2025 (Unit 2). DWR's agreement with PG&E allows for the procurement of fuel purchases, spent fuel management, and other costs necessary to maintain the option of extending operations for DCPP. This agreement was executed pursuant to AB 205 (Committee on Budget, Chapter 61, Statutes of 2022). Subsequently, in September 2022, Senate Bill (SB) 846 (Dodd, Chapter 239, Statutes of 2022) was signed into law to preserve the option of continued operations at DCPP to improve statewide electric reliability and reduce greenhouse gas (GHG) emissions while additional renewable and zero-carbon resources are built. DCPP supplies approximately 17 percent of California's zero-carbon electricity supply and 8.6 percent of California's total electricity supply. SB 846 found that actions to extend DCPP's operations for a renewed license term are prudent, cost effective, and in the best interests of all California electricity customers. SB 846 established the Diablo Canyon Extension Fund overseen by DWR, as well as milestones and criteria for PG&E and various state agencies to extend the operating life of DCPP for another five years to no later than October 31, 2030. DWR's agreement with PG&E under AB 205 is funded by the General Fund and is separate from the loan agreement pursuant to SB 846 funded by the Diablo Canyon Extension Fund.

https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2023/rs2023-0025.pdf.

Pursuant to SB 846, the SWRCB unanimously voted to revise the OTC compliance date for DCPP to October 31, 2030, at its August 15, 2023, Board meeting.[19] On November 7, 2023, PG&E filed a License Renewal Application (LRA) with the United States Nuclear Regulatory Commission (NRC), which the NRC deemed sufficient on December 19, 2023.[20] This means that DCPP may continue to operate, even beyond its current licensed end dates, while the NRC reviews PG&E's LRA. In parallel, the CPUC voted to conditionally extend DCPP operations until October 31, 2029 (Unit 1) and October 31, 2030 (Unit 2).[21] As part of the LRA process, the NRC issued its safety evaluation report in June 2025 concluding that DCPP had met its safety requirements.[22] Also in June 2025, the NRC issued a completed Supplemental Environmental Impact Statement for DCPP.[23] The next milestone in the LRA process is the final decision from the NRC's Director for Nuclear Reactor Regulation,[24] which will come after completion of the following license renewal requirements and associated processes:

[19] State Water Resources Control Board Resolution No. 2023-0025, Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling to Revise Compliance Schedules for Alamitos, Huntington Beach, Ormond Beach, and Scattergood Generating Stations, and Diablo Canyon Nuclear Power Plant, August 13, 2023. https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2023/rs2023-0025.pdf.

[20] Federal Register / Vol. 88, No. 242 / Tuesday, December 19, 2023 / Notices page 87817 to 87819. https://www.govinfo.gov/content/pkg/FR-2023-12-19/pdf/2023-27856.pdf

[21] California Public Utilities Commission, Decision Conditionally Approving Extended Operations at Diablo Canyon Nuclear Power Plant Pursuant to Senate Bill 846, Rulemaking 23-01-007, Decision 23-12-036, December 14, 2023, https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M521/K496/521496276.PDF (accessed on January 17, 2024).

[22] Office of Nuclear Reactor Regulation, Nuclear Regulatory Commission, *Safety Evaluation Related to the License Renewal of Diablo Canyon Nuclear Power Plant, Units 1 and 2*, Docket Nos. 50-275 and 50-323, June 2025, https://www.nrc.gov/docs/ML2515/ML25153A508.pdf (accessed August 1, 2025).

[23] Office of Nuclear Material Safety and Safeguards, Nuclear Regulatory Commission, *Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 62, Regarding License Renewal of Diablo Canyon Nuclear Power Plant, Units 1 and 2, Final Report*, June 2025, https://www.nrc.gov/docs/ML2515/ML25156A357.pdf (accessed on August 1, 2025).

[24] NRC has updated Diablo Canyon's License Renewal Application review schedule, and it no longer includes the Advisory Committee on Reactor Safety (ACRS) review as a milestone prior to the Director's final decision on the LRA. Diablo Canyon's Current License Renewal Review Schedule in available at: https://www.nrc.gov/reactors/operating/licensing/renewal/applications/diablo-canyon.html#plrrs (accessed on August 13, 2025).

1) California Coastal Commission's issuance of its Coastal Zone Management Act Federal Consistency determination; and

2) Central Coast Regional Water Quality Control Board's issuance of a Clean Water Act Section 401 Certification and a National Pollutant Discharge Elimination System Permit to support the 401 Certification.

Table 6 above shows costs incurred by PG&E pursuant to AB 205 to support DCPP license renewal, including the purchase of nuclear fuel.

### A. Extended Operations of Retiring Facilities Emissions

Emissions data includes greenhouse gas (GHG) emissions, criteria pollutants, and toxic air contaminants. SWEO staff collect data from the United States Environmental Protection Agency (US EPA) Emissions Collections and Monitoring Plan System (ECMPS) and local air district reports, in consultation with CARB, for each site. Reporting timeframes vary by data set and source. SWEO staff collects emissions data annually for the previous calendar year.

During calendar year 2024, four generating facilities had reportable emissions. GHG emissions reported include carbon dioxide ($CO_2$), methane ($CH_4$), and nitrous oxide ($N_2O$). Criteria pollutants reported include carbon monoxide (CO), nitrogen oxides ($NO_x$), sulfur oxides ($SO_x$), particulate matter ($PM_{10}$ and $PM_{2.5}$), and volatile organic compounds (VOCs) and reactive organic compounds (ROCs). There are no reportable toxic air contaminants. Table 7 below reports emissions and operating times for CSUCI, AES Alamitos, AES Huntington Beach, and GenOn Ormond Beach for 2024. "Not Measured" indicates that the local air district did not require reporting of the specific emission.

***Table 7: Extended Operations of Retiring Facilities Emissions for Calendar Year 2024***

| Emissions | CSUCI Mass (Short Tons) | AES - Alamitos Mass (Short Tons) | AES - Huntington Beach Mass (Short Tons) | GenOn - Ormond Beach Mass (Short Tons) |
|---|---|---|---|---|
| $CO_2$ | 1,194.31 | 32,686.80 | 4,371.76 | 40,411.00 |
| $CH_4$ | 0.02 | 15.15 | 2.03 | 0.75 |
| $N_2O$ | 0.00 | 18.06 | 2.42 | 0.08 |
| CO | 0.52 | 63.10 | 14.10 | 27.60 |
| NOx | 0.21 | 2.50 | 1.50 | 4.40 |
| SOx | 0.01 | 0.20 | 0.02 | 0.20 |
| $PM_{10}$ | 0.06 | 2.10 | 0.27 | 2.49 |
| $PM_{2.5}$ | Not Measured | 2.10 | 0.27 | Not Measured |
| VOC/ROC | 0.14 | 1.50 | 0.20 | 0.75 |
| **Total Operating Time (hours)** | 86.95 | 648.00 | 169.00 | 1,633.33 |

As described in the December 1, 2024, *Electricity Supply Reliability Reserve Fund Progress Report*, long-start resources such as the OTC resources were only called upon by the CAISO in summer 2024 to address extreme heat exacerbated by wildfires on three occasions. These operating hours are in addition to required testing and maintenance. Table 8 below reproduces data from the 2025 SACCWIS report,[25] which shows that overall capacity factors for each of the OTC resources have significantly declined in 2024 under the ESSRRP compared to prior years when the resources were under the CPUC's Resource Adequacy Program.

[25] Statewide Advisory Committee on Cooling Water Intake Structures. (2025, March 21). Final 2025 Report of the Statewide Advisory Committee on Cooling Water Intake Structures, pg. 10, Table 3: Recent Performance of OTC Gas-Fired Generating Units. https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/saccwis/docs/2025/final-report.pdf

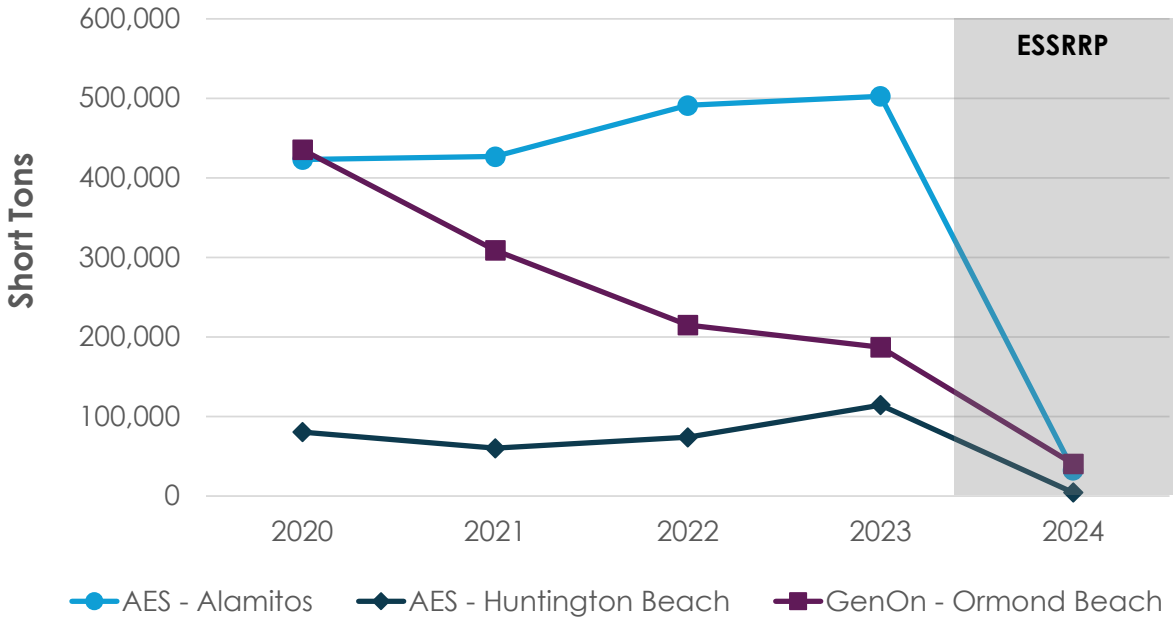
**Table 8: Recent OTC Resource Capacity Factors**

| | Actual Capacity Factors (Percent) | | | | | | |
|---|---|---|---|---|---|---|---|
| **Facilities and Units** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** | **2024 (Jan-Sept)** |
| AES Alamitos 3 | 10.13 | 5.58 | 6.46 | 5.58 | 9.37 | 8.56 | 0.49 |
| AES Alamitos 4 | 9.60 | 5.59 | 4.50 | 6.37 | 8.96 | 7.46 | 0.32 |
| AES Alamitos 5 | 2.93 | 1.24 | 5.42 | 4.63 | 2.55 | 3.34 | 0.33 |
| AES Huntington Beach 2 | 6.99 | 4.12 | 5.69 | 4.46 | 5.64 | 8.89 | 0.40 |
| GenOn Ormond Beach 1 | 1.31 | 0.55 | 4.98 | 2.00 | 1.44 | 0.98 | 0.37 |
| GenOn Ormond Beach 2 | 1.28 | 1.63 | 5.26 | 4.04 | 2.86 | 2.65 | 0.36 |

Source: California Energy Commission, Quarterly Fuel and Energy Report.

Similarly, OTC emissions are lower under the ESSRRP versus the Resource Adequacy Program. As an example, Table 9 below shows the steep decline in carbon dioxide ($CO_2$) emissions from 2020 through 2024.

**Table 9: Recent OTC Carbon Dioxide Emissions (Short Tons)**




There are no GHG emissions or pollutant data for DCPP because it is a nuclear power plant.