

**AMENDMENT TO THE WATER QUALITY CONTROL POLICY
ON THE USE OF COASTAL AND ESTUARINE WATERS
FOR POWER PLANT COOLING**

**TO REVISE THE COMPLIANCE SCHEDULES
FOR THE ALAMITOS, HUNTINGTON BEACH, ORMOND
BEACH, AND SCATTERGOOD GENERATING STATIONS AND
DIABLO CANYON NUCLEAR POWER PLANT**

DRAFT STAFF REPORT

**State Water Resources Control Board
January 31, 2023**



State of California
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California Environmental Protection Agency
Yana Garcia, Secretary

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Abbreviations and Acronyms

Abbreviation or Acronym	Full Name or Phrase
1-in-10 LOLE	1-in-10 Loss-of-Load Event
2022 SACCWIS Report	Final 2022 Report of the SACCWIS
303(d) List	303(d) List of Water Quality Limited Segments
AAFS	Additional Achievable Fuel Substitution
AB	Assembly Bill
AES	AES-Southland, Inc.
Alamitos	Alamitos Generating Station
BAA	Balancing Authority Area
BARCT	Best Available Retrofit Control Technology
CAISO	California Independent System Operator
CARB	California Air Resources Board
CCGT	Combined-Cycle Gas Turbine
CDP	Coastal Development Permit
CEC	California Energy Commission
CEQA	California Environmental Quality Act
Coastal Commission	California Coastal Commission
COVID-19	Coronavirus Disease 2019
CPUC	California Public Utilities Commission
CWA	Clean Water Act
DACs	Disadvantaged Communities

DDT	Dichlorodiphenyltrichloroethane
Diablo Canyon	Diablo Canyon Nuclear Power Plant
DOC	Department of Commerce
DWR	Department of Water Resources
Energy Agencies	California Public Utilities Commission, California Independent System Operator, and California Energy Commission
GenOn	GenOn Holdings, Inc.
GHG	Greenhouse Gas
Huntington Beach	Huntington Beach Generating Station
IEPR	Integrated Energy Policy Report
kV	Kilovolts
LA100 Study	Los Angeles 100 Percent Renewable Energy Study
LADWP	Los Angeles Department of Water and Power
LCR	Local Capacity Resource
LCT Study	2024 Local Capacity Technical Study
LCTR	Local Capacity Technical Report
Local Air District	Local Air Quality Management and Air Pollution Control Districts
MGD	Million Gallons per Day
MW	Megawatts
NERC	North American Electric Reliability Corporation
NOV	Notice of Violation
NOx	Oxides of Nitrogen

NPDES	National Pollutant Discharge Elimination System
NTC	Notice to Comply
OEHHA	Office of Environmental Health Hazard Assessment
Order	Waste Discharge Requirements and NPDES Permit
Ormond Beach	Ormond Beach Generating Station
Ormond Beach Power	Ormond Beach Power, LLC
OTC	Once-Through Cooling
OTC Policy	Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling
PCBs	Polychlorinated biphenyls
RECLAIM	Regional Clean Air Incentives Market
Regional Water Board	Regional Water Quality Control Board
SACCWIS	Statewide Advisory Committee on Cooling Water Intake Structures
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
Scattergood	Scattergood Generating Station
2010 Final SED	2010 Final Substitute Environmental Documentation
SIP	State Water Resources Control Board's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California

Special 2022 SACCWIS Report	Final 2022 Special Report of the Statewide Advisory Committee on Cooling Water Intake Structures
State Water Board	State Water Resources Control Board
Strategic Reserve	Electricity Supply Strategic Reliability Reserve Program
TMDL	Total Maximum Daily Load
TSO	Time Schedule Order
U.S. EPA	United States Environmental Protection Agency
VCAPCD	Ventura County Air Pollution Control District
WECC	Western Electricity Coordinating Council
ZID	Zone of Initial Dilution

1. Executive Summary

The State Water Resources Control Board (State Water Board) is considering an amendment to the statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling or OTC Policy) to extend the compliance date for Alamitos Generating Station Units 3, 4, and 5 (Alamitos); Huntington Beach Generating Station Unit 2 (Huntington Beach); Ormond Beach Generating Station Units 1 and 2 (Ormond Beach) for three years, from December 31, 2023, to December 31, 2026; and Scattergood Generating Station Units 1 and 2 (Scattergood) for five years from December 31, 2024, to December 31, 2029.

The OTC Policy establishes uniform, technology-based standards to implement federal Clean Water Act (CWA) section 316(b) and reduces the harmful effects associated with cooling water intake structures on marine and estuarine life. The State Water Board adopted the OTC Policy on May 4, 2010, under Resolution Number (No.) 2010-0020, and the Office of Administrative Law issued its approval on September 27, 2010. The OTC Policy became effective on October 1, 2010, and was amended in 2012, 2014, 2016, 2017, 2020, and 2021.

Originally, nineteen power plants located along the California coast withdrawing coastal and estuarine waters for cooling purposes using a single-pass system known as once-through cooling (OTC) were required to comply with the OTC Policy. Cooling water withdrawals cause adverse impacts when larger aquatic organisms, such as fish and mammals, are trapped against a facility's intake screens (impingement) and when smaller marine life, such as larvae and eggs, are killed by being drawn through the cooling system and exposed to high pressures and temperatures (entrainment).

Ten of the original nineteen power plants have permanently retired since adoption of the OTC Policy, and one power plant complied with Track 2 of the OTC Policy. Track 2 requires reducing impacts to marine life comparably to Track 1 by other means, such as by implementing control technology or mechanical upgrades. The eight remaining power plants are scheduled to comply by specific compliance dates within the next decade, as presented in Table 1 of the OTC Policy.

The joint-agency Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS) was created to advise the State Water Board on the implementation of the OTC Policy, ensuring the compliance schedule considers the reliability of California's electricity supply, including local area reliability, statewide grid reliability, and permitting constraints. The SACCWIS includes representatives from the California Energy Commission (CEC), California Public Utilities Commission (CPUC), California Coastal Commission (Coastal Commission), California State Lands Commission, California Air Resources Board (CARB), California Independent System Operator (CAISO), and State Water Board.

The OTC Policy includes compliance dates for the nineteen power plants based on the planning and electricity procurement processes of the CEC, CAISO, and CPUC. These compliance dates were scheduled with orderly retirements and planned replacement of capacity aimed at maintaining local and system-wide electrical grid reliability in the State of California. The SACCWIS meets at least annually to review grid reliability studies from CAISO and the Los Angeles Department of Water and Power (LADWP) and receive status updates on compliance from coastal power plants.

At the March 14, 2022 annual SACCWIS meeting, the committee members did not recommend any changes to the compliance schedules in the OTC Policy. Since the Final 2022 Report of the SACCWIS (2022 SACCWIS Report) was approved, the CEC, CPUC, and CAISO (collectively as the "energy agencies") conducted a new reliability analysis that considered impacts from several compounding events, including extreme weather events, supply chain constraints, interconnection and permitting concerns, and climate change updates in the electricity demand forecast. The analysis also considered the potential for coincidental events that could further adversely impact system-wide reliability, such as a simultaneously occurring extreme heat wave, drought, and wildfire affecting transmission capacity. The resulting conclusions of this analysis identified a projected shortfall as high as 10,000 megawatts (MW) in summer 2025, and a need for resource capacity beyond existing required planning criteria used to support the conclusions in the 2022 SACCWIS Report. The energy agencies presented these issues at a CEC workshop on May 20, 2022, and discussed potential options to address

the risk to grid reliability during coincidental extreme events, including separate capacity resources available for emergency contingency use.

In recognizing these issues, the State Legislature subsequently adopted, and the Governor signed, Assembly Bill 205 (Assem. Bill No. 205 (2021-2022 Reg. Sess.)) (AB 205), which created a state-wide Electricity Supply Strategic Reliability Reserve Program (Strategic Reserve) to bolster system reliability while California procures clean energy resources, including extending the operations of power plants currently scheduled for retirement. In response to projected shortfalls, the Strategic Reserve acknowledges that existing generation assets, such as OTC power plants planned for retirement, will be required to maintain reliability during extreme or simultaneously occurring extreme events as California transitions to a clean energy economy.

The SACCWIS reconvened on September 30, 2022, to discuss these recent issues. The SACCWIS unanimously recommended the compliance date extensions of Alamitos, Huntington Beach, and Ormond Beach. On November 30, 2022, the energy agencies provided a joint letter to the State Water Board to clarify that their OTC Policy compliance date extension recommendation is contingent upon Alamitos, Huntington Beach, and Ormond Beach participating in the Strategic Reserve and not serving as Resource Adequacy resources. By participating in the Strategic Reserve, the power plants would only be called upon to support grid operations during extreme events. This would limit use of once-through cooling and air emissions. If the power plants served as Resource Adequacy resources, they would have an obligation to provide power to the market on a consistent basis.

At the September 30, 2022 meeting, the majority of SACCWIS members also supported the LADWP's February 4, 2022 request to extend Scattergood's OTC Policy compliance date to December 31, 2029, to support local reliability while new transmission and generation infrastructure projects are underway. LADWP states that these infrastructure projects will eventually provide clean energy to the LADWP Balancing Authority Area (BAA) in response to the Los Angeles' Green New Deal, which requires 100 percent zero-carbon energy in the LADWP BAA by 2045. The CARB requested

additional time to evaluate the LADWP's request for Scattergood's extension and abstained from voting on this item at the September 30, 2022 SACCWIS meeting.

Section 2.C(3) of the OTC Policy includes a provision that owners and operators of existing power plants must implement measures to mitigate the interim impingement and entrainment impacts resulting from the use of cooling water intakes starting October 1, 2015, and continuing until final compliance. Accordingly, the continued use of OTC waters by Alamitos, Huntington Beach, Ormond Beach, and Scattergood will be subject to continued interim mitigation requirements as detailed in Resolution No. 2015-0057 until the power plants come into final compliance. Further, total statewide OTC daily flow rates are expected to be at or below current levels should the facilities' compliance dates be extended, as operations are likely to be reduced due to participation in the Strategic Reserve.

Extending the operation of Alamitos, Huntington Beach, Ormond Beach, and Scattergood will extend existing air, noise, and aesthetic impacts. However, these impacts are expected to remain at or less than the baseline conditions established in the May 4, 2010 Final Substitute Environmental Documentation (2010 Final SED). Additionally, these four generating stations are located in unceded territories of California Tribes identified with the Native American Heritage Commission, disadvantaged communities as defined by CalEnviroScreen 4.0, or both. Per Assembly Bill 2108 (Assem. Bill No. 2108 (2021-2022 Reg. Sess.)) (AB 2108), the State Water Board will engage in appropriate outreach concerning proposed ongoing operation of OTC intakes by the OTC facilities addressed by the proposed amendment. The State Water Board also considered the environmental justice concerns associated with the proposed amendment and the anticipated adverse water quality impacts of impingement and entrainment of marine life resulting from the continued use of OTC intakes and the water quality impacts from continued discharge operations of the OTC facilities under their National Pollution Discharge Elimination System (NPDES) permits as described in this Staff Report at Section 5.6 and Section 8.2.

This amendment also includes administrative changes to the implementation provisions and schedule in the OTC Policy. The first of these changes would revise the compliance dates for Diablo Canyon Nuclear Power Plant (Diablo Canyon) Units 1 and 2 to October 31, 2030, in Table 1 of the OTC Policy. This is a change without regulatory effect to ensure the OTC Policy is consistent with the compliance date that was already extended by Senate Bill 846 (Sen. Bill No. 846 (2021-2022 Sess.)) (SB 846), which was signed into law by Governor Newsom on September 2, 2022, to support statewide grid reliability. Additionally, this amendment includes revisions to Section 3.B(4) and Section 3.E, Table 1 of the OTC Policy to specify that the SACCWIS will report to the State Water Board on the status of OTC Policy implementation at least through 2026, to match the compliance dates of fossil-fueled power plants in the CAISO's BAA.

2. Regulatory Background

2.1. Regulatory Background and Authority

In 1972, Congress enacted the CWA to restore and maintain the chemical, physical, and biological integrity of the nation's waters. CWA section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impacts.

In 2001, the U.S. Environmental Protection Agency (U.S. EPA) adopted regulations for new power plants (Phase I) that established a performance standard for cooling water intakes based on closed-cycle wet cooling. In 2004, U.S. EPA published the Phase II rule applicable to existing power plants with a design intake flow greater than or equal to 50 million gallons per day (MGD), which was remanded following legal challenge. In May 2014, U.S. EPA finalized regulations covering existing facilities that withdraw at least 2 MGD of cooling water. Under these regulations, facilities select from options designed to reduce impingement to meet best technology available requirements. Facilities that withdraw at least 125 MGD are required to conduct studies to investigate site-specific controls to reduce entrainment impacts. New units added to existing facilities are subject to similar requirements established for new facilities. The new

regulation was published in the Federal Register on August 15, 2014, and became effective on October 14, 2014 (U.S. EPA, 2014).

The State Water Board is designated as the state water pollution control agency for all purposes under the CWA. The State of California's Porter-Cologne Water Quality Control Act of 1969 authorizes the State Water Board to adopt statewide water quality control plans and policies. The OTC Policy, adopted by the State Water Board on May 4, 2010, under Resolution No. 2010-0020, established requirements for the implementation of CWA section 316(b) for existing coastal power plants in California, using best professional judgment in determining best technology available for cooling water intake structures. The best technology available was determined to be closed-cycle wet cooling, or equivalent. The OTC Policy is implemented through NPDES permits, issued pursuant to CWA section 402, which authorize the point source discharge of pollutants to navigable waters. The OTC Policy initially assigned the State Water Board as the entity responsible for issuing or modifying NPDES permits for power plants subject to the Policy. A subsequent OTC Policy amendment adopted pursuant to State Water Board Resolution No. 2013-0018 returned responsibility for these NPDES permits to the power plant's corresponding Regional Water Quality Control Board (Regional Water Board).

All facilities subject to the OTC Policy are required to comply with applicable regulatory requirements that are designed to minimize environmental impacts and protect human health, including all state and local permits. If the compliance dates of Alamitos, Huntington Beach, Ormond Beach, and Scattergood are extended, those facilities would continue to be regulated by applicable air and water quality permits, and therefore continue to comply with requirements imposed to minimize environmental impacts and protect human health.

Because the OTC Policy requirements are equivalent to, if not more stringent than those contained in applicable U.S. EPA regulations, OTC Policy requirements continue to govern the existing coastal power plants in California. The U.S. EPA rule explicitly

states that it is within the states' authority to implement requirements that are more stringent than the federal requirements.

2.2. Role of the Statewide Advisory Committee on Cooling Water Intake Structures

Before and during the development of the OTC Policy, the State Water Board consulted with the energy agencies to build a feasible compliance schedule for the facilities under the OTC Policy to come into compliance with minimal impacts to the electric grid, based on the planning and electricity procurement processes of the state's energy agencies. These compliance dates were scheduled with orderly retirements and planned replacement of capacity aimed at maintaining local and system-wide electrical grid reliability in the State of California.

The compliance dates for the OTC Policy were originally developed based on a report produced by the energy agencies, titled *Implementation of OTC Mitigation Through Energy Infrastructure Planning and Procurement Changes*, and the accompanying table, titled *Draft Infrastructure Replacement Milestones and Compliance Dates for Existing Power Plants in California Using Once Through Cooling*, as cited in the 2010 Final SED. The state's energy agencies designed the compliance dates to maintain reliability of the electric system and stated that the dates specified in their original report may require periodic updates.

Section 1.1 of the OTC Policy describes the SACCWIS' role. Since energy regulation is outside of the expertise and authority of the State Water Board, the SACCWIS was created to advise the State Water Board on the ongoing implementation of the OTC Policy to ensure that the implementation schedule would be revised as appropriate to consider the reliability of California's electricity supply, including local area reliability, statewide grid reliability, and permitting constraints. The SACCWIS meets at least annually to review grid reliability studies from the CAISO and the LADWP, and to receive status updates on compliance from OTC power plant operators. The SACCWIS provides recommendations to the State Water Board if compliance schedule changes are needed to ensure the essential electrical power needs of the state are met. The SACCWIS includes representatives from the CEC, the CPUC, the Coastal Commission,

the California State Lands Commission, the CARB, the CAISO, and the State Water Board.

Furthermore, each of the state's energy agencies that are part of the SACCWIS play a distinct role: the CPUC considers procurement authorizations for its jurisdictional load-serving entities and conducts system-wide reliability analyses; the CAISO conducts reliability analyses and examines infrastructure upgrades and additions in its transmission planning process; and the CEC evaluates and, when necessary, issues licenses to site new electric generation resources.

The SACCWIS' Memorandum of Agreement, which sets forth principles, procedures, and agreements to which the signatory agencies of the SACCWIS commit themselves, states that the agencies and entities comprising the SACCWIS shall commit to working cooperatively towards fulfilling the obligations of the SACCWIS as described in the OTC Policy. The Memorandum of Agreement also states that it does not limit the rights or authority of any agency or entity participating in the SACCWIS.

2.3. Requirements When Amending the OTC Policy

The State Water Board must comply with all applicable state and federal public participation requirements and state laws governing environmental and peer review when amending a state policy for water quality control. The proposed OTC Policy amendment does not require peer review or a new California Environmental Quality Act (CEQA) analysis, as set forth more fully below and in Section 8 of this Staff Report.

To the extent that any approval constitutes a project within the meaning of CEQA, the State Water Board is the lead agency and is responsible for preparing any required environmental documentation for the amendment. The California Secretary of Resources has certified the State Water Board's water quality planning process as exempt from certain CEQA requirements when adopting plans, policies, and guidelines, including preparation of an initial study, negative declaration, and environmental impact report. CEQA imposes specific obligations on the State Water Board when it establishes performance standards. Public Resources Code Section 21159 requires that an environmental analysis of the reasonably foreseeable methods of compliance be

conducted. The environmental analysis must address the reasonably foreseeable environmental impacts of the methods of compliance, reasonably foreseeable alternatives, and mitigation measures.

This amendment does not constitute a project within the meaning of CEQA because it continues the status quo and does not result in any direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment beyond what was considered in the 2010 Final SED adopted concurrently with the original OTC Policy. State Water Board regulations associated with CEQA do not apply when the State Water Board determines that the activity is not subject to CEQA (Title 23, California Code of Regulations, § 3720, subd. (b)). While the amendment does not constitute a project within the meaning of CEQA, an addendum to the 2010 Final SED is included in Section 8 of this Staff Report to provide additional information about the amendment.

Health and Safety Code Section 57004 requires external scientific peer review of the scientific basis for any rule proposed by any board, office, or department within the California Environmental Protection Agency. Because this amendment does not establish a new regulatory level, standard, or other requirement based on scientific findings, conclusions, or assumptions, peer review requirements do not apply.

3. Project Description

The State Water Board is considering an amendment to the OTC Policy to extend the compliance date of Alamitos Units 3, 4, and 5; Huntington Beach Unit 2; and Ormond Beach Units 1 and 2 for three years from December 31, 2023, to December 31, 2026, to address system-wide grid reliability concerns. The State Water Board is also considering an amendment to extend the compliance date for Scattergood Units 1 and 2 for five years from December 31, 2024, through December 31, 2029, to address local grid reliability concerns. This is based upon the SACCWIS' analysis of alternatives and recommendations included in the 2022 Special Report of the SACCWIS (Special 2022 SACCWIS Report) approved on September 30, 2022, and upon the rationale and

considerations described in this Staff Report. If adopted, these changes would be reflected in Section 3.E, Table 1 of the OTC Policy.

Additionally, the State Water Board is considering administrative changes to the OTC Policy. This includes a change without regulatory effect to revise the compliance dates for Diablo Canyon Units 1 and 2 to October 31, 2030, which will ensure the OTC Policy is consistent with the compliance date that was already extended by SB 846. This also includes revisions to specify that the SACCWIS will report to the State Water Board on the status of OTC Policy implementation at least through 2026, to match the compliance dates of fossil-fueled power plants in the CAISO's BAA. If adopted, these changes would be reflected in Section 3.B(4) and Section 3.E, Table 1 of the OTC Policy.

4. Environmental Setting

Section 2.1 of the 2010 Final SED describes the environmental settings of regions with existing OTC power plants. Alamitos, Ormond Beach, and Scattergood fall within the jurisdiction of the Los Angeles Regional Water Board. Huntington Beach falls within the jurisdiction of the Santa Ana Regional Water Board. Alamitos and Scattergood are located in Los Angeles County, Huntington Beach is located in Orange County, and Ormond Beach is located in Ventura County.

5. Rationale and Considerations for Grid Reliability Compliance Date Extensions

5.1. Grid Reliability

5.1.1. California Independent System Operator Balancing Authority Area

The CAISO BAA covers approximately 80 percent of California, and it includes all of the state's investor-owned utilities and some municipal utility service areas. The CAISO is the largest of the balancing authorities comprising the western interconnection electrical grid.

5.1.1.1 Events and Conditions Leading to the Proposed Amendment

Updated Reliability Analysis

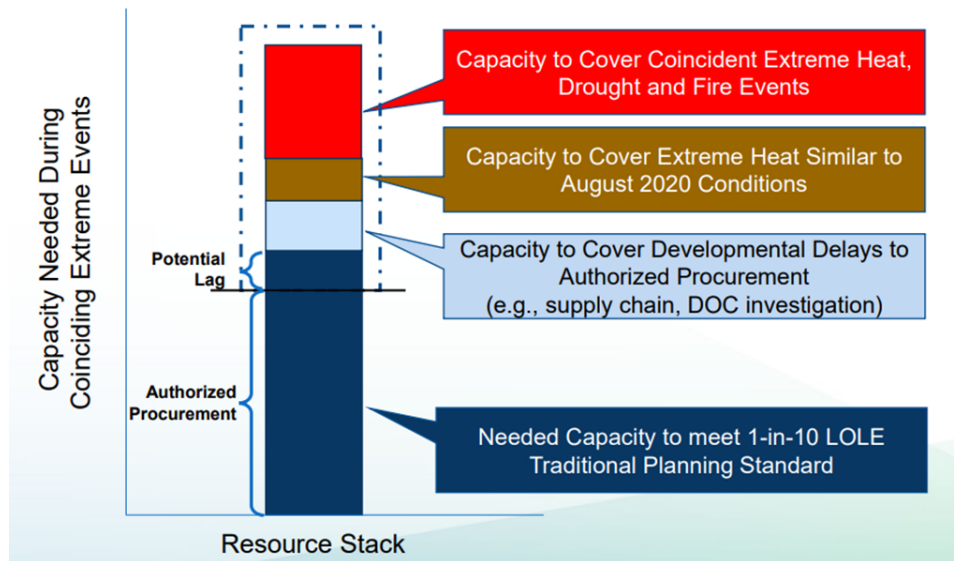
On March 14, 2022, the SACCCWIS voted on and approved the 2022 SACCCWIS Report. The SACCCWIS recommended no changes to the compliance dates in the OTC Policy, but noted that the SACCCWIS would continue to closely monitor grid reliability needs throughout the state and would reconvene if necessary.

Following the release of the 2022 SACCCWIS Report, the CEC, CPUC, and CAISO conducted a new reliability analysis that considered impacts from several compounding events, including extreme weather events, supply chain constraints, interconnection and permitting concerns, and climate change updates in the electricity demand forecast. The analysis also considered the potential for coincidental events that could further adversely impact system-wide reliability, such as a simultaneously occurring extreme heat wave, drought, and wildfire affecting transmission capacity.

Categories of Capacity Needs in Summer 2022 and 2025

The CEC hosted a public workshop on May 20, 2022, to present an updated analysis of grid reliability performed by the energy agencies. The updated analysis focused on summer 2022 and 2025 and identified four broad categories of capacity needs during coinciding extreme events. These are illustrated in Figure 1 below.

Figure 1: Reliability Impacts and Capacity Needs



Source: Erne, David, *CEC Staff Workshop on Summer and Midterm Reliability*, Docket 21-ESR-01, May 20, 2022, “Reliability Workshop Overview,” slide 4.

The first category capacity resources needed are those resources needed to meet traditional grid reliability planning (shown in dark blue in Figure 1). These are based on evaluating the supply necessary to meet demand such that the system is not likely to have more than one outage event in ten years, also referred to as a 1-in-10 loss of load expectation (LOLE). Both supply and demand side issues can affect the quantity of resources needed to meet the 1-in-10 LOLE standard. This first category reflects the analysis used to support the conclusions in the 2022 SACCWIS Report approved by the SACCWIS in March 2022 and is based on the demand forecast completed by the energy agencies in 2021.

The CEC’s demand forecast update released in January 2022 projected a greater demand through 2026 than was anticipated in the 2021 demand forecast, in part because the forecast was improved to incorporate additional potential climate change impacts on demand. Consequently, there is a potential lag or need for additional capacity to meet the 1-in-10 LOLE. This capacity need is represented by the top portion of the dark blue bar above the black line illustrated in Figure 1.

The second category (shown in light blue in Figure 1) is the capacity resources needed to cover delays in the development of previously authorized procurement of new generation and storage resources. California is procuring unprecedented quantities of clean energy resources, as described in Section 6 of the Special 2022 SACCWIS Report. However, many load serving entities and project developers are facing a series of issues that are leading to project delays or the potential for project cancellations.

Supply chain related disruptions, many associated with coronavirus disease 2019 (COVID-19), have impacted solar and storage development projects throughout California.

Supply chain issues were further compounded by an ongoing U.S. Department of Commerce (DOC) investigation into a solar tariff circumvention complaint, which threatened solar project development in California. The investigation was opened in March 2022 in response to allegations that eight solar companies are manufacturing solar cells and modules in the People's Republic of China, then assembling these components in Cambodia, Malaysia, Thailand, and Vietnam "for minor processing" prior to export to the U.S. The DOC is investigating if this practice amounted to intentionally evading U.S. antidumping duty and countervailing duty orders on solar cells and solar cell modules from the People's Republic of China. On December 2, 2022, the DOC published the preliminary findings of its investigation that four of the eight manufacturers attempted to avoid tariffs by employing this practice. The DOC plans to conduct in-person audits and receive public comments prior to issuing a final determination in May 2023. A Presidential Proclamation issued on June 6, 2022, placed a temporary reprieve on duties imported from Cambodia, Malaysia, Thailand, and Vietnam until June 2024, which may partially alleviate impacts to solar projects currently under development in California.

The third category (shown in brown in Figure 1) consists of the capacity resources needed to address conditions that are not incorporated in the traditional planning standard. These include extreme events such as the west-wide heat wave experienced in August 2020, which led to multiple incidents of load curtailment.

The fourth category (shown in red in Figure 1) consists of the capacity resources needed to address coincident extreme events, such as the Bootleg fire that occurred in Oregon in summer 2021, which reduced imports to the CAISO footprint by 3,000 MW during a simultaneously occurring widespread heat wave.

Estimated Shortfall for Summer 2025

Based on these four categories of capacity needs, the energy agencies identified an estimated electrical capacity shortfall for summer 2022 and 2025. Table 1 below illustrates this estimated shortfall in summer 2025.

Table 1: Estimated Electrical Capacity Shortfall in Summer 2025

Issue	Estimated Shortfall in 2025
Lag in incorporation of updated demand forecasts and policy goals in procurement targeting 1-in-10 LOLE traditional planning metric	1,800 MWs
Extreme weather and fire risks to energy assets not completely captured in a 1-in-10 traditional planning efforts	4,000-5,000 MWs
Project development delay scenarios (estimated)	1,600-3,800 MWs
Total risk in a coincidental situation	~10,000 MWs

Source: Erne, David, *CEC Staff Workshop on Summer and Midterm Reliability*, Docket 21-ESR-01, May 20, 2022, “Reliability Workshop Overview,” slide 8.

The combination of the conditions described in Table 1 could result in a large shortfall of approximately 10,000 MW in 2025.

The planned retirement of Diablo Canyon contributed to this significant shortfall projection for 2025. However, through SB 846 the California Legislature extended the OTC Policy compliance date for Diablo Canyon to October 31, 2030, to support mid-term reliability. Diablo Canyon’s Net Qualifying Capacity was 2,280 MW as of 2020,

and this capacity decreases the projected 10,000 MW shortfall. Additional information on Diablo Canyon is included in Section 6 of this report.

5.1.1.2. Actions Taken to Improve Grid Reliability in the California Independent System Operator Balancing Authority Area

New Procurement

The state's energy agencies have taken actions to ensure all viable resources are available to bolster grid reliability in coming years. For instance, the CPUC adopted Decision (D.) 19-11-016 on November 7, 2019, which ordered procurement of 3,300 MW of incremental resources with 50 percent required to be online by August 2021. In October 2021, CPUC staff reported that load serving entities met this requirement. Fossil fueled resources, such as OTC power plants, are not considered a part of this 3,300 MW of procurement. As a part of a separate proceeding (R.20-05-003), the CPUC adopted D.21-06-035 on June 24, 2021, to address mid-term reliability needs of the electricity system within the CAISO's BAA. This decision intends to address reliability needs by requiring at least 11,500 MW of additional procurement, with: 2,000 MW required by August 2023; 6,000 MW required by June 2024; 1,500 MW required by June 2025; and 2,000 MW required by June 2026. This procurement order is designed to achieve California's reduced greenhouse gas (GHG) emission targets for 2030 and to keep California on a clear path to meeting the goal of 100 percent zero-carbon electricity resources by 2045.

Electrical Supply and Demand Forecasting Improvements

In addition to recent procurement decisions, the CEC has improved its forecasting to facilitate more accurate projections of supply and demand used to develop the annual Integrated Energy Policy Report (IEPR).

For example, the CEC refined various forecast elements to better account for the impact of climate change. To place more emphasis on recent patterns and trends, CEC staff use a 30-year rolling window of daily temperature statistics to distinguish normal peak load events from extreme events, such as widespread, west-wide heatwaves.

Additionally, CEC staff have begun weighing the previous ten years of data more heavily to better capture long-term temperature trends.

The 2021 IEPR forecast process included several new products and revised assumptions to further strengthen projections, including: incorporating additional achievable fuel substitution assumptions (e.g., the replacement of gas appliances with electric appliances); updating assumptions pertaining to medium- and heavy-duty electric vehicle charging patterns; and expanded projections of demand through 2050 under various GHG emission reduction-driven scenarios. The 2022 IEPR forecast was refined again to further account for fuel substitution and to provide more flexibility in modeling uncertainties around California's rapidly changing transportation sector.

For the 2023 IEPR forecast, the CEC is working on updating several models pertaining to grid forecasting, including the residential sector model, the distributed generation and battery storage adoption model, and the transportation travel demand model. The CEC is also procuring behind-the-meter photovoltaic data and intend to analyze these data to refine photovoltaic generation shapes. Furthermore, the CEC is examining new adjustments to forecasting methodologies that account for changes in demand associated with climate change, such as increases in temperature, and plans to apply these adjustments to 2023 IEPR forecast if sufficient data is available in time.

The Electricity Supply Strategic Reliability Reserve Program

Despite the energy agencies' previous and ongoing efforts to procure more electricity and improve forecasting, the impact of emerging risks, especially those outside of traditional resource planning activities, has exceeded the ability of existing procurement planning processes to adapt in the near-term. Consequently, legislative action was taken in a coordinated state-wide effort to address electrical reliability.

On June 30, 2022, Governor Newsom signed AB 205 into law to support and expedite the state's transition to clean energy and help maintain energy reliability in the face of climate change. AB 205 finds that extreme events from climate change, including heat waves, wildfires, and drought, combined with other factors, such as supply chain disruptions, are jeopardizing California's ability to build out the electrical infrastructure

needed to maintain affordable and reliable electrical capacity. In the context of energy reliability and resource planning activities, AB 205 defines an extreme event as an:

Event occurring at a time and place in which weather, climate, or environmental conditions, including temperature, precipitation, drought, fire, or flooding, present a level of risk that would constitute or exceed a one-in-ten event, as referred to by the North American Electric Reliability Corporation, including when forecast in advance by a load-serving entity or local publicly owned electric utility.

In response to these conditions, AB 205 established several programs and allocated associated funding, including \$2.95 billion for the creation of the Strategic Reserve. The Strategic Reserve is intended as a transitional tool to address the reliability risks from extreme events identified in the CEC's May 20, 2022 workshop, by providing funding to secure conventional generation, as well as efficiency upgrades, demand response, distributed generation, and long-duration storage. The Strategic Reserve will enable demand-side programs to scale up, new and clean resources to come online, critical grid assets to be hardened, and new planning processes to continue to be implemented. This program is expected to remain in operation through 2026, but may be extended if circumstances warrant continuation.

Strategic Reserve provisions allow contracting with and extending the life of existing generating facilities planned for retirement, such as OTC power plants. Specifically, the Strategic Reserve requires the Department of Water Resources (DWR) to prioritize contracts with non-preferred resources, such as remaining fossil-fueled OTC units. The structure of the Strategic Reserve and these contracts means that existing fossil-fueled resources would not compete with utility procurement of clean resources, enabling the state to continue to pursue its long-term clean energy goals and mandates.

Additionally, Strategic Reserve contracts would permit all utilities and balancing authorities within California to access Strategic Reserve resources as they address the challenges of increasingly more frequent and extreme climate-driven events, supply chain issues, and other related hurdles in ensuring electrical reliability.

AB 205 identified DWR as the Strategic Reserve contract administrator because of its extensive experience managing electric generation resources through the State Water Project hydroelectricity fleet. Previous state legislation also granted DWR the authority to oversee the California Energy Resources Scheduling Program.

5.1.1.3. Alternatives and Recommendation of the Final 2022 Special SACCWIS Report for the California Independent System Operator Balancing Authority Area

To help address electrical capacity shortfalls and improve statewide grid reliability, on September 30, 2022, the SACCWIS re-convened and approved the Special 2022 SACCWIS Report. The report presents alternatives and a recommendation to the State Water Board to consider extending the OTC Policy compliance dates for Alamitos, Huntington Beach, and Ormond Beach by three years to December 31, 2026, to address the system-wide grid reliability issues and support the Strategic Reserve. The alternatives from the approved Special 2022 SACCWIS Report are listed below.

1. *Alternative A1 (Recommended): Extend the compliance dates for Alamitos Units 3, 4, and 5, Huntington Beach Unit 2, and Ormond Beach Units 1 and 2, for three years, from December 31, 2023, to December 31, 2026.*

This alternative matches the authorization date of the Strategic Reserve, which is expected to operate through 2026. This alternative provides 2,854 MW in capacity to the Strategic Reserve to be used during extreme events to support system-wide grid reliability concerns. Enabling DWR to secure these existing resources will allow the state to address reliability risks more expeditiously and with greater certainty. This alternative considers that Alamitos and Huntington Beach have existing, co-located combined-cycle non-OTC units that will continue operating regardless of the planned retirement of each power plant's remaining OTC units.

As stated in the Special 2022 SACCWIS Report, Alternative A1 does not include a recommendation to extend the OTC Policy compliance date for Redondo Beach, recognizing the land use challenges that would potentially be associated with the power plant's continued operations.

2. Alternative A2: Extend the compliance date for Alamos Units 3, 4, and 5, Huntington Beach Unit 2, Ormond Beach Units 1 and 2, and Redondo Beach Units 5, 6, and 8, for three years, from December 31, 2023, to December 31, 2026.

This alternative would have maximized, at roughly 3,688 MW, the existing OTC capacity available to meet mid-term reliability needs within the Strategic Reserve. This alternative would have provided the greatest amount of capacity from OTC power plants within the CAISO BAA. However, Redondo Beach has land use challenges that would complicate extending its OTC Policy compliance date. For example, the property upon which the power plant is located is no longer owned by its operator as of March 2020, and the owner is currently leasing the land through 2023. There are also covenants resulting from the previous sale of the property that may result in litigation should the compliance date be extended, and would likely limit AES-Southland, Inc.'s (AES) ability to operate the power plant beyond 2023. These circumstances would likely complicate contracting with DWR for the purposes of the Strategic Reserve.

3. Alternative A3: No action.

The four power plants would stop using OTC water on or before December 31, 2023. Without these OTC power plants, the Strategic Reserve would need to procure up to 2,854 MW of additional new resources. As described above, procurement of new resources may be impacted by supply chain issues and other delays that could challenge meeting the 1-in-10 LOLE planning standard. This alternative would result in reduced capability to support grid reliability during extreme events, such as the west-wide heat wave experienced in August 2020, and coincident extreme events, such as the Bootleg fire in Oregon that reduced imports to the CAISO footprint by 3,000 MW in 2021 during a heat wave.

At the September 30, 2022 meeting, the SACCWIS approved Alternative A1 as its preferred recommendation to the State Water Board. Section 3.B.(5) of the OTC Policy states that the State Water Board shall consider the SACCWIS' recommendations and,

if appropriate, consider modifications to the OTC Policy. In the event that the SACCWIS energy agencies make a unanimous recommendation for implementation schedule modification based on grid reliability, as was the case at the September 30, 2022 SACCWIS meeting, the State Water Board shall afford significant weight to the recommendation.

Clarification Regarding Use of OTC Power Plants in the Strategic Reserve

On November 30, 2022, the energy agencies submitted a joint letter to the State Water Board clarifying their recommendation as SACCWIS members to extend the OTC Policy compliance dates for Alamitos, Huntington Beach, and Ormond Beach on September 30, 2022.

The energy agencies stated the following:

The CPUC, CEC and CAISO clarify that our recommendation is contingent upon these power plants participating in the Strategic Reliability Reserve Program...created by Assembly Bill (AB) 205 that is discussed on pages 7 and 8 of the report. Under this program, these resources will only be called upon to support grid operations during extreme weather events (including any maintenance or test events recommended by and coordinated with the CAISO).

The letter goes on to clarify that these “resources would not serve as Resource Adequacy resources.” Power plants with a CAISO Resource Adequacy contract require a “must offer obligation” to provide capacity to the CAISO market for CAISO operation on a consistent basis. Should Alamitos, Huntington Beach, or Ormond Beach enter Resource Adequacy contracts, they would likely operate more frequently as compared to their participation solely in the Strategic Reserve. Increased operations would result in more OTC usage and air emissions.

Therefore, the joint letter contains a recommendation to the State Water Board to extend Alamitos, Huntington Beach, and Ormond Beach’s OTC Policy compliance dates solely to support the Strategic Reserve.

5.1.2. LADWP Balancing Authority Area

The LADWP is the largest municipal water and power utility in the U.S., providing electricity to approximately 1.4 million customers throughout its BAA. This complex grid network was built out starting 100 years ago and was designed to rely on in-basin, gas-fired generation capacity (such as the existing OTC power plants), as well as to enable the import of electricity from sources external to the LADWP basin to augment this capacity.

High-voltage transmission lines comprise about 75 percent of the LADWP's in-basin network and allow for five thousand MW of import capability. However, interconnections used to import power are located either externally to or at the LADWP's northern most boundary. Because the LADWP's grid was built out from gas-fired generation capacity that was constructed primarily along Los Angeles' coastline, the Western Sub-Area of the LADWP's BAA, described as a "transmission cul-de-sac", is limited in its ability to import power from the north. Scattergood is used to relieve transmission congestion on Western Sub-Area lines that flow north to south.

5.1.2.1 Events and Conditions Leading to the Proposed Amendment in the Los Angeles Department of Water and Power Balancing Authority Area

The Los Angeles Green New Deal

On February 12, 2019, Los Angeles Mayor Eric Garcetti introduced the Los Angeles Green New Deal, which included a provision that the LADWP will transition to 100 percent renewable energy by 2045 to help address climate change. This timeline was accelerated by a motion adopted by the Los Angeles City Council in September 2021, which directed the LADWP to procure 100 percent zero-carbon electricity by 2035.

The Green New Deal and motion adopted by the Los Angeles City Council will collectively reduce the impacts of Los Angeles' energy production sector on climate change. However, this goal disrupted the LADWP's previous plans to comply with the OTC Policy by repowering Scattergood.

Previous Plan to Repower Scattergood with Fossil-Fueled Capacity

Following the adoption of the OTC Policy in 2010, the LADWP submitted implementation plans for the OTC power plants within its jurisdiction to phase out the use of OTC completely by 2029. The LADWP planned to replace Scattergood Units 1 and 2 with air-cooled CCGT and cease the use of OTC by December 31, 2024. Between 2011 and 2019, the agency made progress in line with its implementation plan, having submitted an approved permit-to-construct and initiating the regulatory process to comply with CEQA. Under the previous repowering plans, construction on the new CCGT was slated to begin at the end of 2020. However, these plans and permits were withdrawn after Mayor Garcetti announced the Green New Deal in February 2019. As a result, the LADWP indicated it cannot repower Scattergood with CCGT by the power plant's current OTC compliance date of December 31, 2024, under the previous plan.

Following the announcement of the Green New Deal, the LADWP Board of Commissioners developed and adopted the Local Capacity Technical Report (LCTR) on December 14, 2021. The LCTR records the results and recommendations of the 2024 Local Capacity Technical (LCT) Study, which was conducted, in part, to evaluate the impacts of Scattergood's retirement on electricity loads in 2024 and support LADWP's request to extend Scattergood's OTC Policy compliance date for five years to support local grid reliability while transitioning to a zero-carbon grid.

5.1.2.2. Local Capacity Technical Study

Assumptions and Scope:

The LCT Study focused on local capacity within the LADWP BAA in regions with limited import capability, including the Western Sub-Area, to forecast loads based on transmission and generation infrastructure, both existing and underway. The study assumed maximum import capability under all scenarios.

The LADWP used internally generated results that were consistent with LADWP system planning assumptions (approved by the Western Electricity Coordinating Council, or WECC) to forecast load. Parameters that affected system load included the predicted

number of households, economic activity, temperature, and increased efficiency and distributed energy programs.

In conducting the LCT Study, the LADWP adjusted the baseline assumptions of projected demand and supply in summer 2024 to reflect current generation and transmission projects, as well as the 1-in-10 LOLE for the LADWP system. The 1-in-10 LOLE is the supply necessary to meet demand such that the system is not likely to have more than one outage event in ten years.

Electrical Reliability and Study Scenarios:

The LCT Study used two scenarios that reflect stressed operating conditions based on North American Reliability Corporation (NERC) planning standards to examine reliability in its BAA: a low range Local Capacity Requirements (LCR) scenario and a high range LCR scenario accounting for the highest deficit.

The low range scenario describes system performance under normal operating conditions and single contingencies, such as the loss of a single transmission element like a circuit, generator, or transformer. The high range scenario accounts for two or more contingencies and system re-adjustment after contingencies. The LADWP also grouped extreme conditions with the high range scenario in this study.

The LADWP used the high range scenario to request the five-year extension of Scattergood because the LADWP is required to “maintain the system in a safe operating mode at all times. This obligation translates into respecting the NERC...Reliability Criteria.”

Two heavy summer system conditions, which reflect high demand and temperatures, were studied to capture the range of the LCR needed in the LADWP BAA to meet reliability criteria under the low and high range scenarios. The first condition reflects minimal to no import availability from the Pacific Direct Current Intertie, a significant transmission corridor that transmits power from the Pacific Northwest, while imports along the Victorville-Adelanta line, another significant transmission corridor that

transmits power from Utah, are maximized. The second condition reflects maximal imports from the Pacific Direct Current Intertie, along with high renewable generation.

Local Capacity Technical Study Results

The modeling and analysis conducted for the LCT Study demonstrated that Scattergood provides seven percent of the net basin dependable capacity for Los Angeles' total basin peak load, indicating that the Western Sub-Area is highly dependent on local generation capacity, such as Scattergood, to meet reliability criteria.

Under the first heavy summer system condition, the LADWP assumed maximal generation from Scattergood (amounting to 745 MW), and it resulted in a 0 MW deficit under the low range scenario. However, this condition resulted in a 228 MW deficit under the high range scenario. The second heavy summer system condition requires 657 MW of generation from Scattergood under the high range scenario, and it results in a 140 MW deficit with the Tarzana-Olympic project complete on time. However, the loss of Scattergood's generation prior to the Tarzana-Olympic project's completion would result in a 254 MW deficit.

Other Study Considerations

In recognizing the importance of local generation, the LADWP also assessed the possibility of alternative mitigation strategies, such as energy storage, in lieu of Scattergood's interim capacity to provide local reliability. However, energy storage poses multiple challenges against meeting reliability criteria. For one, the local capacity deficit ranges between 254 MW and 352 MW under the high range scenario. To mitigate these deficits and maintain local area reliability would require a significant physical storage solution footprint. Scattergood's existing footprint does not offer the possibility of installing adequate storage solutions to mitigate this deficit, and the LADWP lacks the existing real estate in the Western Sub-Area to install this storage elsewhere.

Further, contingencies assessed for the LCT Study threaten loss of generation for several days, which existing energy storage solutions cannot provide without the ability

to recharge. Finally, energy storage charging would increase Western Sub-Area loading and further constrain the already-congested Tarzana-Olympic and Toluca-Hollywood transmission paths.

Study Conclusions:

The LADWP's LCT Study shows that Scattergood plays a significant role in maintaining local area reliability, and that Scattergood's retirement in 2024 would leave the Western Sub-Area of the LADWP BAA susceptible to a minimum 254 MW shortfall. This deficit is because the Tarzana-Olympic and Toluca-Hollywood transmission paths, which form the backbone of the Western Sub-Area's transmission infrastructure, are heavily constrained. The issue is further exacerbated by the fact that the LADWP's revision to its 2021 load forecast anticipates that loading is projected to increase 63 MW beyond the baseline assumptions.

While the LADWP is developing infrastructure, including new local generation and upgraded transmission capacity, required to reliably operate its Western Sub-Area, the LCTR indicates that projects are at high risk of facing challenges due to delays in equipment manufacturing and reduced resources due to the COVID-19 pandemic. As such, coastal gas-fired generation is necessary to provide local resource adequacy and voltage support until new generation and transmission projects are online. Therefore, the LADWP requested an extension for Scattergood through 2029, which allows for project development while also providing buffer time for the possibility of delays.

5.1.2.3. Actions taken to improve grid reliability in the Los Angeles Department of Water and Power Balancing Authority Area

LA100 Study

Following the announcement of the Green New Deal, the LADWP embarked on the Los Angeles 100 Percent Renewable Energy Study (LA100 Study) to evaluate pathways and costs to achieve a 100 percent renewable and reliable electric supply. The final report of the LA100 Study was released on March 24, 2021, and identified that 100 percent renewable energy is achievable in the Los Angeles basin, which will require an approximately 57-87 billion dollar investment in addition to existing obligations. The

LA100 Study identified pathways to a reliable and renewable grid, including: electrification efficiency flexible load; customer rooftop solar expansion; renewable energy; storage solutions; upgraded transmission and distribution; and renewably fueled dispatchable turbines. The LADWP presently employs natural gas turbines, including the OTC power plants, on a near daily basis to maintain reliability in its BAA. In the future, the LADWP anticipates using hydrogen-powered or other zero-carbon turbines infrequently to provide reliability in high demand or contingency scenarios.

Transmission and Generation Construction and Upgrades

To meet the requirements of the Green New Deal while also supporting widespread, multi-sector electrification goals, the LADWP plans to embark on an aggressive, multi-faceted infrastructure project that will roughly double its existing capacity. The LADWP plans to increase its existing generation capacity to 80% renewables by 2030 to achieve 97 percent GHG free energy production while also adding 3,000 MW of new renewable resources to meet projected growth in demand.

Further, the LADWP plans to complete 10 largescale transmission projects within its Western and Eastern sub-areas in the next ten years to achieve growing demand in its BAA. The first of two transmission upgrades needed to reduce reliance on Scattergood include the Tarzana-Olympic Line 1 Conversion, which will upgrade this transmission corridor's line 1 from 138 kV to 230 kV, and the Toluca-Hollywood line work, which will upgrade 1.78 miles of 230 kV underground cable. The Tarzana-Olympic Upgrade Project will significantly benefit the Western Sub-Area's capacity and is most relevant to the requested Scattergood extension, and the Toluca-Hollywood Project also plays a critical role. Together, these transmission paths form the backbone of the Western Sub-Area's transmission infrastructure, and these two projects aim to relieve congestion on these lines by making upgrades to the LADWP's grid modernization efforts. The three transmission projects are currently scheduled to be in service between 2025 and 2029.

The LADWP plans to convert Scattergood's fossil-fueled capacity to 346 MW of hydrogen capacity and reduce gas usage across the LADWP generation fleet. The LADWP must also upgrade Scattergood's phase shifting transformer, a piece of

equipment that controls the flow of power on three-phase transmission networks. In addition to the transformation of local generation, the LADWP must also build over 1,000 MW of energy storage by 2030 to support short-duration, in-basin, and out-of-basin capacity needs. Finally, the LADWP must deploy 1,000 MW of local solar and 500 MW of demand response resources to meet its goals.

Capacity replacement and transmission upgrades are intended to ensure the LADWP's grid can serve load reliably in the future. While transmission line upgrades are underway, Scattergood and other gas generating power plants are needed to provide local capacity.

In moving forward, the LADWP has already begun its CEQA process and environmental permitting work for increasing transmission capacity and new local capacity in the LADWP BAA. The LADWP also completed a Request for Proposals for design and construction of Scattergood's transmission and renewable technologies. The LADWP anticipates bidding and awarding a contract for the Request for Proposals in 2025. Starting in 2026, the LADWP expects a 36-month design and construction period. The LADWP anticipates commissioning Scattergood's new capacity and placing it in service in mid-2029. Because of the expected in-service date, the LADWP requested an OTC Policy compliance date extension for Scattergood from the State Water Board to December 31, 2029.

5.1.2.4. Alternatives and Findings of the Final Special 2022 SACCWIS Report for the Los Angeles Department of Water and Power BAA

In addition to containing a recommendation from the SACCWIS to extend Alamitos, Huntington Beach, and Ormond Beach's compliance dates, the SACCWIS also considered the request from the LADWP to extend the compliance date for Scattergood on September 30, 2022. The Special 2022 SACCWIS Report presented alternatives for the LADWP's request to extend the OTC Policy compliance date for Scattergood for five years to address local grid reliability issues. The alternatives from the approved Special 2022 SACCWIS Report are listed below.

1. Alternative B1 (Recommended): Support Extending the OTC Policy Compliance Date for Scattergood for Five Years.
2. Alternative B2: Oppose Extending the OTC Policy Compliance Date for Scattergood for Five Years

At the September 30, 2022 meeting, the SACCWIS approved Alternative B1 as its statement of support to the State Water Board for extending the OTC Policy compliance date for Scattergood Units 1 and 2 for five years, from December 31, 2024, to December 31, 2029. The CAISO, CEC, CPUC, California State Lands Commission, Coastal Commission, and State Water Board reviewed the LADWP's extension request and supporting documentation submitted to date and found no cause for objecting to the request. CARB abstained from commenting during the meeting as more time was needed to evaluate the LADWP's request for Scattergood's extension. The State Water Board is coordinating with the CARB as it evaluates the request.

Pursuant to Section 1.K of the OTC Policy, the SACCWIS advises the State Water Board on schedules for power plants not under the jurisdiction of the CPUC or operating within the CAISO BAA. Additionally, Section 3.B(2) of the OTC Policy states that the SACCWIS may consult with other appropriate agencies, including the LADWP, in the process of reviewing implementation schedules and providing recommendations to the State Water Board.

Scattergood's Role in Local Grid Reliability

Scattergood's generation capacity is critical to the LADWP's local area reliability. According to the LADWP, Western Sub-Area load ranges from 575 MW on light load days to over 1,000 MW on load heavy days. The LADWP's grid was constructed around local generation and import capabilities to the Western Sub-Area are limited, so Scattergood's generation is critical to local area reliability. While the Western Sub-Area does maintain a small portion of import capability via three transmission paths, this import capability is limited to 640 MW post contingency. Any Western Sub-Area loads greater than 640 MW require local generation to maintain reliability. The Western Sub-Area load surpassed 640 MW between 61 and 110 days per year from 2017 to 2021.

Scattergood's capacity factor is about five percent according to the LADWP. Like Alamitos, Huntington Beach, and Ormond Beach, this low-capacity factor does not reflect the importance of Scattergood as a resource in maintaining grid reliability; its capacity is vital to prevent load shedding and potential power outages during periods when load is high.

5.2. Impacts to Marine Life

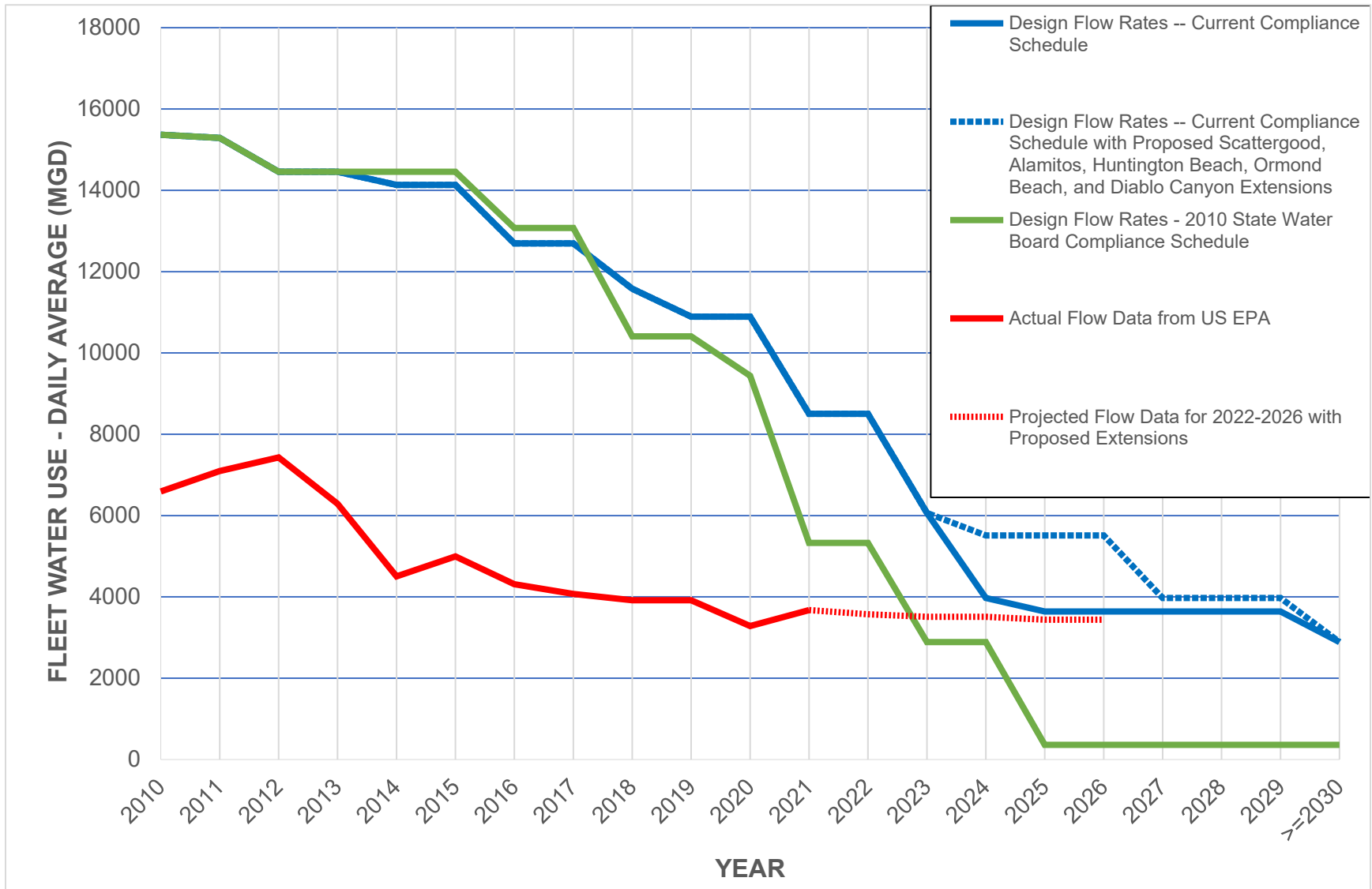
Section 2.2 and 2.3 of the 2010 Final SED established baseline impacts to marine life through analysis of impingement and entrainment studies conducted from 2000-2005 at eighteen of the nineteen coastal OTC power plants. The consensus among regulatory agencies at both the state and federal levels is that OTC systems contribute to the degradation of aquatic life in their respective ecosystems. Installation of reasonably foreseeable methods of compliance were found to reduce either impingement or entrainment impacts by 90 percent to 97 percent, depending on the technology selected. For example, Huntington Beach, Ormond Beach, and Scattergood employ deep offshore intakes with velocity caps for their cooling systems that reduces impingement from 90 percent to 97 percent.

The 2010 Final SED showed that OTC units among the nineteen power plants operated at varying efficiencies (volume of cooling water in million gallons required per MW-hour generated), depending on the type of boiler system and general age of the unit. For example, combined-cycle units were found to be up to 50 percent more efficient than steam boilers.

Figure 2 below illustrates ocean and estuarine water flow rates of the OTC power plant fleet through time, and compares the flow rates due to the OTC Policy adopted in 2010 (green line), the OTC Policy amended in 2021 (blue solid line), the flow rates due to the recommended extensions of the compliance dates for Alamitos, Huntington Beach, Ormond Beach, and Scattergood (blue dashed line), the actual flow rates of the OTC fleet (red solid line), and the projected flow rates with the proposed extensions through 2026 (red dashed line).

The projected collective OTC power plant fleet flow rates exceed the collective OTC power plant fleet flow rates associated with the OTC Policy compliance schedule adopted in 2010. The projected collective OTC power plant fleet flow rates reflect the recent extension of Diablo Canyon's compliance date through October 31, 2030, through SB 846. Overall, the projected OTC power plant fleet flow rates will likely continue to decrease over time and meet the goals of the OTC Policy once final compliance is achieved.

Figure 2: Historic and Projected Water Usage by the OTC Power Plant Fleet in Million Gallons per Day (MGD)



5.3. Mitigation of Impingement and Entrainment Impacts

The OTC Policy includes a provision that existing power plants must implement measures to mitigate the interim impingement and entrainment impacts to marine life resulting from cooling water intakes during operation. This requirement commenced on October 1, 2015, and continues up to and until the owner or operator achieves final compliance. Section 2.C(3) of the OTC Policy provides options for owners or operators to demonstrate compliance with the interim mitigation requirements.

AES, owner and operator of Alamitos and Huntington Beach, and the LADWP, owner and operator of Scattergood, elected to comply with the interim mitigation requirements through Section 2.C(3)(b) by providing funding to the Ocean Protection Council or California Coastal Conservancy to fund appropriate mitigation projects. Specific to Huntington Beach, the State Water Board approved AES's request to adjust the entrainment calculation to account for existing mitigation efforts that are consistent with the interim mitigation option outlined in Section 2.C(3)(a) of the OTC Policy.

GenOn Holdings, Inc. (GenOn), the former owner of Ormond Beach, elected to continue complying with interim mitigation requirements for the power plant through Section 2.C(3)(b). Ormond Beach Power, LLC. (Ormond Beach Power), now the owner and operator, has not indicated it intends to change plans to comply with interim mitigation requirements.

Accordingly, the continued use of OTC water for Alamitos, Huntington Beach, Ormond Beach, and Scattergood will be subject to continued interim mitigation requirements as detailed in Resolution No. 2015-0057 up to and until the power plants come into compliance with the OTC Policy.

Between October 2015 and October 2022, approximately \$3.3 million in interim mitigation funds were paid for Alamitos and Huntington Beach by AES, \$890,000 for Ormond Beach by GenOn or Ormond Beach Power, and \$1.4 million for Scattergood by the LADWP to fund appropriate mitigation projects. Payments are calculated in determinations prepared by State Water Board staff on an annual basis.

The process to calculate interim mitigation payments was approved by the State Water Board on August 18, 2015, in Resolution No. 2015-0057. The State Water Board previously contracted with Moss Landing Marine Laboratory to establish an expert review panel (Expert Review Panel II) on minimizing and mitigating intake impacts from power plant and desalination facility seawater intakes. The Expert Review Panel II developed a method to calculate interim mitigation payments that would compensate for continued intake impacts due to impingement and entrainment, which was the basis of method set forth in Resolution No. 2015-0057. The interim mitigation payment calculation comprises an entrainment payment, an impingement payment, and a management payment for implementation and monitoring of the mitigation project. The interim mitigation payments are calculated annually for each individual OTC facility.

The entrainment calculation uses empirical transport models coupled with the habitat production foregone method, as required by the OTC Policy, and is based on the cost of creating or restoring habitat that replaces the production of marine organisms killed by entrainment. The entrainment calculation is based on the volume of OTC water used during the annual interim mitigation period multiplied by either a site-specific or default average cost of entrainment determined in the Expert Review Panel II's Final Report. Resolution No. 2015-0057 states that when site-specific entrainment data is available for a facility, the Executive Director of the State Water Board shall determine whether this data is suitable for calculating a specific habitat production foregone for that plan. Otherwise, owners and operators electing to comply with interim mitigation requirements consistent with Section 2.C(3)(b) use the default method for calculating the entrainment component of the interim mitigation calculation. Each site-specific or general entrainment rate is multiplied by a 3-percent escalator each year to update the average cost of entrainment to account for inflation.

The impingement calculation is based on the pounds of fish impinged during the annual interim mitigation period multiplied by the average indirect economic value of the fisheries. The management and monitoring payment is calculated by taking 20 percent of the sum of the entrainment and impingement calculations.

The State Water Board received several public comments regarding sufficiency and effectiveness of the interim mitigation calculations and payment distributions toward mitigation and restoration projects at the State Water Board informational item held on December 7, 2022. The State Water Board is evaluating updating the entrainment and impingement cost multipliers, as well as the annual escalator for inflation, used for the interim mitigation payment calculation as set forth in Resolution No. 2015-0057. However, any updates to the interim mitigation calculation will occur through a separate process from this proposed amendment to the OTC Policy.

5.4. Land Use Impacts

The 2010 Final SED concluded that no land use impacts were identified regarding OTC power plant compliance with requirements of the OTC Policy. This conclusion was based on the 2008 report by Tetra Tech, which evaluated the technical and logistical feasibility of retrofitting 15 of the state's fossil-fueled coastal OTC power plants with closed-cycle wet cooling systems (pages 104 and G-229, 2010 Final SED). Revisions to OTC Policy compliance dates based upon non-marine impacts to local communities, including land use concerns and environmental justice, may be considered but are largely beyond the scope of the State Water Board's authority under CWA section 316(b) and the OTC Policy.

Power generation is expected to be ongoing at Alamitos, Huntington Beach, and Scattergood following OTC Policy compliance. To date, AES has retired Alamitos Units 1, 2, and 6, and Huntington Beach Unit 1, to enable CCGT at both facilities to be placed in service. AES has also constructed battery storage capacity on the site of Alamitos. The LADWP has retired Scattergood Unit 3, and as discussed above, plans to construct hydrogen capacity to enable local power generation following the retirement of Units 1 and 2.

Power generation is expected to cease at the Ormond Beach site after the power plant retires. Post-retirement community considerations for the Ormond Beach site, as well as Huntington Beach wetland considerations, are discussed below.

Ormond Beach:

The Ormond Beach power plant is located within City of Oxnard in Ventura County, where many persons of color and low-income populations work in high outdoor exposure agricultural areas. Environmental justice implications of the proposed extension are discussed in greater detail below.

During the 2020 OTC Policy amendment, the City of Oxnard and GenOn negotiated demolition and remediation plans for the facility in Agreement Number (No.) A-8207: Agreement for Demolition and Remediation of the Ormond Beach Generating Station. Agreement No. A-8207 established a timeline and financial plan for the demolition and remediation of Ormond Beach, funded by GenOn up to \$25 million, contingent on the State Water Board's approval for Ormond Beach's compliance date extension from December 31, 2020, to December 31, 2023. The agreement received support from the Oxnard City Council, which unanimously approved and authorized the city's mayor to execute the agreement at a meeting on January 1, 2020. On September 1, 2020, the State Water Board approved the 2020 OTC Policy amendment, putting the agreement into effect.

In Section 3.a of Agreement No. A-8207, GenOn committed to completing demolition and remediation of the Ormond Beach site by December 31, 2025, should the power plant's compliance date be extended until 2023. The agreement also stipulated that GenOn will provide less funding towards demolition and remediation, and post-retirement work would be completed one to two years later, should Ormond Beach's compliance date be extended for a shorter period than recommended by the SACCWIS prior to the 2020 OTC Policy amendment.

As stated in the Special 2022 SACCWIS Report, SACCWIS representatives have indicated that this agreement may be able to be extended with the proposed OTC Policy compliance extension. However, as acknowledged in the Special 2022 SACCWIS Report, the agreement must still be reviewed and considered by the Oxnard City Council. State Water Board staff is currently unaware of the any items for consideration

by the Oxnard City Council pertaining to this item or any negotiations between Ormond Beach Power and the City of Oxnard.

Huntington Beach:

In the early 2000s, Poseidon Water, LLC submitted a Coastal Development Permit (CDP) application to the City of Huntington Beach to remove infrastructure and construct a seawater desalination facility and water delivery pipeline on an out-of-service tank farm area on the property of the Huntington Beach power plant, which is owned by AES. The City of Huntington Beach, which has jurisdiction of a Local Coastal Program, conducted two initial CEQA reviews – in 2003 and 2005 – that did not identify wetlands within the project site.

In 2009, a Coastal Commission staff ecologist visited the property and identified approximately 3.5 acres of wetland indicators within the project area. Despite providing evidence of the wetland indicators and requesting reconsideration of the wetland finding to the City of Huntington Beach during the development of the project's Draft Supplemental Environmental Impact Report, the Final Supplemental Environmental Impact Report asserted that the project site did not support wetlands. The Final Supplemental Environmental Impact Report was certified by the City of Huntington Beach in September 2010 and a CDP was subsequently issued to Poseidon Water.

However, the CDP was subsequently appealed, and the Coastal Commission found in November 2010 that additional on-site evaluation was needed to determine the full extent of the project site's wetlands. Coastal Commission staff ecologists accessed the project site in July 2012, and found that previous areas with wetland indicators had been disked, graded, drained, and all vegetation removed without an appropriate CDP.

In October 2014, the Coastal Commission issued a Notice of Violation (NOV) to AES for unpermitted development activities that resulted in the disturbance and destruction of the approximately 3.5 acres of wetland habitat on site. However, the Coastal Commission did not request additional enforcement actions at the time, as it was planned that mitigation for the lost wetland habitat would be provided in the prospective CDP for Poseidon Water, LLC's proposed desalination facility.

On May 12, 2022, the Coastal Commission considered and denied the proposed CDP for Poseidon Water, LLC's proposed desalination facility. As of November 29, 2022, Coastal Commission staff have indicated that they are in the process of determining potential next steps to address the violation and establish mitigation measures.

5.5. Air Quality Impacts

Air Quality Regulatory Structure

The U.S. EPA, CARB, and California's 35 local air quality management and air pollution control districts (local air districts) comprise a three-tiered system for addressing air pollution in California. All power plants that operate in the state and produce emissions are permitted by local air districts, which require scheduled monitoring and reporting from the operators to ensure compliance with applicable rules and regulations. The local air districts, in coordination with U.S. EPA and CARB, develop regional air quality management plans for attaining and maintaining health-based ambient air quality standards. The local air districts set and enforce emissions standards for local sources, including refineries, cement plants, gas stations, and power plants. The South Coast Air Quality Management District (SCAQMD) is the local air district whose jurisdiction covers the non-desert regions of Los Angeles County and all of Orange County,¹ which includes Alamitos, Huntington Beach, and Scattergood. The Ventura County Air Pollution Control District's (VCAPCD) jurisdiction encompasses Ventura County, which includes Ormond Beach. There are environmental justice concerns regarding pollution from power plants into the air basin and the potential impacts this may have on human health.

Health Risk Analysis

The Air Toxics Hot Spots Information and Assessment Act (refer to California Health and Safety Code Section 44360(b)2) requires facilities to conduct toxic emissions evaluations every four years to determine whether citizens will be exposed to any harmful pollutants, and if warranted perform a health risk analysis to determine risk to

¹ Jurisdiction also covers the non-desert regions of San Bernardino County and Riverside County, including the Coachella Valley.

the surrounding community. Huntington Beach and Ormond Beach have a low-level health risk classification and are exempt from quadrennial air toxics emission reporting. The risk status for both Alamitos and Scattergood are pending review by SCAQMD. State Water Board staff is tracking this matter.

Permitting and Compliance

Each facility under consideration for the proposed extensions has a valid Title V permit and can continue operating in accordance with its permit.² Each facility must also comply with any future applicable federal, state, and local air regulatory requirements that are incorporated at a later date. Operation of Alamitos, Huntington Beach, and Ormond Beach through 2026, and Scattergood through 2029, will require that each facility apply to renew its Title V permit in accordance with local air district permitting procedures and timelines, including any requirements for public notice. Title V permits may include conditions establishing air pollutant emission standards, limits on fuel consumption, visible emission standards, and other air program requirements. Based on information available to CARB, SCAQMD, and VCAPCD, facilities are in compliance with applicable rules and regulations as of November 2022.

VCAPCD indicated that there are no NOVs or Notices to Comply (NTCs) for Ormond Beach issued since August 2021, when the last OTC Policy extension was considered.³ For the power plants in SCAQMD, a total of three NOVs and one NTC were issued since August 2021 for Alamitos and Scattergood. They included two NOVs at Alamitos, one for visible emissions and one for a self-reported violation of the permitted ammonia injection rate for the selective catalytic reduction control device. At Scattergood, one NOV was issued for inaccurate reporting of annual Regional Clean Air Incentives

² The current Title V permits for Alamitos expire on April 21, 2025; Scattergood on January 13, 2025; and Ormond Beach on December 31, 2023. The Title V permit for Huntington Beach expired on April 28, 2021; however, the facility submitted a renewable application to the SCAQMD on October 22, 2020, which qualifies it to continue operating under the terms and conditions of the permit until it is renewed.

³ VCAPCD reports there are no NOVs or NTCs dating back to 2013.

Market (RECLAIM) emissions and one NTC was issued related to ammonia slip testing. These NOV's and NTCs have since been resolved.⁴

Rulemaking

The SCAQMD is continuing to develop command-and-control rules to replace its local market-based pollutant trading RECLAIM program. All OTC power plants within the SCAQMD's jurisdiction participate in RECLAIM. The SCAQMD Rule 1135 sets Best Available Retrofit Control Technology (BARCT) level emissions standards for oxides of nitrogen (NO_x). The SCAQMD Rule 429.2 is a companion rule to Rule 1135 that establishes requirements for generating unit startup, shutdown, and malfunction events, along with monitoring, recordkeeping, and reporting requirements. Rules 1135 and 429.2 exempt OTC generating units through their OTC Policy compliance dates from certain provisions, until December 31, 2029. However, owners and operators that remove the OTC system to comply with the OTC Policy, but continue operating the generating units, will be expected to comply with the Rule 1135 NO_x emission limits. Rule 429.2 also exempts OTC units that will retire by their corresponding OTC Policy compliance date from certain provisions through December 31, 2029, including startup and shutdown duration limits, limits to the number of scheduled startups, and installing a temperature device. Since Alamitos, Huntington Beach, and Scattergood will comply with the OTC Policy by retiring their units, the units are eligible for the limited-term Rule 1135 and Rule 429.2 exemptions if they follow provisions set forth in the rules.

New Source Review emission offset requirements for OTC power plants undergoing repower are satisfied through access to the SCAQMD's internal offset bank on a fee basis through provisions in Rules 1304 and 1304.1. Although RECLAIM program transition work is ongoing, the SCAQMD currently does not have plans to change the eligibility of these power plants' access to the internal offset bank. However, the New Source Review regulation is undergoing the amendment process and there may be changes to how offsets are calculated per guidance from U.S. EPA. These changes

⁴ Information is available through the SCAQMD Facility Information Detail (F.I.N.D.) web tool at: <http://www.aqmd.gov/nav/FIND>

may impact the amount of offsets required for future projects involving replacement of OTC units with other equipment, but they should not impact the availability of those offsets.

SCAQMD will evaluate any permitting requirements that apply to the Scattergood hydrogen-ready turbine capacity that will be replacing the fossil gas units. CARB will continue to monitor and coordinate with SCAQMD on any permitting issues associated with the Scattergood power plant. The State Water Board continues to coordinate with CARB on this matter.

Greenhouse Gas Emissions

CARB has indicated it is committed to meeting the state's climate change goals through the implementation of multiple complementary policies. CARB's Climate Change Scoping Plan and five-year updates provide the state's overarching strategy to meet GHG emission reduction and other targets established in legislation and Executive Orders. The 2017 Scoping Plan outlined a variety of actions to meet the SB 32 2030 GHG emissions target of 40 percent below 1990 emission levels, including modeling desired future GHG emissions levels for the electricity sector. SB 350 directs CARB, in coordination with the CPUC and CEC, to establish 2030 GHG emission planning targets for the electricity sector in general and for each electricity provider, and the Scoping Plan's modeling informs the electricity sector GHG planning targets. These sector planning targets serve as the basis for individual electricity providers under the Integrated Resource Planning process. To meet these planning targets, electricity providers are required to develop and submit integrated resource plans that detail how they will meet their customer's resource needs, reduce GHG emissions, and ramp up deployment of renewable and zero-carbon resources. The 2022 Climate Change Scoping Plan for Achieving Carbon Neutrality, which included an updated electricity sector GHG emissions planning target range, was approved by the CARB Board on December 15, 2022.⁵

⁵ Additional information is available on the [California Air Resources Board's website](#).

Additionally, in 2013, the state implemented a Cap-and-Trade Program that places a strict declining cap on primary sources of GHG emissions, including large power plants. These entities must comply by acquiring and submitting to CARB emissions allowances and a limited number of compliance offset credits in amounts that equal their annual covered emissions. In December 2022, CARB announced that all entities covered by the Cap-and-Trade Program met their compliance obligations for covered GHG emissions for 2021.

OTC power plants will be expected to meet all applicable state, federal, and local air quality rules and regulations during the extension period.

5.6. Water Quality Permitting

The following section describes water quality permitting information related to the proposed compliance date extensions for Alamitos, Huntington Beach, Ormond Beach, and Scattergood.

Alamitos

On November 12, 2020, the Los Angeles Regional Water Board adopted Order R4-2020-0134, which renewed the waste discharge requirements and NPDES permit (Order) for Alamitos. Order R4-2020-0134 prescribes effluent limitations for the discharge of OTC water and low-volume wastes to the San Gabriel River Estuary and for the discharge of storm water to the Los Cerritos Channel Estuary.

The NPDES permit issued to Alamitos by the Los Angeles Regional Water Board will expire on December 31, 2025. Pursuant to Section 13376 of the Water Code, the permittee may submit an application and complete Report of Waste Discharge to renew the permit at least 180 days prior to the expiration date of Order R4-2020-0134.

As described in greater detail in Section 8 of this report, the associated Time Schedule Order (TSO) R4-2020-0135, which sets interim effluent limitations for temperature, total residual chlorine, copper, nickel, Bis(2-ethylhexyl)phthalate, enterococcus, and total suspended solids, will expire on December 31, 2023. Once the TSO R4-2020-0135 expires, the discharger may request another TSO extension; however, it would be

limited to a period not to exceed 10 years from the effective date of the original TSO, R4-2015-0174, which was adopted by the Los Angeles Regional Water Board and became effective on September 10, 2015.

Huntington Beach

On December 4, 2020, the Santa Ana Regional Water Board adopted Order R8-2020-0040, which renewed the waste discharge requirements and NPDES permit for Huntington Beach. Order R8-2020-0040 prescribes effluent limitations for the discharge of OTC water, wastewater associated with bio-fouling control and heat treatment, boiler blowdown, condensate overboard, treated wastewater from retention basins, storm water runoff, and urban runoff to the Pacific Ocean.

The NPDES permit issued to Huntington Beach by the Santa Ana Regional Water Board will expire on December 31, 2025. Pursuant to Section 13376 of the Water Code, the permittee may submit an application and a complete Report of Waste Discharge to renew the permit at least 180 days prior to the expiration date of Order R8-2020-0040.

Ormond Beach

On November 12, 2020, the Los Angeles Regional Water Board adopted Order R4-2020-0132, which renewed the waste discharge requirements and NPDES permit for Ormond Beach. Order R4-2020-0132 prescribes effluent limitations for the discharge of OTC water, low-volume wastes, and storm water to the Pacific Ocean.

The NPDES permit issued to Ormond Beach by the Los Angeles Regional Water Board will expire on December 31, 2025. Pursuant to Section 13376 of the Water Code, the permittee may submit an application and a complete Report of Waste Discharge to renew the permit at least 180 days prior to the expiration date of Order R4-2020-0132.

Scattergood

On February 11, 2016, the Los Angeles Regional Water Board adopted Order R4-2016-0055, which renewed the waste discharge requirements and NPDES permit for Scattergood. Order R4-2016-0055 prescribes effluent limitations for the

discharge of OTC water, industrial process waters, and storm water to the Pacific Ocean.

On March 18, 2021, the Los Angeles Regional Water Board administratively extended Scattergood's NPDES permit after receiving a complete Report of Waste Discharge from the LADWP. The terms and conditions of Order R4-2016-0055 continue to be in full effect pending action on a new or revised permit by the Los Angeles Regional Water Board.

5.7. Environmental Justice Considerations

The State Water Board continually works to implement its mission to preserve, protect, and restore water resources for all Californians. The intent of the OTC Policy is to ensure that the beneficial uses of the state's coastal and estuarine waters are protected while also ensuring that the electrical power needs essential for the welfare of the residents of the state are met. The State Water Board also works towards environmental justice. Public Resources Code section 30107.3(a) defines environmental justice as the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to the development, adoption, implementation, and enforcement of environmental law, regulations, and policies.

In September 2022, Governor Newsom signed AB 2108, through which the State Legislature found and declared that disadvantaged communities are disproportionately impacted by water quality pollution and the top 10 percent of the most polluted neighborhoods are 90 percent Black, Indigenous, and people of color. AB 2108 states that it is the intent of the Legislature to facilitate the development of analyses and findings that apply environmental justice objectives, goals, and policies adopted by the State Water Board in a transparent and inclusive manner. AB 2108 also directs the State and Regional Water Board to engage in appropriate outreach to identify issues of environmental justice as early as possible in planning, policy, and permitting processes. This section of the Staff Report is intended to describe outreach consistent with AB 2108 and present environmental justice analyses and findings associated with the

extension of compliance dates for Alamitos, Huntington Beach, Ormond Beach, and Scattergood in accordance with AB 2108.

The proposed amendment aims to ensure statewide and local grid reliability necessary to ensure the welfare of all residents of the State; however, the proposed extensions will allow continued water quality impacts, such as impingement and entrainment of marine life and continued discharge operations regulated under NPDES permits associated with the use of OTC intakes at OTC power plants that, prior to this amendment, were planned for retirement by December 31, 2023.

Impacted Groups

The State Water Board also acknowledges that the OTC power plants are located on or near the unceded historic territories of some California Native American Tribes. As identified on the digital atlas provided by the California Native American Heritage Commission and the California Department of Parks and Recreation, the OTC power plants are located on or near the unceded territories of the following Tribes:

- Alamitos, Huntington Beach, and Scattergood: Gabrieleño (Tongva)
- Ormond Beach: Chumash

Disadvantaged communities (DAC) were identified using the California Office of Environmental Health Hazard Assessment (OEHHA) CalEnviroScreen 4.0, which is based on geographic, socioeconomic, public health, and environmental hazard data. While AB 2108 defines a DAC as a community in which the median household income is less than 80 percent of the statewide annual median household income level, use of the CalEnviroScreen 4.0 results in a broader number of DACs as it considers more than economic factors.

In May 2022, the California Environmental Protection Agency formally designated four categories of geographic areas as disadvantaged:

1. Census tracts with the highest 25 percent of overall scores in CalEnviroScreen 4.0;

2. Census tracts with the highest five percent of cumulative pollution burden indicator scores in CalEnviroScreen 4.0;
3. Census tracts identified in the 2017 DAC designations as disadvantaged; and
4. Lands under the control of federally recognized Tribes.

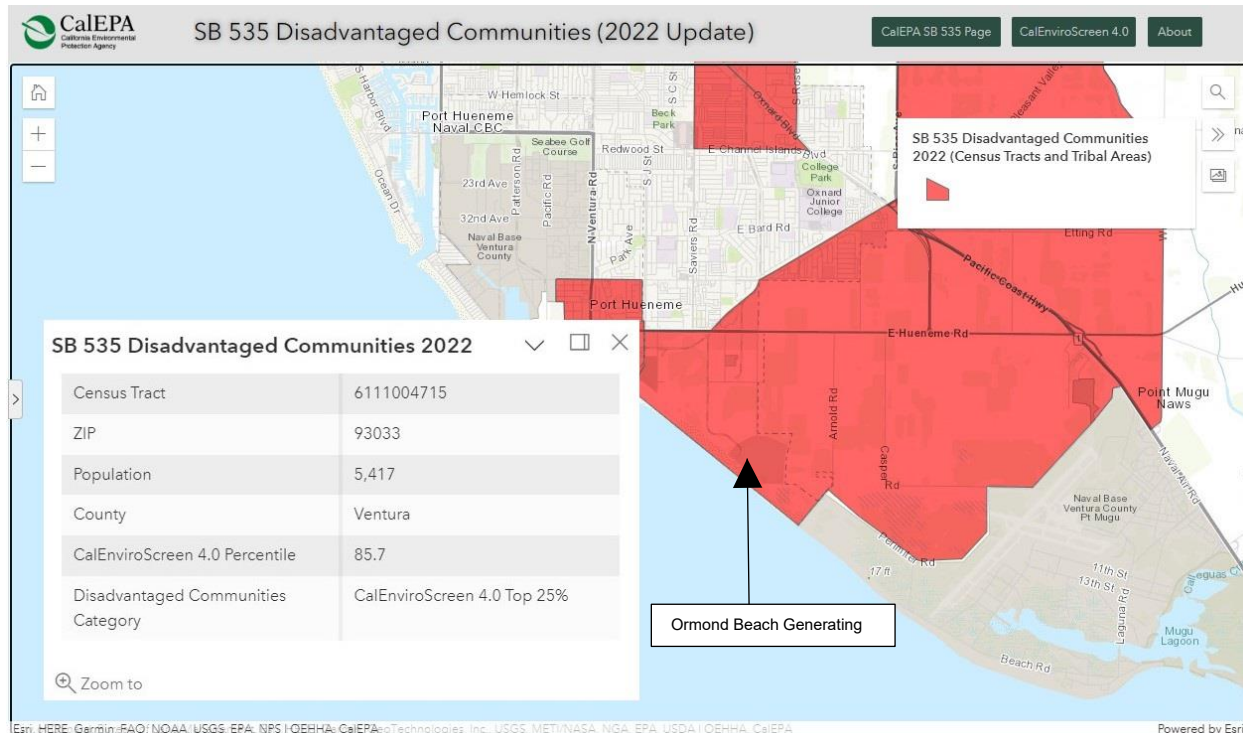
According to CalEnviroScreen 4.0, Alamitos, Ormond Beach, and Scattergood are located in DACs with the following categorical designations:

- Alamitos: CalEnviroScreen 4.0 High Pollution Burden Score and Low Population Count (population: 0)
- Ormond Beach (Figure 4): CalEnviroScreen 4.0 Top 25 percent
- Scattergood: CalEnviroScreen 4.0 High Pollution Burden Score and Low Population Count (population: 0)

The DACs in which Alamitos and Scattergood are located are industrial areas with low population. Additionally, Scattergood is located near a major international airport (Los Angeles International Airport).

Ormond Beach is located in a DAC with residential areas. The area of the DAC is shown in Figure 4.

Figure 4: Disadvantaged Community with Ormond Beach Generating Station



Anticipated Water Quality Impacts and Measures to Address Impacts

Within this section, anticipated adverse water quality impacts and measures available to address the impacts are specific to environmental justice considerations associated with AB 2108 and are not equivalent to adverse environmental impacts and reasonably foreseeable methods of compliance per CEQA. As discussed above, this amendment does not constitute a project within the meaning of CEQA because it continues the status quo and does not result in any direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment beyond what was considered in the 2010 Final SED. Section 8 of this Staff Report includes additional information regarding CEQA.

The anticipated adverse water quality impacts associated with the extending the OTC Policy compliance dates for Alamitos, Ormond Beach, Huntington Beach, and Scattergood generating stations are impingement and entrainment of marine life resulting from OTC intakes and impacts associated with allowing the permitted

discharges of pollutants from the power plants to continue. While impingement and entrainment of marine life associated with the use of the OTC intakes had occurred for decades, requirements for immediate and interim mitigation measures were implemented in 2011 and 2015, respectively, by the State Water Board. Section 2.C of the OTC Policy addresses immediate and interim requirements while power plants continue to use OTC intakes. For example, the Section 2.C(1) of the OTC Policy requires owners or operators of existing power plants with offshore intakes to install large organism exclusion devices and Section 2.C(3) of the OTC Policy requires owners and operators to implement measures to mitigate the interim impingement and entrainment impacts resulting from the cooling water intake structures. The Regional Water Boards also regulate the intake and effluent from these facilities through NPDES permits.

Huntington Beach, Ormond Beach, and Scattergood have installed large organism exclusion devices (Alamitos does not use offshore intake). As described in the 2010 Final SED, while impingement impact does not always result in mortality of the organism, entrainment impact is virtually complete mortality. The preferred method to reduce the adverse effects of entrainment is the use of a barrier technology with pores small enough to exclude organisms that could be entrained or by reducing the facility's intake flow. The proposed extensions to the OTC Policy compliance dates allows for continued use of OTC intakes and, therefore, continued impingement and entrainment impacts.

From October 1, 2015, to September 30, 2021, Alamitos, Huntington Beach, Ormond Beach, and Scattergood cumulatively used approximately 226,000 million gallons of ocean or estuarine water for cooling annually. Each gallon of water used has an impact when planktonic organisms, including larvae, within that water are entrained and killed. In the same time period, approximately 850 pounds of marine organisms, such as fish, annually were impinged against OTC intake structures. In the same time period, approximately 850 pounds of marine organisms, such as fish, annually were impinged against OTC intake structures. Based on these annual averages, the continued operation of OTC intakes by these four power plants could cumulatively use

approximately 768,000 million gallons of cooling water and impinge 2,600 pounds of fish from the current compliance dates through their proposed new compliance dates. The following are the projected annual averages of OTC intake volumes and pounds of fish and other marine organisms impinged of each power plant:

- Alamitos: 104,000 million gallons of OTC intake and 160 pounds of fish;
- Huntington Beach: 41,000 million gallons of OTC intake and 590 pounds of fish;
- Ormond Beach: 37,000 million gallons of OTC intake and 38 pounds of fish;
- Scattergood: 45,000 million gallons of OTC intake and 62 pounds of fish.

Measures within the State Water Board's authority to address impingement and entrainment impacts are currently in place through the OTC Policy's provision that existing power plants must implement measures to mitigate the interim impingement and entrainment impacts resulting from OTC intakes during operation until final compliance with the OTC Policy is achieved. Section 5.3 of this Staff Report describes additional information on interim mitigation requirements.

The Regional Water Boards also regulate the intake and effluent from these power plants through NPDES permits. As described in Sections 5.3 and 8.2 of this Staff Report, the NPDES permits regulate water quality impacts associated with continued pollutant discharges. The above listed sections also include compliance summaries for each generating station. Extending the compliance dates for Alamitos, Huntington Beach, Ormond Beach, and Scattergood will result in continued OTC-related discharges of pollutants under these permits.

For discharge-related water quality impacts from ongoing operation of these power plants, owners and operators had elected to comply with the OTC Policy by retiring or repowering the power plants, which will cease intake and discharge related to the OTC Policy and meet mitigation measures. To the extent there are any measures to reduce exceedances of pollutant parameters in an NPDES permit, the State Water Board would expect Regional Water Boards to require their implementation.

Outreach

In accordance with AB 2108, the State Water Board staff is currently conducting outreach and plans to conduct additional outreach to identify potential environmental justice issues, tribal impacts, and racial equity considerations associated with the proposed amendment to the OTC Policy. The majority of the outreach will occur before and during the public comment period of January 31 to March 17, 2023. Outreach plans include direct communication with representatives of the Chumash and Gabrieleño (Tongva) tribes, direct communication with representatives of the disadvantaged community near Ormond Beach generating station, use of a fact sheet or a frequently-asked-questions handout to focus on environmental justice issues, questions to help the Water Board identify any missing environmental justice issues, and broadly distributed notices of the opportunity to comment throughout California.

Proposed Concise, Programmatic Findings Pursuant to Water Code Section 13149.2

AB 2108 (through Water Code section 13149.2) requires the State Water Board to make findings on (1) anticipated water quality impacts in disadvantaged or tribal communities as a result of a permitting activity or facility, and any racial equity and environmental justice concerns raised regarding such water quality impacts, and (2) available measures within the State Water Board's authority to address such water impacts when, as proposed here, the State Water Board considers adopting an amendment to the OTC Policy. Because the proposed action is an amendment to a state water quality control policy, the required concise, programmatic findings, are made at a general rather than individual community level. However, because only four power plants are affected by the proposed amendment to the OTC Policy, the State Water Board's findings also address anticipated water quality impacts in disadvantaged or tribal communities from continued impingements of marine life, intakes, and discharges from these power plants at the individual community level, and any racial equity and environmental concerns raised regarding such water quality impacts. The following is the proposed finding:

On September 16, 2022, the Governor signed into law Assembly Bill No. 2108 (Assem. Bill No. 2108 (2021-2022 Reg. Sess.)) to address the disadvantaged and tribal communities disproportionately impacted by water quality pollution. The State Water Board acknowledges that the proposed extension of OTC Policy compliance dates of Alamitos, Huntington Beach, Ormond Beach, and Scattergood, may result in adverse water quality impacts to the disadvantaged community surrounding Ormond Beach and the lands of the Chumash and Gabrieleño (Tongva) Tribes.

The adverse water quality impacts per Water Code section 13149.2 are the impingement and entrainment of marine and estuarine life from approximately 769,000 million gallons of ocean and estuarine water projected to be used for once-through cooling each year until the extended compliance dates, as described in Section 5.7 of the Staff Report for the amendment to the OTC Policy. Measures within the State Water Board's authority to address impingement and entrainment are currently in place through the OTC Policy provision that existing power plants must implement measures to mitigate the interim impingement and entrainment impacts resulting from cooling water intakes during operation until final compliance with the OTC Policy is achieved. As addressed in Section 8 of the Staff Report for the amendment to the OTC Policy, the proposed compliance date extensions do not constitute a substantial change in the project's environmental baseline. Therefore, owners and operators of power plants will continue to comply with the interim mitigation requirements in Section 2.C(3) of the OTC Policy until they achieve final compliance to offset water quality impacts analyzed in the 2010 Final Substitute Environmental Document.

Additionally, adverse water quality impacts of the proposed OTC Policy compliance date extensions include continued pollutant discharges from ongoing operation of the Alamitos, Huntington Beach, Ormond Beach, and Scattergood generating stations pursuant to NPDES discharge permits as described in Sections 5.3 and 8.2 of the Staff Report for the amendment to the OTC Policy.

Owners and operators of the power plants had elected to comply with the OTC Policy by retiring or repowering the power plants, which will cease intake and discharge related to the OTC Policy and meet mitigation measures. To the extent there are any measures to reduce exceedances of pollutant parameters in an NPDES permit, the State Water Board would expect Regional Water Boards to require their implementation.

The State Water Board conducted outreach to the above-mentioned communities to engage in and identify issues of environmental justice as early as possible, with the majority of the outreach occurring before and during the public comment period of January 31 to March 17, 2023.

6. Administrative Revisions

6.1. Senate Bill 846's Once-Through Cooling Policy Compliance Date Extension for Diablo Canyon Nuclear Power Plant

In 2020, the State Water Board amended the OTC Policy compliance dates of Diablo Canyon Units 1 and 2 to match the Nuclear Regulatory Commission expiration dates of November 2, 2024, for Unit 1, and August 26, 2025, for Unit 2. On September 2, 2022, Governor Newsom signed into law SB 846, which took effect immediately and set a new OTC Policy compliance date for Diablo Canyon Units 1 and 2, conditioned upon the U.S. Nuclear Regulatory Commission extending the powerplant's operating licenses. SB 846 adds section 13193.5 to the Water Code, which specifies in part:

“Notwithstanding any provision to the contrary in the State Water Resources Control Board's Water Quality Control Plan on the Use of Coastal and Estuarine Waters for Power Plant Cooling . . . the final compliance dates for Diablo Canyon Units 1 and 2 shall be October 31, 2030.”

The proposed amendment includes an administrative, non-regulatory change to the compliance dates listed in the OTC Policy for Diablo Canyon Units 1 and 2. This change will ensure the OTC Policy is consistent with the compliance date that was already extended by SB 846, providing the reader with an accurate accounting of OTC Policy compliance dates. No regulatory effects will occur as a result of this change.

Although Diablo Canyon uses large volumes of water compared to the other OTC power plants, Diablo Canyon’s impacts are expected to be at or below baseline impacts established in the 2010 Final SED. Furthermore, per SB 846, the owners and operators of Diablo Canyon will be subject to the interim mitigation requirements in Section 2.C(3) of the OTC Policy through October 31, 2030. In addition, the owners and operators of Diablo Canyon shall consult and work collaboratively with local California Native American tribes connected and interested in the lands, but not limited to, upon which Diablo Canyon is currently sited.

6.2. SACCWIS Reporting to the State Water Board

In addition to revising the compliance dates of Diablo Canyon, the proposed amendment would specify that the SACCWIS will report to the State Water Board on the status of OTC Policy implementation at least through 2026. The OTC Policy presently requires the SACCWIS to report to the State Water Board with recommendations on modifications to the implementation schedule annually. The proposed language would ensure that the SACCWIS continues to report to the State Water Board annually while Strategic Reserve power plants continue to operate. The proposed amendment would also include language recognizing the SACCWIS may reconvene on an as-needed basis beyond 2026 to address grid reliability concerns affecting existing OTC power plants.

7. Analysis of Alternatives

This section presents alternatives of the proposed amendment to the OTC Policy under consideration. It should be noted that the alternatives beginning with the prefix “A” pertain to the three power plants within the CAISO’s BAA (Alamitos, Huntington Beach, and Ormond Beach), and the alternatives beginning with the prefix “B” pertain to the power plant within the LADWP’s BAA (Scattergood).

Alternative A1 (Preferred) – Amend the OTC Policy to extend the compliance dates for Alamitos, Huntington Beach, and Ormond Beach by three years from December 31, 2023, to December 31, 2026, as unanimously recommended by the SACCIWS.

Alternative A2 – Amend the OTC Policy to extend the compliance dates for Alamitos, Huntington Beach, Ormond Beach, and Redondo Beach by three years from December 31, 2023, to December 31, 2026.

Alternative A3 – No action. Alamitos, Huntington Beach, and Ormond Beach would stop using ocean water for OTC on or before December 31, 2023. California may be at higher risk of experiencing load shedding during times when electrical demand is high or contingency scenarios.

Alternative B1 (Preferred) – Amend the OTC Policy to extend the compliance date for Scattergood by five years from December 31, 2024, to December 31, 2029, as requested by the LADWP and supported by a quorum of the SACCWIS.

Alternative B2 – No action. Scattergood would stop using ocean water for OTC on or before December 31, 2024. The LADWP's Westside Sub-Area may experience load shedding when electrical demand is high or contingency scenarios.

The State Water Board is considering an amendment to the OTC Policy consistent with Alternative A1, to extend the compliance date for Alamitos, Huntington Beach, and Ormond Beach for three years until December 31, 2026. The need to extend Alamitos', Huntington Beach's, and Ormond Beach's compliance dates to address system grid reliability concerns is supported by the SACCWIS recommendation, the information in the Special 2022 SACCWIS Report, and the information in this Staff Report.

The State Water Board is also considering an amendment to the OTC Policy consistent with Alternative B1, to extend the compliance date for Scattergood for five years until December 31, 2029. The need to extend Scattergood's compliance date to address local reliability concerns is supported by a SACCWIS vote of support for the LADWP's request, the information in the Special 2022 SACCWIS Report, and the information in this Staff Report.

Additionally, the State Water Board is including an administrative, change without regulatory effect to Diablo Canyon's compliance date in the potential amendment. As described in greater detail in Section 6, Diablo Canyon's compliance date was extended

through October 31, 2030, through SB 846. Finally, the State Water Board is including an administrative revision to specify that the SACCWIS will report to the State Water Board on the status of OTC Policy implementation at least through 2026, to match the compliance dates of fossil-fueled power plants in the CAISO's BAA.

8. Addendum to the 2010 Final Substitute Environmental Documentation

8.1. Introduction

CEQA applies to a governmental action that could cause a significant effect on the environment, defined as “a substantial adverse change in the physical conditions which exist in the area affected by the proposed project.” (Cal. Pub. Resources Code § 21068; Cal. Code Regs., tit. 14, § 15002, subd. (b), (g).) The State Water Board adopted CEQA regulations at Title 23, California Code of Regulations, sections 3720-3782 to set forth rules and procedures that apply for environmental review of actions subject to the Board's certified regulatory process. These regulations require the State Water Board to evaluate potential environmental impacts associated with adopting the OTC Policy. In 2010, the State Water Board certified a SED in accordance with these regulations, which at that time required a written report containing the following:

- (1) a brief description of the proposed activity;
- (2) reasonable alternatives to the proposed activity; and
- (3) mitigation measures to minimize any significant adverse environmental impacts of the proposed activity.

(Title 23, California Code of Regulations, § 3777, subd. (a) (2010))

The State Water Board revised its CEQA regulations in 2011. The revisions provide more detail on the requirements for a substitute environmental document, which now must include the following:

- (1) A brief description of the proposed project;
- (2) An identification of any significant or potentially significant adverse environmental impacts of the proposed project;

- (3) An analysis of reasonable alternatives to the project and mitigation measures to avoid or reduce any significant or potentially significant adverse environmental impacts; and
- (4) An environmental analysis of the reasonably foreseeable methods of compliance. The environmental analysis shall include, at a minimum, all the following:
 - (A) An identification of the reasonably foreseeable methods of compliance with the project;
 - (B) An analysis of any reasonably foreseeable significant adverse environmental impacts associated with those methods of compliance;
 - (C) An analysis of reasonably foreseeable alternative methods of compliance that would have less significant adverse environmental impacts; and
 - (D) An analysis of reasonably foreseeable mitigation measures that would minimize any unavoidable significant adverse environmental impacts of the reasonably foreseeable methods of compliance.

(Title 23, California Code of Regulations, § 3777, subd. (b). (eff. 2/18/11))

The State Water Board regulations governing CEQA compliance do not apply when the Board determines that the activity is not subject to CEQA. Title 23, California Code of Regulations, § 3720, subd. (b).

Prior to adopting the OTC Policy in 2010, the State Water Board conducted a programmatic analysis to assess the potential for adverse environmental impacts that could be caused by requiring power plant owners to comply with the OTC Policy by employing one or more of the reasonably foreseeable compliance methods. To assess any potential effects, the State Water Board looked to the environmental setting, the physical conditions in the vicinity of the project as they existed at the time of the assessment. These physical conditions are often referred to as the “baseline” and are used to compare the existing physical environment with conditions that may result from approving the project. Tit. 14 Cal. Code Regs., Section 15125. The CEQA baseline is interpreted to include previously existing development and activities (*Citizens for East Shore Parks v. State Lands Commission* (2011) 202 Cal.App.4th 549, 560).

The 2010 Final SED for the OTC Policy describes and evaluates potential environmental impacts associated with installation of better technologies, closed-cycle wet cooling or equivalent, and potential mitigation measures for impacts associated with installation or use of those technologies. Because all OTC facilities affected by the OTC Policy were operating at the time of the 2010 Final SED, impacts associated with continued operation of those facilities were not analyzed as a potential impact associated with adoption of the OTC Policy or with reasonably foreseeable methods of compliance with the OTC Policy. Instead, impacts associated with operation of the affected power plants were considered as part of the environmental setting, or baseline against which to assess the effects of requiring compliance with the OTC Policy. Continued operation of the power plants did not constitute a substantial adverse change in the physical conditions existing at the time the OTC Policy was adopted.

The State Water Board included compliance schedules for each of the affected power plants and convened the SACCWIS to advise on energy needs affecting those compliance schedules. This was part of the original OTC Policy adoption, in order to prevent disruptions in electricity reliability as the OTC Policy was implemented. In planning the compliance schedule, the State Water Board was not required to evaluate the environmental effects of allowing plants to continue operation for differing numbers of years, since that operation was part of the baseline against which adoption of the OTC Policy was measured to determine its potential environmental effects.

The extension of specific compliance dates for purposes of grid reliability being considered now continues the baseline environmental setting that existed at the time of the 2010 adoption of the OTC Policy. In addition, because the OTC Policy as adopted and as analyzed in the 2010 Final SED explicitly included the potential for compliance date extensions, any new extension is a part of the project as originally analyzed. Extending a compliance date is not a new, independent action that requires CEQA analysis under these circumstances. Moreover, the proposal to extend the deadlines for the facilities does not constitute a project within the meaning of CEQA, because it continues the status quo and does not result in any direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment.

Nonetheless, the State Water Board prepared this addendum in order to provide additional information regarding energy demand and operation of affected power plants. An addendum to a previously certified environmental impact report or equivalent such as a substitute environmental document is appropriate if some changes or additions are necessary but none of the conditions requiring preparation of a subsequent environmental document have occurred (Tit. 23, Cal Code Regs., § 15164). The conditions requiring preparation of a subsequent environmental document are those where the lead agency determines, on the basis of substantial evidence in light of the whole record, one or more of the following:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous [Environmental Impact Report (EIR)] or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more

significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

- (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

(Title 14, Cal. Code of Regs., § 15162, subd. (a).)

These conditions have not been met. The compliance date extensions are not a substantial change in the project, as compliance date extensions for grid reliability were part of the original project. There are no identified substantial changes with respect to the circumstances under which the project is undertaken that would involve new significant environmental effects resulting from compliance with the OTC Policy, as opposed to continued operation as per baseline conditions, nor are there significant effects of reasonably foreseeable methods of compliance with the OTC Policy that were not discussed previously or are shown to be substantially more severe than previously demonstrated. Finally, no new information has been identified that was not known at the time the 2010 Final SED was certified and that would show the compliance date extension to involve new significant effects or substantially more severe significant effects resulting from OTC Policy compliance or involve mitigation measures or alternatives previously found not feasible or different from those analyzed. Because these conditions have not been met, the preparation of a subsequent substitute environmental document is not necessary. Therefore, an addendum is appropriate, in order to reflect the changes or additions described below.

Section 5 above describes new developments concerning the need for continued operation of the facilities to ensure grid reliability. Section 5.2 of this Staff Report, including Figure 2, provides new information regarding projected ocean and estuarine water used for OTC statewide. Daily average OTC water use on a statewide scale, excluding Diablo Canyon's recent legislative extension, is projected to be at or below

design flow rates from the original OTC Policy compliance schedule when the Policy was adopted in 2010.

OTC water use is associated with the amount of time a facility is actively operating. Air quality and noise impacts are also associated with active operation. Therefore, air quality and noise impacts on a statewide scale are projected to be at or below the impacts expected under the original OTC Policy compliance schedule.

Following is a summary of the major findings of the 2010 Final SED, together with further updated information and related regulatory developments.

8.2. Water Quality and Biological Resources

The 2010 Final SED concluded that less than significant (where the effect will not be significant and mitigation is not required) to no environmental impacts would result from implementation of the evaluated reasonably foreseeable methods of compliance with the OTC Policy. The State Water Board evaluated potential changes in effluent limitations in the case of installation of cooling towers to comply with the OTC Policy. However, many OTC facilities opted to retire OTC generating units to comply with the OTC Policy, which meets OTC Policy Track 1 requirements.

For the facilities included in this proposed amendment, Alamos Units 1, 2, and 6 complied with the OTC Policy on December 31, 2020, per their OTC Policy compliance date. Huntington Beach Unit 1 complied with the OTC Policy on December 31, 2019, and Units 3 and 4 complied on October 31, 2012. Scattergood Unit 3 complied on December 31, 2015. All remaining operational OTC facilities plan to comply with the OTC Policy by retiring their OTC units by their associated compliance dates. For these units, environmental impacts are at or below the baseline established at the time of adoption of the 2010 Final SED, as described above. The following sub-sections contain water quality and biological resources-related information for each of the natural gas-fired facilities included in the proposed amendment.

Alamitos

Alamitos is located on the bank of the San Gabriel River just north of the Orange County line, and it withdraws water from Alamitos Bay through surface and shoreline intakes. Alamitos Bay is classified as an enclosed bay and estuary.

OTC Usage and Discharge: Cooling water for Alamitos is drawn from the Los Cerritos Channel Estuary and is discharged to the San Gabriel River Estuary. Units 3 and 4 withdraw cooling water from a cooling water intake structure located in a canal connected to the Los Cerritos Channel Estuary. Unit 5 withdraws cooling water from a second canal on the south end of the facility, also connected to the Los Cerritos Channel Estuary. There are two intake forebays per unit which are equipped with curtain walls and traveling screens to prevent debris from entering the cooling water system.

Non-OTC Wastes: Low-volume wastewater includes wastewater from boiler blowdown, condenser overboard, reverse osmosis reject water, and in-plant drains. All these waste streams are intermittent.

Metal cleaning wastes, both chemical and non-chemical, are periodically generated when the metallic surfaces of the facility systems are cleaned. The facility previously discharged these wastes to the receiving water. The discharge of metal cleaning wastes has ceased, and these wastes are now contained and transported offsite to an authorized waste facility.

The facility's previous order, Order R4-2015-0173, included effluent limitations for sanitary wastewater that was treated on-site prior to discharge to the receiving waters. In September 2018, AES constructed a sewer line and decommissioned the on-site treatment plant. The discharge of treated sanitary wastewater has therefore ceased and sanitary wastewater is now discharged to the Los Angeles County Sanitation District's wastewater system.

Biofouling Control: Marine biofouling of the cooling water conduits and forebay is controlled by chlorine injection. The facility removes calcareous shell debris that

accumulates within the intake screen structure by performing manual pick and cleans when the circulation pumps are non-operative. Heat treatment was previously used to remove the calcareous shell debris, but AES has not heat treated since 2002.

Wastewater Treatment: Low-volume wastewater is collected in the facility's retention basin prior to being discharged.

Discharge Point and Receiving Waters: The facility discharges OTC water commingled with internal process wastewater to the San Gabriel River Estuary through two channel bank outfalls along the western bank of the river. Discharge Point 002 discharges OTC water from Units 3 and 4. Discharge Point 003 discharges OTC water from Unit 5.

The San Gabriel River Estuary is located along the heavily urbanized Los Angeles-Orange County Line. The San Gabriel River Estuary is subject to requirements of the State Water Board's Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (also known as the State Implementation Plan or SIP), which is applicable to the inland surface waters, enclosed bays, and estuaries of the state. The facility's order regulates the discharge of OTC water and process wastewater to the San Gabriel River Estuary and implements the SIP.

Compliance Summary: Monitoring data submitted to the Los Angeles Regional Water Board during the effective term of the facility's previous permit (January 2016 through May 2020) indicate that the discharger violated numeric effluent limitations for discharges, predominantly related to exceedances of Enterococci. State Water Board staff is not currently aware of any compliance or enforcement actions by the Los Angeles Regional Water Board.

Impaired Waters: Certain receiving waters in the Los Angeles Region do not fully support beneficial uses and therefore were classified as impaired on the 303(d) List of Water Quality Limited Segments (303(d) list) for 2020-2022 and have been scheduled for Total Maximum Daily Load (TMDL) development. The facility discharges into the

San Gabriel Estuary. The 2020-2022 303(d) List classifies the San Gabriel Estuary as impaired. The pollutants of concern in the estuary include: copper, dioxin, indicator bacteria, nickel, and dissolved oxygen.

The facility also discharges storm water runoff to the Los Cerritos Channel Estuary. The 2014-16 303(d) List classifies the freshwater portion of Los Cerritos Channel as impaired. The pollutants of concern are: ammonia, bis(2-ethylhexyl) phthalate, chlordane (sediment), indicator bacteria, copper, lead, pH, trash, and zinc. The freshwater portion of Los Cerritos Channel is upstream of the storm water discharge from this facility. The 2020-2022 303(d) List also classifies Alamitos Bay, which is downstream of the estuary and the facility, as impaired. The pollutants of concern include indicator bacteria and dissolved oxygen.

San Gabriel River Metals and Selenium TMDL: The U.S. EPA established the TMDL for Metals and Selenium, San Gabriel River, and Impaired Tributaries (San Gabriel River Metals and Selenium TMDL) on March 26, 2007. The Los Angeles Regional Water Board adopted Resolution No. R13-004 on June 6, 2013, that amended the Basin Plan to incorporate the Implementation Plan for the San Gabriel River Metals and Selenium TMDL. The San Gabriel River Metals and Selenium TMDL Implementation Plan was approved by the Office of Administrative Law on October 13, 2014. The TMDL's compliance schedule authorizing provisions were approved by U.S. EPA on May 11, 2017. The TMDL contains requirements applicable to AES' discharges. Therefore, the facility's order contains effluent limitations and monitoring requirements based on the TMDL.

Los Cerritos Channel Metals TMDL: The U.S. EPA established the Los Cerritos Channel TMDL for Metals (Los Cerritos Channel Metals TMDL) on March 17, 2010. The Los Angeles Regional Water Board adopted Resolution No. R13-004 on June 6, 2013, that amended the Basin Plan to incorporate the Implementation Plan for the Los Cerritos Channel Metals TMDL. The Los Cerritos Channel Metals TMDL Implementation Plan was approved by the Office of Administrative Law on October 13, 2014. The TMDL's compliance schedule authorizing provisions were

approved by U.S. EPA on May 11, 2017. The TMDL contains requirements applicable to the freshwater portion of Los Cerritos Channel. The discharge from the facility is to the Los Cerritos Estuary downstream of the portion of Los Cerritos Channel addressed by the TMDL. Therefore, the facility's order does not contain requirements based on the TMDL.

Harbor Toxics TMDL. The Los Angeles Regional Water Board adopted Resolution No. R11- 008 on May 5, 2011, that amended the Basin Plan to incorporate the TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters (Harbor Toxics TMDL). The Harbor Toxics TMDL was approved by the State Water Board on February 7, 2012; the OAL on March 21, 2012; and the U.S. EPA on March 23, 2012. The Harbor Toxics TMDL contains monitoring requirements applicable to responsible parties identified in the San Gabriel River Metals and Selenium TMDL. Therefore, the facility's order contains monitoring requirements based on the TMDL.

Time Schedule Order: On May 15, 2015, AES submitted a written request for additional time to achieve compliance with certain new effluent limitations contained in Order R4-2015-0173. Based on monitoring data, the Los Angeles Regional Water Board found that interim effluent limitations were appropriate for total residual chlorine, temperature, and copper; and that interim receiving water limitations were appropriate for temperature. On September 10, 2015, the Los Angeles Regional Water Board adopted TSO R4-2015-0174 concurrently with the adoption of Order R4-2015-0173. TSO R4-2015-0174 included interim effluent limitations for total residual chlorine, temperature, and copper, and interim receiving water limitations for temperature. These were all discharges from a mix of OTC water and process wastewater, discharging through outfalls 001, 002 and 003.

After the adoption of Order and TSO R4-2015-0174, on November 13, 2016, AES submitted a written request for additional time to achieve compliance with the new effluent limitations for bacteria and storm water effluent limitations for total suspended solids contained in Order R4-2015-0173. Based on monitoring data, the Los Angeles

Regional Water Board found that interim effluent limitations were appropriate for enterococcus and total suspended solids. On March 14, 2017, the Los Angeles Regional Water Board's Executive Officer issued TSO R4-2015-0174-A01 that amended TSO R4-2015-0174 to include interim effluent limitations for enterococcus and an interim storm water limitation for total suspended solids.

On March 12, 2018, AES submitted a request to the Los Angeles Regional Water Board to modify the compliance deadlines in TSO R4-2015-0174-A01. The request discussed grid reliability issues involving the CAISO, Southern California Edison, and the CPUC. The Los Angeles Regional Water Board evaluated the request for modification of the compliance schedule and determined that the modification to be appropriate. On June 21, 2018, the Executive Officer issued TSO R4-2015-0174-A02 that amended TSO R4-2015-0174-A01 to include the revised compliance schedule. TSO R4-2015-0174-A02 included the interim limitations described above and expired on December 31, 2020.

On January 22, 2020, AES submitted a written request for additional time, up to December 31, 2023, to achieve compliance with the effluent limitations established in Order R4-2020-0134 for temperature, total residual chlorine, enterococcus, copper, nickel and bis(2-ethylhexyl)phthalate at Discharge Points 002 and 003; and the effluent limitation for TSS at Discharge Points O-48 and O-84. The written request referenced the grid reliability issues previously addressed by the SACCWIS.

In order to comply with the temperature, total residual chlorine, enterococcus, copper, nickel and bis(2-ethylhexyl)phthalate effluent limitations in the discharge to the San Gabriel River Estuary and the receiving water limitations for temperature, AES plans to cease the discharge of OTC water and low-volume wastes, which is consistent with OTC Policy Track 1 compliance.

The Los Angeles Regional Water Board issued the TSO in recognition that AES needs time to complete necessary studies and implement appropriate control measures, including the complete cessation of discharge and implementation of Track 1 compliance. Through the TSO, AES will be required to comply with the final

temperature, total residual chlorine, enterococcus, copper, nickel and bis(2-ethylhexyl)phthalate effluent limitations in the discharge to the San Gabriel River Estuary and the final receiving water limitations for temperature no later than December 31, 2023.

In moving forward, several issues may challenge renewing the TSO should Alamos' OTC Policy compliance date be extended through December 31, 2026. Because the TSO was originally adopted on September 10, 2015, the TSO could only be renewed through September 10, 2025 (if approved by the Los Angeles Regional Water Board), due to the 10-year time limit on TSOs. Any discharge after this date until the end of 2026 would need to meet final effluent limitations. Additionally, because the facility withdraws its OTC water from Los Cerritos Channel and discharges to a separate water body, the San Gabriel River Estuary, Alamos must address pollutant concentrations in its discharge that could be coming from their source water from Los Cerritos Channel without getting intake credits. Further, the owner and operator may be subject to mandatory minimum penalties for any final effluent limitation exceedances that occur after the current TSO expires.

Future Operations: On December 31, 2019, AES permanently shut down Units 1, 2 and 6 and disabled the power supply to the circulation pumps. AES constructed two dry-cooled natural gas fired CCGT power blocks to replace the retired units, which do not use OTC. These units began commercial operation on February 6, 2020.

Huntington Beach

Located alongside the Santa Ana River and on the inland side of the Pacific Coast Highway, Huntington Beach withdraws water from a deep offshore location, using a velocity cap.

As required by its order, AES has implemented operating restrictions for intake circulation pumps and ceased all intake flows that aren't directly engaged in power-generating activities or critical system maintenance. Operating requirements for cooling

water at Huntington Beach are set forth in the Huntington Beach's implementation plan, which was provided to the State Water Board on April 1, 2011.

Unit 2 will continue to be available for power generation and will use OTC seawater for its operation until the facility's final compliance date. Units 3 and 4 were replaced by an air-cooled 644 MW CCGT power block that consists of two natural-gas-fired combustion turbine generators. The CCGT generates low volume waste similar in characteristics to the low volume waste generated by Unit 2.

OTC Usage and Discharge: Cooling water for Unit 2 is withdrawn from the Pacific Ocean through a concrete conduit. The intake conduit extends offshore approximately 1,650 feet terminating at a depth of approximately 33 feet mean lower low water, with the inlet rising 11.7 feet above the sea floor. The onshore portion of the intake structure consists of a forebay, bar racks to remove large debris, and vertical traveling screens that remove trash, algae, marine life, and other incidental debris incoming with the OTC.

When Unit 2 is operating, cooling water is collected and directed to a single 14-foot concrete conduit which extends approximately 1,500 feet offshore to an ocean outfall. The outfall structure is similar to the intake structure minus a velocity cap.

Non-OTC Wastes: In addition to OTC, the facility is permitted to discharge several process wastewaters which are commingled with OTC water prior to discharge. These permitted waste streams include: storm water runoff, low volume wastes generated at Unit 2 and the CCGT power block (i.e., boiler blowdown, boiler condensate overboard, reverse osmosis concentrate reject water, pretreatment filter backwash, softener regenerant, equipment wash water, and boiler system hydrostatic test water), and non-chemical metal cleaning wastes generated at Unit 2 (i.e., boiler fireside and steam side rinse water).

Some low volume wastes, non-chemical metal cleaning wastes, and onsite stormwater runoff from Units 1 and 2 are treated at an onsite retention basin. All low volume wastes and stormwater runoff from the CCGT power block are mostly treated at a separate onsite retention basin. Both retention basins are adjacent, and their effluents

commingle at a vault before discharging through the facility's outfall. It should be noted that all chemical metal cleaning wastes are collected and transported to an off-site facility for treatment and disposal. Consequently, chemical metal cleaning wastes are not considered a component of the discharge and the discharge of these wastes from the facility to the receiving water is not permitted under the facility's order. The proposed amendment would not impact other discharges.

Biofouling Control: Marine biofouling of the cooling water conduits and forebay is controlled by heat treatments. During heat treatments, a portion of the heated discharge water is diverted into the forebay and intake conduits to raise water temperature for about one hour. This effectively increases the temperature of the circulating water and extirpates many encrusting organisms that adhere to cooling structures. The target temperature during heat treatment within the discharge waters is between 112° – 122°F. Calcareous shell debris accumulates in the intake structure because of heat treatments. On a periodic basis, this shell debris is manually removed from the forebay and in plant conduits and discharged to the ocean.

The use of ocean water as a matrix for heat removal can result in biofouling of conduits and heat-transfer structures within a plant. Periodic chlorination of intake water is performed to control biological growths on the condenser tubes not sufficiently addressed by heat treatment procedures. Condenser tubes are arranged in banks of two per turbine generator. Condenser tubes are typically treated by the manual injection of sodium hypochlorite into the cooling water flow.

Wastewater Treatment: The facility has three oil/water separators, and one is dedicated for Units 1 – 4 and two are dedicated for the CCGT power block. All process waters passing through the power block's floor drains is directed to an oil/water separator and then to a retention basin.

The facility has two retention basins, one of which is 900,000 gallons and the other 600,000 gallons, which are used to treat process wastes and storm water for the OTC and CCGT units. Low volume wastes (i.e., reverse osmosis concentrate reject water, pretreatment filter backwash, softener regenerant, equipment wash water, and boiler

system hydrostatic test water), non-chemical metal cleaning wastes (i.e., air preheater and boiler fireside washes), and storm water are treated in the retention basins which provides oil removal and sedimentation prior to discharge.

Discharge Point and Receiving Water: Wastewater generated at the facility is discharged to the Pacific Ocean through a single discharge point. The outfall is located approximately 1,500 feet offshore at a depth of 25 feet.

The receiving water is the Pacific Ocean Nearshore Zone from the San Gabriel River to Poppy Street in Corona del Mar, and the Pacific Ocean Offshore Zone between the nearshore zone and the limit of the State waters, all waters of the U.S. The facility's previous order, Order No. R8-2014-0076, established the minimum initial dilution factor for discharges from the facility at its discharge point to be 7.5 to 1 at the edge of a 1,000-foot zone of initial dilution. This dilution ratio was determined by the State Water Board in March 1980 as part of its investigation of the initial dilution factors applicable to power plant ocean outfalls throughout the State.

Compliance Summary: Between January 2015 and September 2020, the Santa Ana Regional Water Board recorded a series of violations at Huntington Beach, most of which were associated with elevated copper levels in the effluent or measuring equipment failure. State Water Board staff is not currently aware of any ongoing corrective or enforcement actions against AES.

Impaired Water Bodies on the CWA 303(d) List: There are no active TMDLs applicable to discharges from the facility to the Pacific Ocean. The nearshore and offshore zones of Huntington Beach State Park are the immediately affected receiving waters of discharges from the facility. Huntington Beach State Park is listed on the 2020-2022 303(d) List for polychlorinated biphenyls (PCBs).

Future Operations: On February 2020, the air-cooled natural gas fired CCGT power block was put into service. The CCGT power block does not require the use of ocean water for cooling. Synchronous condensers (Units 3 and 4) have ceased operation as of September 2018 and are scheduled to be demolished. The operation of Unit 1 was

permanently discontinued as of December 31, 2019, and Unit 2 is included in the proposed amendment for a compliance date extension from December 31, 2023, to December 31, 2026. Following Unit 2's retirement from service, use of ocean water at the facility will cease.

Ormond Beach

As required by its order, Ormond Beach Power has implemented operating restrictions for intake circulation pumps and ceased all intake flows that aren't directly engaged in power-generating activities or critical system maintenance. Operating requirements for cooling water at Ormond Beach are set forth in the discharger's implementation plan, which was provided to the State Water Board on April 1, 2011.

Units 1 and 2 will continue to be available for power generation and will use OTC seawater for its operation until the facility's final compliance date.

OTC Usage and Discharge: Cooling water for the facility is withdrawn from the ocean via an offshore cooling water intake structure located 1,950 feet offshore and at a depth of 35 feet Mean Low Lower Water. The onshore portion of the intake structure is comprised of four screen bays with traveling screens to filter out debris.

Non-OTC Wastes: The facility generates several internal low volume wastes which commingle with the OTC water prior to discharge, including: auxiliary boiler blowdown, boiler condensate overboard, reverse osmosis reject water, demineralizer regenerant wastes, equipment wash water collected in floor drains, and seal water. Most of these wastes are routed to the retention basins for storage and treatment before combining with the once through cooling water.

Biofouling Control: Marine biofouling of the cooling water conduits and forebay is controlled by heat treatments. During heat treatments, a portion of the heated discharge water is diverted into the forebay and intake conduits to raise water temperature. This effectively increases the temperature of the circulating water and extricates many encrusting organisms that adhere to the cooling structures. During heat treatments, the temperature of the water discharged through the intake conduit

must be raised to 105°F for one hour to remove the fouling organisms. The effluent limitation for temperature is 125°F. During gate adjustments, the discharge temperature is allowed to reach 135°F for no more than 30 minutes. Gate adjustments control the temperature of the water recirculating in the intake and discharge point during heat treatments. Calcareous shell debris accumulates in the intake structure because of heat treatments. When heat treatment is being used, this shell debris is manually removed from the forebay and in-plant conduits and disposed by the City of Oxnard. Heat treatments at the facility occur approximately once every 5 weeks and lasts for about two hours per conduit.

Periodic chlorination of intake water is performed to control biological growths on the condenser tubes. Cleaning of the cooling water forebay is conducted periodically to remove accumulated shells and sediment. Water from the forebay cleaning is pumped to a decanting waste bin, filtered, and returned to the forebay. Materials cleaned from the pumps and forebay are collected in bins and disposed of as waste. Waste that accumulates on the traveling screens is removed as needed and disposed of at an offsite disposal facility.

Wastewater Treatment: Ormond Beach discharges wastewater and storm water to the Pacific Ocean through a single discharge point. The wastewater treatment units at the facility consists of an oil and water separator and two retention basins. Storm water and some low volume wastes are treated by an oil and water separator and are conveyed to either of the retention basins. The flow of storm water and all low volume wastes, except seal water, is intermittent. All internal waste streams are routed to combine with the OTC water stream prior to discharge through the facility's discharge point.

Discharge Point and Receiving Waters: Wastewaters generated at the facility are discharged to the Pacific Ocean at Ormond Beach via Discharge Point 001. Discharge Point 001 consists of an outfall coffer located approximately 1,790 feet offshore at a depth of 20 feet below mean lower low water. Order No. 01-092 established an initial dilution ratio of 6.5 to 1 (receiving water to effluent) for discharges from Discharge Point 001, which was retained in Order No. R4-2015-0172. Order No. R4-2015-0172

included a requirement for the discharger to perform a supplemental mixing zone study and collect additional receiving water monitoring data to supplement the dilution studies previously conducted for the facility to identify the location of the boundary of the zone of initial dilution (ZID) based on modelling results. On September 11, 2017, the discharger submitted a “Supplemental Mixing Zone Study” (Mixing Zone Study) to the Los Angeles Regional Water Board. In a letter dated October 20, 2017, the Los Angeles Regional Water Board determined that the current dilution ratio of 6.5 for the facility is appropriate. In addition, the Los Angeles Regional Water Board determined the ZID radius at 328 feet from the discharge terminus is appropriate (which is the lowest average ZID radius within a single month, August 1972, based on the data provided in the Mixing Zone Study), and shall be designated as Monitoring Location ZID-001 for future compliance monitoring. The facility’s order is incorporating a minimum probable initial dilution of 6.5:1 for discharges through Discharge Point 001 and designates the ZID radius at 328 feet as Monitoring Location ZID-001.

Compliance Summary: Data submitted to the Los Angeles Regional Water Board during the period of November 2015 and March 2020 indicate that there have not been any numerical exceedances of effluent limitations. During the same reporting period, the discharger violated monitoring and reporting requirements (i.e., holding times exceedances). The fourth Quarter 2015 monitoring report indicates that tributyltin samples collected at monitoring locations EFF-001 and INT-001C and the ammonia sample from INT-001C were analyzed past the allowable hold times. The second Quarter 2018 and first Quarter 2020 monitoring reports also incorrectly reported pH values of zero (0) at EFF-001. The discharger reported that the chain-of-custody forms were revised and will be reviewed by the regional and local environmental staff to ensure all new permit parameters and requirements are accounted for and all future hold times are strictly implemented. In addition, an automatic notification system has been implemented for the collection and testing of a weekly pH sample.

Impaired Water Bodies: Certain receiving waters in the Los Angeles region do not fully support beneficial uses and therefore have been classified as impaired on the 303(d) list and have been scheduled for TMDL development. The 2020-2022 303(d) List classifies

Ormond Beach (offshore and nearshore) as an impaired water body. The pollutant of concern is indicator bacteria. The facility's order includes monitoring requirements for indicator bacteria.

Future Operations: The discharger plans to retire the facility to comply with the OTC Policy by the final compliance date established therein. After the compliance date, the discharger will continue to discharge stormwater and other low volume wastewater, in compliance with its order, during the decommissioning of the facility.

Scattergood

As required by its order, the LADWP has implemented operating restrictions for intake circulation pumps and ceased all intake flows that aren't directly engaged in power-generating activities or critical system maintenance. Operating requirements for cooling water at Scattergood are set forth in the discharger's implementation plan, which was provided to the State Water Board on April 1, 2011 (later amended on December 10, 2012).

Scattergood Units 1 and 2 will continue to be available for power generation and will use OTC seawater for operation until the facility's final compliance date.

OTC Usage and Discharge: The facility withdraws intake water from the Santa Monica Bay through a concrete conduit with a 12-foot inside diameter. The intake conduit extends offshore approximately 1,600 feet terminating at a depth of 20 feet below mean lower low water. The onshore intake structure consists of a forebay, bar racks to remove large debris, and vertical traveling screens that rotate periodically to remove smaller debris and any impinged organisms. After passing through the facility, the cooling water is discharged into Santa Monica Bay through a pipe that runs 1,200 ft. offshore and is parallel to the intake conduit (Discharge Point 001).

Non-OTC Wastes: A variety of low volume wastes are generated through the normal operations of the facility. Currently, the low volume wastes consist of boiler and evaporator blowdown, demineralization and reverse osmosis system waste, laboratory drains, condensate polisher regeneration wastes, boiler and air pre-heater wash water

(non-chemical metal cleaning wastes), floor drains, equipment drains, cooling tower blowdown and miscellaneous low volume wastes. The cooling tower blowdown is discharged to an inverted siphon prior to discharge via Discharge Point 001.

Biofouling Control: Marine biofouling of the cooling water conduits (intake and discharge) is controlled by temporarily recirculating and reversing the flow of the OTC water alternately in each offshore conduit (i.e., the discharge point becomes the intake point, and vice-versa). This effectively increases the temperature of the circulating water and achieves mortality of many encrusting organisms that adhere to cooling structures. Elevated temperatures are maintained for 1 hour while gate adjustments can last as long as 2 hours per heat treatment cycle. Calcareous shell debris accumulates in the intake structure because of heat treatments. Approximately once per year, this shell debris is manually removed from the intake and disposed of in the ocean.

Periodic chlorination of intake water is performed to control biological growths on the condenser tubes not sufficiently addressed by heat treatment procedures. Condenser tubes are arranged in banks of two per generating unit, with each bank referred to as a condenser half. Condenser halves are typically treated by the injection of chlorine (in the form of sodium hypochlorite) into the cooling water flow intermittently throughout the day for a total chlorination time of no more than 2 hours per day per generating unit.

Wastewater Treatment: The facility's order states that the temporary treatment system for low volume wastes (excepting the cooling tower blowdown) consists of an oil/water separator, a storage tank, an existing settling tank, and four 21-thousand-gallon baker tanks in series, connected to two separate pumps each for redundancy. The order states this treatment system is temporary due to previous plans to replace Scattergood's generation capacity with non-OTC CCGTs. These plans have since been changed. State Water Board staff is unaware if this treatment system has changed.

Discharge Point and Receiving Water: The facility discharges combined effluent through an outfall structure that extends 1,200 feet offshore to Discharge Point 001 to the Santa Monica Bay of the Pacific Ocean. The discharge is an ocean discharge

within the Santa Monica Bay Watershed Management Area. The previous permit (Order No. 00-083) established an initial dilution ratio of 9.7 to 1 for Discharge Point 001, except for residual chlorine which is 10.7 to 1. These ratios were based on calculations made by the discharger and approved by the State Water Board.

Compliance Summary: To address violations that occurred between August 23, 2009, and January 31, 2010, the Los Angeles Regional Water Board issued Settlement Offer No. R4-2011-0081-M on April 21, 2011. On June 21, 2011, the discharger delivered to the Los Angeles Water Board a signed Acceptance of Conditional Resolution and Waiver of Right to Hearing Order addressing the violations. The discharger submitted the penalty amount of \$12,000 to the Los Angeles Regional Water Board on July 18, 2011. For the remaining excursions, the Los Angeles Regional Water Board issued Settlement Offer No. R4-2014-0180 on September 17, 2014. The discharger accepted the Settlement Offer and submitted the penalty amount of \$6,000 to the Los Angeles Regional Water Board on January 16, 2015. Since January 2014, two total suspended solids limitation exceedances in the low volume wastes, one temperature limitation exceedance in the final effluent, and one reporting violation were enumerated. Construction engineering inspections were conducted on June 4, 2009, April 20, 2010, and April 9, 2013. No violations were noted from the inspections.

Impaired Water Bodies: Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2020-2022 303(d) List and have been scheduled for TMDL development. The facility discharges to Santa Monica Bay. The State Water Board's 2020-2022 303(d) List for California includes Santa Monica Bay (offshore and nearshore) as impaired waters. The pollutants of concern include Dichlorodiphenyltrichloroethane, or DDT (tissue & sediment, centered on the Palos Verdes Shelf), PCBs, arsenic, mercury, and trash.

The Los Angeles Regional Water Board adopted several TMDLs that remain in effect for the Santa Monica Bay. On November 4, 2010, the Los Angeles Regional Water Board adopted Resolution R10-010, a TMDL for debris in the nearshore and offshore

areas of Santa Monica Bay. This TMDL does not include requirements applicable to the discharger.

The Los Angeles Regional Water Board also adopted two TMDLs to reduce bacteria at Santa Monica Bay beaches (including Dockweiler Beach) during dry and wet weather. The Los Angeles Regional Water Board adopted the Dry Weather and Wet Weather TMDLs on January 24, 2002, and December 12, 2002, respectively (Resolutions 2002-004 and 2002-022).

Finally, the U.S. EPA issued the Santa Monica Bay TMDLs for DDTs and PCBs on March 26, 2012. The TMDL includes waste load allocations for DDT and PCBs for point sources, including the waste load allocations that apply to Scattergood. The facility's order implements the requirements of the Santa Monica Bay TMDL for DDTs and PCBs.

Future Operations: The facility's permit describes how Unit 3 will be replaced with non-OTC, natural-gas-fired technology. However, due to the requirements of the Green New Deal, the LADWP is no longer pursuing replacement of Scattergood's capacity with fossil fuel-fired generation. Instead, the LADWP is presently developing a project to replace Scattergood's capacity with hydrogen generation.

8.3. Utilities and System Services

The 2010 Final SED for the OTC Policy concluded that impacts to the electrical grid due to implementation of the OTC Policy were considered to be less than significant with mitigation. Disruptions to utility services and grid reliability would be most effectively mitigated by establishing a statewide policy that included provisions to consult with the state's energy agencies and coordinate implementation among the Regional Water Boards. The SACCWIS monitors statewide grid reliability to identify potential electrical shortages potentially brought about by implementation of the OTC Policy. Due to the potential for projected electrical shortfalls in 2022 and 2025, the State Legislature enacted the Strategic Reserve. In its Special 2022 SACCWIS Report, the SACCWIS recommended the State Water Board consider extending the compliance dates for Alamitos, Huntington Beach, and Ormond Beach for three additional years until

December 31, 2026. The SACCWIS also supported a request from the LADWP to extend Scattergood's compliance date for five additional years until December 31, 2029, to support local system reliability.

8.4. Air Quality

The 2010 Final SED evaluated potential impacts to air quality in three scenarios assuming that all OTC units deemed feasible are retrofitted to either closed-cycle wet cooling or closed-cycle dry cooling systems and new combined-cycle generation or increased capacity at retrofitted OTC units replaces the nuclear OTC units at Diablo Canyon and San Onofre Nuclear Generating Station. It was determined that air quality impacts related to complying with the OTC Policy could not accurately be assessed because it was difficult to estimate the method of compliance owners and operators would select for each power plant. The 2010 Final SED concluded that complying with the OTC Policy with a combination of OTC unit retirements and replacement of capacity with newer, more efficient resources that produce fewer emissions would be expected to show no change to a modest reduction of existing baseline air quality impacts caused by operation of OTC units.

8.5. Aesthetics and Noise

The 2010 Final SED determined that noise and aesthetic impacts related to compliance with the OTC Policy were less than significant. If cooling towers were installed as a method of compliance with the OTC Policy, appropriate mitigation would be required to offset aesthetic and noise impacts.

This amendment would not affect the identified reasonably foreseeable methods of compliance with the OTC Policy, nor would it result in any new significant environmental impacts or a substantial increase in the severity of previously identified significant effects beyond what was identified in the 2010 Final SED, as illustrated by the above discussion. Therefore, continued operation of Alamitos, Huntington Beach, Ormond Beach, and Scattergood under their current operational configurations does not constitute a change in the physical environment relative to the baseline identified in the

2010 Final SED and does not require subsequent or supplemental environmental analysis.

9. Water Code Section 13140 and Other Required Considerations

9.1. Economic Analysis

The 2010 Final SED provides information on the costs of compliance with the OTC Policy. An extension of the compliance date for the facilities is anticipated to result in some cost to the owner and operator for maintaining trained staff and resources to continue operations and interim mitigation payments through December 31, 2026 (Alamitos, Huntington Beach, and Ormond Beach), and through December 31, 2029 (Scattergood). These costs are considered as costs of compliance with the OTC Policy and are consistent with those discussed in the 2010 Final SED.

9.2. The Human Right to Water

OTC water use is not included in Resolution No. 2016-0010, which adopted the human right to water as a core value of the State and Regional Water Boards. The primary goal of the OTC Policy is to protect marine life from the harmful impacts of impingement and entrainment associated with the use of cooling water intake structures. Therefore, the directives of Resolution No. 2016-0020 are not applicable to this amendment to the OTC Policy that is under consideration.

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