

**Revised Responses to Comments**

**on the Amendment to the**  
**Water Quality Control Policy on the**  
**Use of Coastal and Estuarine Waters**  
**for Power Plant Cooling**

**to Extend the Compliance Schedule**  
**for the Redondo Beach Generating**  
**Station**

**State Water Resources Control Board**  
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## Abbreviations and Acronyms

| <b>Abbreviation or Acronym</b> | <b>Full Name or Phrase</b>   |
|--------------------------------|--|
| 2010 Final SED                 | Final Substitute Environmental Document for the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling                    |
| 2020 OTC Policy Amendment      | Amendment to Revise Compliance Schedules for Alamitos, Huntington Beach, Ormond Beach, and Redondo Beach Generating Stations and Diablo Canyon Nuclear Power Plant |
| AES                            | AES Corporation and/or AES Redondo Beach, LLC.   |
| Amendment                      | 2021 Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling  |
| APF                            | Area of Production Foregone  |
| AQI                            | Air Quality Index  |
| BAA                            | Balancing Authority Area   |
| CAISO                          | California Independent System Operator   |
| California Ocean Plan          | Water Quality Control Plan for Ocean Waters of California  |
| California Thermal Plan        | Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California                           |
| CARB                           | California Air Resources Board   |
| CCR                            | California Code of Regulations   |
| CEC                            | California Energy Commission   |
| CEQA                           | California Environmental Quality Act   |
| CO <sub>2</sub>                | Carbon Dioxide   |
| Coastal Commission             | California Coastal Commission  |
| Conservancy                    | State Coastal Conservancy  |
| COVID-19                       | Coronavirus Disease 2019   |
| CPUC                           | California Public Utilities Commission   |
| CWA                            | Clean Water Act  |
| D.                             | Decision   |
| EIR                            | Environmental Impact Report  |
| ERP II                         | Expert Review Panel II   |

| <b>Abbreviation or Acronym</b>            | <b>Full Name or Phrase</b>  |
|---|---|
| Final 2021 SACCWIS Report                 | Final 2021 Report of the Statewide Advisory Committee on Cooling Water Intake Structures  |
| GHG                                       | Greenhouse Gas  |
| LCP                                       | Local Coastal Program   |
| Los Angeles Regional Water Board          | Los Angeles Regional Water Quality Control Board  |
| MPA                                       | Marine Protected Area   |
| MW  | Megawatt  |
| NO <sub>2</sub>                           | Nitrogen Dioxide  |
| NOV                                       | Notice of Violation   |
| NO <sub>x</sub>                           | Nitrogen Oxide(s)   |
| NPDES                                     | National Pollution Discharge Elimination System   |
| NQC                                       | Net Qualifying Capacity   |
| NTC                                       | Notice to Comply  |
| OPC                                       | Ocean Protection Council  |
| OTC                                       | Once-Through Cooling  |
| OTC Policy or Once-Through Cooling Policy | Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling   |
| PG&E                                      | Pacific Gas and Electric Company  |
| PM <sub>2.5</sub>                         | Fine Particulate Matter   |
| PM <sub>10</sub>                          | Particulate Matter  |
| PRM                                       | Planning Reserve Margin   |
| R.  | Ruling  |
| RA  | Resource Adequacy   |
| Redondo Beach                             | Redondo Beach Generating Station  |
| Regional Water Board                      | Regional Water Quality Control Board  |
| Resources Agency                          | California Natural Resources Agency   |
| Response to Comments                      | Response to Comments on the Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling to Extend the Compliance Schedule for the Redondo Beach Generating Station |
| RMR                                       | Reliability-Must-Run  |

| <b>Abbreviation or Acronym</b> | <b>Full Name or Phrase</b>   |
|--------------------------------|--|
| SACCWIS                        | Statewide Advisory Committee on Cooling Water Intake Structures  |
| SED                            | Substitute Environmental Document  |
| SCAQMD                         | South Coast Air Quality Management District  |
| Staff Report                   | Staff Report for the Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling to Extend the Compliance Schedule for the Redondo Beach Generating Station |
| State Water Board              | State Water Resources Control Board  |
| TAC                            | Toxic Air Contaminant  |
| TPD                            | Tons Per Day   |
| TSO                            | Time Schedule Order  |

## 1. Introduction

The State Water Resources Control Board (“State Water Board”) received 99 written comments on the *Draft Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (“Once-Through Cooling” or “OTC Policy”) and the *Draft Staff Report for the Amendment to the OTC Policy to Extend the Compliance Schedule for the Redondo Beach Generating Station* (“Amendment,” and “Staff Report,” respectively).<sup>1,2</sup> The public comment period for the Amendment and Staff Report started on June 14, 2021, and closed at noon on July 16, 2021. This document (“Response to Comments”) contains responses to timely comment letters submitted to the State Water Board on the Amendment and Staff Report. Based on these comments, the Staff Report has been revised.

Revisions to the September 17, 2021 Responses to Comments were made to add responses to the comment letters submitted by the Los Angeles County Business Federation and the Los Angeles/Orange Counties Building and Construction Trades Council (Letters 17 and 18, respectively), which were inadvertently omitted in the September 17, 2021 version.

Information provided in these responses is based upon and supplements data and findings previously set forth within the Statewide Advisory Committee on Cooling Water Intake Structure’s (SACCWIS) Final 2021 Report of the SACCWIS (“Final 2021 SACCWIS Report”) and the Staff Report, including context on the electrical grid and energy use, recent energy agency decisions and recommendations, and detail on other regulatory issues raised in comments.<sup>3</sup>

The Responses to Comments and revisions to the Staff Report do not add significant new information that is material to the State Water Board’s decision or that would otherwise warrant action that is not a logical outgrowth of the Draft Amendment that was previously subject to a written comment period. Therefore, it is not necessary to afford interested persons with another written comment period to address the Responses to Comments or revisions to the Staff Report.

### 1.1. Approach

The State Water Board has made a good faith effort to ensure that all comments were identified, considered, and responded to in the Responses to Comments. The following summarizes the approach the State Water Board took when identifying, considering, and responding to comments received.

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<sup>1</sup> State Water Resources Control Board (State Water Board). June 14, 2021. [Draft Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling](#).

<sup>2</sup> State Water Board. June 14, 2021. [Draft Staff Report for the Amendment to the OTC Policy to Extend the Compliance Schedule for the Redondo Beach Generating Station](#).

<sup>3</sup> Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS). [March 26, 2021. Final 2021 Report of the Statewide Advisory Committee on Cooling Water Intake Structures](#).

Many of the comments were similar in nature and were grouped within distinct categories. Section 2 provides master responses to comments by category. The categories are: comments on the proposed extension of Redondo Beach Generating Station Units 5, 6, and 8 (“Redondo Beach”); grid reliability; water quality, impacts to marine life and mitigation; wetlands; air quality; and requirements of the California Environmental Quality Act (CEQA).

Some comments were received that contained unique and substantive content outside of the scope or topics of master responses. For these comments, Section 3 provides individual responses. State Water Board staff did not edit any comments for spelling, grammar, or clarity. All writings in the comment field of *Table 3: Individual Comments and Responses* are the true and accurate representation of the comments provided to the State Water Board.

Commenters often included introductory information about the commenter’s agency or organizations’ mission, background information, or the importance of the Amendment to the agency or organization. Multiple commenters provided a variety of personal and professional background information in their letters. These statements provide context in understanding the comments of a particular commenter that are germane to the Amendment and the Staff Report; however, this type of information does not raise significant environmental issues or make comments on the Amendment and does not require a response.

Comment letters were assigned identifying numbers (01 through 97) after being received by the State Water Board, as located in Appendix 1 – Index of Commenters. Commenters may use this table to identify the letter number associated with their submissions, as well as master responses that are responsive to their comments. Appendix 1 also identifies whether comments were addressed in *Table 3: Individual Comments and Responses*.

## **2. Master Responses**

### **2.1. OTC Policy Application, Statements of Support and Opposition, and Public Process Comments**

This master response section addresses comments regarding requirements of the OTC Policy and general opposition to or support for an extension of the OTC Policy compliance date for Redondo Beach for up to two years to December 31, 2023.

#### **2.1.1. Requirements and Purpose of the OTC Policy**

A substantial number of commenters made general statements that inaccurately interpreted the purpose or requirements of the OTC Policy or the jurisdiction and authority of the State Water Board. Additionally, several commenters stated that Redondo Beach is currently in violation of the OTC Policy, or will be in violation if the compliance date is extended. Some commenters asserted that the State Water Board has failed to implement the OTC Policy, and others stated that the Amendment is inconsistent with environmental protection.

The OTC Policy does not require affected power plants to shut down on or before their compliance dates. The OTC Policy establishes requirements for the implementation of Clean Water Act (CWA) section 316(b), using best professional judgement in determining the best technology available for cooling water intake structures at existing coastal and estuarine power plants to reduce impingement and entrainment impacts to marine life. The best technology available is discussed in greater detail in Master Response 2.3. However, it is the State Water Board's responsibility to implement the OTC Policy, which recognizes that compliance dates may require amendment based on, among other factors, the need to maintain reliability of the electric system as determined by the energy agencies included in the SACCWIS, acting according to their individual or shared responsibilities (see, OTC Policy section 1.I). The State Water Board ensures implementation of the OTC Policy by participating directly in the annual SACCWIS process and requiring compliance and interim mitigation information from owners and operators on a yearly basis.

Although the State Water Board retains the final authority to amend the OTC Policy, in the event that the SACCWIS' energy agencies make a unanimous recommendation for a compliance schedule modification based on grid reliability, the State Water Board shall afford significant weight to the recommendation (see, OTC Policy section 3.B(5)). A more detailed description of the SACCWIS and its advisory role to the State Water Board to ensure that implementation of the OTC Policy does not disrupt the electric reliability of the state is included in Master Response 2.2, Grid Reliability.

"Compliance" with the OTC Policy does not equate to the retirement of OTC units covered under the OTC Policy. The OTC Policy requires a reduction of intake flow rate at each OTC unit, at a minimum, to a level equivalent with that which can be attained by a closed-cycle wet cooling system, which was analyzed as a means of compliance in the 2010 Final Substitute Environmental Document ("2010 Final SED") for the OTC Policy.<sup>4</sup> A minimum 93 percent reduction in intake flow rate for each OTC unit is required for Track 1 compliance, compared to the unit's design intake flow rate, along with reducing the through-screen intake velocity below 0.5 foot per second. If an owner or operator of a power plant demonstrates that compliance with Track 1 is not feasible, the owner or operator may comply with the OTC Policy via Track 2 compliance.

Track 2 requires a reduction in impingement mortality and entrainment of marine life for the facility, on a unit-by-unit basis, to a comparable level to that which would be achieved under Track 1, using operational or structural controls, or both. A "comparable level" of reduction is a level that achieves at least 90 percent of the reduction in impingement mortality required under Track 1, which equates to an overall 83.7 percent or greater reduction in impingement mortality and entrainment by each OTC unit. The owner or operator of a facility decides the measures for compliance with the OTC Policy on a unit-by-unit basis.

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<sup>4</sup> State Water Board. May 4, 2010. [Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling – Final Substitute Environmental Document](#).



Retirement of an OTC unit is an option that may be selected in order to comply under Track 1, as retirement acts to achieve a 93 percent or greater reduction in intake flow rate and less than 0.5 foot per second through-screen velocity. The OTC Policy and the 2010 Final SED were not meant to analyze or otherwise determine how long the facilities would operate, because facilities could continue to operate beyond their ultimate compliance dates if they achieved the requirements described above. See Master Response 2.6 for more information on compliance measures and CEQA analysis for the OTC Policy, including the primary intent of the OTC Policy regarding environmental protection.

The OTC Policy does not prohibit the use of cooling water intake structures. As described above, compliance with the OTC Policy does not require shutting down existing OTC units. It requires significant reductions to intake flow rate and through-screen velocity of screens covering the cooling water intake structures. These reductions can be in achieved multiple ways, by making modifications to or installing new operational or structural controls, a different type of cooling system such as closed-cycle wet or dry cooling, or cessation of operation. It has been the responsibility of the owners and operators of the OTC units to determine how they will comply with the OTC Policy (see, OTC Policy section 3.A.).

Commenters stated that Redondo Beach is or will be in violation of the OTC Policy if the compliance date is extended. The OTC Policy required owners or operators to submit an implementation plan to the State Water Board no later than April 1, 2011, identifying the compliance alternative selected by the owner or operator, describing the general design, construction, or operation measures that will be undertaken to implement the alternative, and propose a realistic schedule for implementing these measures that is as short as possible. If the owner or operator chooses to repower the facility to reduce or eliminate reliance upon OTC, or to retrofit the facility to implement either Track 1 or Track 2 alternatives, the implementation plan shall identify the time period when generating power is infeasible and describe measures taken to coordinate this activity through the appropriate electrical system balancing authority's maintenance scheduling process. Redondo Beach's operation and retirement plan align with Track 1 of the OTC Policy, and its owner and operator submitted an implementation plan to the State Water Board per the requirements described above.

Furthermore, the OTC Policy empaneled the SACCWIS for the purpose of reviewing implementation plans and schedules submitted by the owners and operators pursuant to the OTC Policy. The SACCWIS advises the State Water Board on the implementation of the OTC Policy at least annually to ensure that implementation schedules consider local area and grid reliability, including permitting constraints. For more information about the SACCWIS process, please see Master Response 2.2.1.

The OTC Policy required owners and operators of existing power plants to fulfill immediate and interim mitigation requirements. Immediate requirements consisted of owners and operators installing large-organism exclusion devices, with no greater than 9-inch gaps, over offshore intakes, and cessation of intake flows for any OTC units that were not directly engaging in power-generating activities or critical system maintenance. Additionally, the owner or operator of an existing power plant must implement measures

to mitigate the interim impingement and entrainment impacts resulting from the cooling water intake structure(s), commencing October 1, 2015, and continuing up to and until the owner or operator achieves final compliance.

Final compliance for each OTC unit is different, determined by the track selected by the owner and operator. Since the adoption of the OTC Policy, ten of these facilities have permanently ceased their OTC operations by replacing, retiring, or repowering the OTC units. Eight of the remaining facilities complying via Track 1 plan to retire their existing OTC equipment. Dynegy's Moss Landing Power Plant is the only facility complying with the OTC Policy through Track 2. To date, owners and operators of existing OTC units have fulfilled, and continue to fulfill, the requirements of the OTC Policy described above and are considered compliant with the OTC Policy, including Redondo Beach.

Additionally, the compliance dates do not preclude facilities from retiring earlier, including if their capacity is deemed unnecessary by the energy agencies of the SACCWIS.

### **2.1.2. Community Concerns and Comments of General Nature**

#### Statements of Support and Opposition

Several commenters supported the extension of the compliance date because of the regional economic benefits from available jobs for the duration of the additional two years of operation. The State Water Board recognizes the potential economic and job benefits that may occur if the extension is approved.

A substantial number of commenters expressed general opposition to extending the OTC Policy compliance date for Redondo Beach beyond December 31, 2021. Reasons for opposing an extension include, but are not limited to: impacts to public health from facility air emissions such as particulate matter and GHGs, including asthma, cancer, and other impacts that could affect the densely populated community surrounding the facility (21,000 people within a 1-square mile radius, including several schools and an elderly living facility); loud noises and noise-induced stress and anxiety; poor aesthetics; that the plant is an eyesore; that the plant is dangerous or may cause a disaster; construction of new residential buildings near the facility; a desire for timely demolition of the facility to make way for parkland or greenspace; asserting that adoption of the Amendment will delay conversion of the property to open and green space; desire to clean-up the coastline; concerns for the extension of Redondo Beach negatively impacting tourism and property values; and concerns that an extension could lead to economic impacts.

The State Water Board recognizes the concerns surrounding the extension of OTC Policy compliance dates for certain facilities and the concerns of communities located near power plants. The State Water Board's primary responsibility and jurisdiction is to implement CWA section 316(b) and ensure the beneficial uses of the state's coastal and estuarine waters are protected, while also relying on the recommendations of the SACCWIS, which is charged with ensuring that the electrical power needs essential for the welfare of the citizens of California are met. However, the State Water Board has

the discretion to and, to the extent practicable, may consider these other important issues.

The 2010 Final SED established baseline environmental impacts caused by the operation of OTC facilities prior to adoption of the OTC Policy in 2010. As described in the 2010 Final SED, the OTC facilities cause environmental issues, including impacts to marine life, water quality, air quality, and compounding effects when operating in proximity to other industrial processes that have a negative impact on the environment. All facilities subject to the OTC Policy are required to comply with applicable statutes and regulations as well as state and local permits that are designed to minimize environmental impacts and be protective of human health. If the compliance date is extended, Redondo Beach would continue to be regulated by applicable air and water quality permits. Please see Master Responses 2.3 and 2.5 for detailed discussion of these applicable water and air quality permits.

As described in Section 1.I of the OTC Policy, the State Water Board recognizes the compliance dates in the OTC Policy may require amendment based on, among other factors, the need to maintain reliability of the electric system as determined by the energy agencies included in the SACCWIS, acting according to their individual or shared responsibilities. The State Water Board relies on the recommendations of the SACCWIS to ensure that implementation of the OTC Policy does not impact the state's essential electrical power needs; however, the State Water Board retains the final authority over changes to the OTC Policy. The State Water Board considers non-marine impacts to local communities, including air quality, environmental justice, or local land-use concerns as part of evaluating revisions to OTC Policy compliance dates; however, these issues are largely beyond the scope of the State Water Board's authority under CWA section 316(b) and the OTC Policy.

The Amendment is based on the rationale and considerations described in Section 5 of the Staff Report, including the recommendation of the SACCWIS, which was informed by collaborative energy analysis efforts of the SACCWIS' energy agencies. The Amendment fulfills the State Water Board's responsibility to ensure the protection of beneficial uses of the state and to ensure that the energy needs essential to the welfare of citizens of the state are met.

Several commenters referenced quotes from State Water Board members during the consideration of adoption meeting on September 1, 2020, for the Amendment to Revise Compliance Schedules for Alamitos, Huntington Beach, Ormond Beach, and Redondo Beach Generating Stations and Diablo Canyon Nuclear Power Plant ("2020 OTC Policy Amendment") as evidence of opposition to this Amendment. However, shortly before the adoption of the 2020 OTC Policy Amendment, portions of California were subject to rotating power outages during mid-August due largely to unexpectedly high peak energy demands during widespread extreme high temperatures. Therefore, in Resolution No. 2020-0029, the State Water Board recognized that the CAISO, CEC, and CPUC ("the state's energy agencies") may revise their forecasting models to account for this

scenario, and may determine a need to request additional extensions of final compliance dates to maintain grid reliability and avoid similar blackouts in the future.<sup>5</sup>

Commenters expressed concerns regarding impacts to the environment or local community near Redondo Beach. Some commenters also expressed that the amendment is not consistent with U.S. EPA regulations and rules. A number of commenters also asserted that the Amendment is inconsistent with the State Water Board's mission.

As stated in Section 2.1 of the Staff Report, 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 requirements are equivalent to, if not more stringent than those contained in applicable U.S. EPA regulations. 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.

Some commenters questioned whether the OTC Policy's requirements are actually equivalent to, if not more stringent than those contained in applicable U.S. EPA regulations. For comparison, 40 C.F.R. section 125.94 generally requires one of seven options for owners and operators of existing facilities to reduce impingement mortality, including installing a closed-cycle recirculating system or reducing through-screen design or actual velocity to a maximum of 0.5 feet per second.<sup>6</sup> Section 2.A(1) of the OTC Policy, or Track 1, requires owners and operators of existing facilities to reduce the intake flow rate to a level commensurate with that which can be attained by a closed-cycle wet cooling system, as well as a reduction in through-screen intake velocity to a maximum of 0.5 foot per second. If compliance with Track 1 is not feasible, Section 2.A(2) of the OTC Policy, or Track 2, requires owners and operators to reduce impingement mortality and entrainment of marine life to a comparable level to that which would be achieved under Track 1. Regarding entrainment impacts, 40 C.F.R. section 125.94 requires the U.S. EPA Regional Administrator or State Director (officer with a state agency implementing an approved program) to establish standards for the best technology available for entrainment on a site-specific basis.<sup>7</sup> The OTC Policy's Track 1 requirements apply to all existing facilities, and those that cannot comply with Track 1 must comply with Track 2. The federal regulation does not set forth any more stringent standard for compliance with CWA section 316(b) than that set forth in the OTC Policy.

The OTC Policy, adopted in 2010, predates the federal regulation governing compliance options for impingement mortality and site-specific entrainment standards. As illustrated above, the OTC Policy establishes requirements that are as or more stringent than those set forth in the federal regulation such that compliance with the OTC Policy also constitutes compliance with the federal regulation. Additionally, 40 C.F.R. section 125.94 requires compliance "as soon as practicable, based upon a schedule of

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<sup>5</sup> State Water Board. September 1, 2020. [Resolution No. 2020-0029, para. 20](#).

<sup>6</sup> 40 C.F.R. § 125.94, subd. (c)

<sup>7</sup> 40 C.F.R. § 125.94, subd. (d)

requirements established by the Director. The Director may establish interim compliance milestones in the permit.” The State Water Board, as the designated water pollution control agency for all purposes stated in the CWA, has discretion to allow for compliance extensions. See Section 2.1 of the Staff Report for background information regarding federal and state regulations.

The OTC Policy establishes uniform, technology-based standards to implement federal CWA section 316(b) and reduce the harmful effects associated with cooling water intake structures on marine and estuarine life using best professional judgment in determining best technology available for cooling water intake structures. Specifically, Section 2.C(3) of the OTC Policy also requires that existing power plants must implement measures to mitigate the interim impingement and entrainment impacts resulting from the cooling water intake structure(s). See Master Response 2.3 regarding specific interim mitigation requirements and compliance.

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. Redondo Beach would continue to be regulated by applicable air and water quality permits if the compliance date is extended, ensuring requirements would be imposed in order to minimize environmental impacts and be protective of human health. See Master Response 2.6 regarding specific CEQA requirements.

The State Water Board’s mission is to preserve, enhance, and restore the quality of California’s water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations. The State Water Board was created to serve as the water pollution control agency for all purposes under the CWA, and establishes and implements plans, policies, and regulations pursuant to its authority. Pursuant to this charter and recognizing the impacts of coastal power plants on aquatic organisms and water quality, the State Water Board adopted the OTC Policy in 2010 to reduce the harmful effects on marine and estuarine life associated with cooling water intake structures for power generating facilities. To date, still-operational OTC facilities are in compliance with the OTC Policy per its intent and purpose, as described above. While the State Water Board considers other environmental impacts, such as air quality, these are outside the scope of the Amendment and beyond the jurisdiction of the State Water Board. However, State Water Board staff coordinates closely with state agencies represented in the SACCWIS to understand ongoing impacts associated with still-operational OTC facilities and their compliance with all applicable rules and regulations.

#### Public Comment Process Concerns

Several commenters implied that the State Water Board had been inappropriately lobbied by AES Corporation and/or AES Redondo Beach, LLC. (AES). Any stakeholder can provide comments and participate through the regulatory process. The State Water Board considers all comments timely received.

Some commenters expressed concern regarding the length and/or timing of the public comment period for this Amendment, implying that the 30-day public comment period was too short or that the prescribed deadline for submitting written comments of July 16, 2021, was too far in advance of the consideration of adoption meeting on October 19, 2021. The State Water Board followed legally required processes for accepting public comments pertaining to the Amendment and complied with all applicable legal requirements for the required public process. The California Code of Regulations (CCR) requires that the notice period may not be less than 45 days; however, the comment period may be shortened to 30 days in exceptional circumstances or if the State Water Board determines a project will not result in significant adverse environmental effects. The Amendment will not result in significant adverse environmental effects as described in Section 7 of the Staff Report and discussed in Master Response 2.6. The CCR also requires that documents relevant to a hearing regarding a plan or policy that establishes or implements water quality standards must be made available to the public at least 30 days before the hearing (Cal. Code Regs., tit. 23, §3779, subd. (b); 40 C.F.R. §25.5(b)).

The California Independent System Operator (CAISO), the California (CEC), and the California Public Utilities Commission (CPUC) informed State Water Board staff that prompt consideration of the Amendment is required to accurately assess energy availability in 2022. A 30-day public comment period was used to allow prompt consideration and is allowable because there are no new environmental impacts associated with the proposed extension.

## **2.2. Grid Reliability**

This master response addresses comments, questions, and concerns raised by commenters regarding grid reliability, including, but not limited to: the role of the SACCWIS; events leading to the amendment and alternatives considered; the need for energy produced by Redondo Beach; the dynamics of the energy grid; renewable energy; projected energy supply, and Redondo Beach's role in system-wide grid reliability.

### **2.2.1. Role of the SACCWIS**

A number of commenters requested that the State Water Board not allow Redondo Beach to continue operating beyond December 31, 2021. The compliance date extension proposed in the Amendment to address grid reliability concerns starting in the summer of 2022 as discussed in section 5 of the Staff Report and as is consistent with the SACCWIS' recommendation in the Final 2021 SACCWIS Report. The Staff Report has been revised to clarify the role that the SACCWIS plays in implementing the OTC Policy and how compliance dates were originally established.

### **2.2.2. Events Leading to the Amendment and Alternatives Considered**

The need for the proposed compliance date extension for Redondo Beach began with blackouts that occurred in August 2020, which ultimately led to a series of events that spotlighted concerns for grid reliability starting in the summer of 2022. These events are described in Section 5.1 of the Staff Report and are summarized below:

- On August 14 and 15, 2020, the CAISO declared Stage 3 Emergencies as a result of extreme heat conditions stressing the grid, which led to rotating but controlled blackouts for portions of California (collectively, the August 2020 blackouts);
- Following these events and based on the direction given by Governor Gavin Newsom, the state’s energy agencies initiated a series of actions to investigate the causes of the August 2020 blackouts, resulting in the Final Root Cause Analysis Report, which identified three major contributing factors to the August outages;<sup>8</sup>
- The state’s energy agencies conducted an in-depth stack analysis to compare near-future demand projections with availability of energy supply; this stack analysis identified a shortage in the summer of 2022 and uncertainties in the summer of 2023; and
- As a result, the SACCWIS adopted the Final 2021 SACCWIS Report on March 26, 2021, which recommended a two-year extension of the compliance date for Redondo Beach from December 31, 2021, to December 31, 2023.

The proposed extension of Redondo Beach’s compliance date is needed to partially bridge the shortfall identified in the summer of 2022 and uncertainties identified in the summer of 2023, including those presented by climate change and a projected 500 Megawatt (MW) increase in energy demand. This proposed extension is responsive to the recommendation of the SACCWIS included in the Final 2021 SACCWIS Report.

In response to this information, some commenters disputed the actual causes of the August 2020 blackouts that precipitated the Amendment. To support this assertion, information was provided that allegedly associated the August 2020 blackouts with software errors, balancing authority mismanagement, infrastructure failure, or otherwise non-capacity related occurrences.

On January 13, 2021, the state’s energy agencies released the Final Root Cause Analysis Report, which examined the causes of the August 2020 blackouts. This report identified three major contributing factors, including the following:

1. A climate change-induced extreme heat wave across the western United States resulted in demand for electricity exceeding existing RA and planning targets;
2. In transitioning to a reliable, clean, and affordable resource mix, resource planning targets have not kept pace to ensure sufficient resources that were adequately reliable to meet demand in the early evening hours, making balancing supply and demand more challenging during the extreme heat wave; and
3. Some practices in the day-ahead energy market, such as under-scheduling by scheduling coordinators, exacerbated supply challenges under highly stressful conditions.

Some comments were more specific in nature, detailing transmission issues during the August 2020 blackouts and raising questions about electricity imports and exports

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<sup>8</sup> California Independent System Operator (CAISO). January 13, 2021. [Final Root Cause Analysis – Mid-August 2020 Extreme Heat Wave](#).

during this event. Over the course of August 14 and 15, 2021, the CAISO was a net importer of electricity, albeit at reduced levels due to transmission limitations. Transmission issues that occurred in August 2020 have now been addressed. However, impacts on the grid from transmission issues, such as those posed by west-wide heat waves that complicate imports, must continuously be taken into account and actively managed by the CAISO.

### **2.2.3. Actions Taken to Improve Grid Reliability**

Some commenters questioned how the state's energy agencies have not been able to keep pace with planning targets despite the known impacts of climate change. A series of comments also suggested that the state's energy agencies have not been meeting their obligations to maintain a reliable electric grid by not adequately preparing for climate change or failing to procure new sources of power to replace OTC capacity.

For nearly three years, the CAISO has been raising concerns about potential grid reliability issues occurring in Southern California, driven by the rapid deployment of solar generation in California concurrent with the retirement of Alamitos, Redondo Beach, Ormond Beach, and Huntington Beach generating stations. Potential system-wide grid reliability issues were first identified in June 2019, as identified by CAISO's comments in CPUC Rulemaking (R.)16-02-007.<sup>9</sup> This ruling compared the estimated available capacity in the CAISO BAA from 2019 through 2028 against the 2018 approved Integrated Energy Policy Report peak demand forecast and estimated system RA requirements for those same years.<sup>10</sup>

To analyze available supply through 2028, CPUC staff incorporated the most up-to-date information regarding capacity available for system RA purposes, including existing resources, new resources that are expected to come online by 2028 (i.e., capacity that is already under construction or is otherwise anticipated by previous commission decisions), projected demand response, and projected availability of imports. On November 7, 2019, the CPUC approved its recommendation for extensions of compliance dates for OTC facilities to ensure grid reliability to the State Water Board in Decision (D.)19-11-016.<sup>11</sup> The CPUC reaffirmed this decision in its March 2020 decision, D.20-03-028, which found that the CPUC should not modify any other OTC extension recommendations made in D.19-11-016 because reliability insurance may have still been needed.<sup>12</sup>

Following the August 2020 blackouts and recognizing the need for potential additional capacity to address reliability challenges posed by climate change, the CPUC opened

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<sup>9</sup> CAISO. August 12, 2019. [Reply Comments of the California Independent System Operator Corporation](#).

<sup>10</sup> California Energy Commission (CEC). August 1, 2018. [Integrated Energy Policy Report – IEPR](#).

<sup>11</sup> California Public Utilities Commission (CPUC). November 7, 2019. [Decision Requiring Electric System Reliability Procurement for 2021-2023 \(D.19-11-016\)](#).

<sup>12</sup> CPUC. March 26, 2020. [2019-2020 Electric Resource Portfolios to Inform Integrated Resource Plans and Transmission Planning \(D.20-03-028\)](#).



R.20-11-003 to consider a suite of actions within its authority to bolster grid reliability.<sup>13</sup> As noted in Section 5.1 of the Staff Report, the CPUC adopted D.21-02-028 on February 11, 2021, which directed the three investor owned utilities to seek contracts for electric capacity that will be available for the net peak demand in the summer of 2021.<sup>14</sup> Building on R.20-11-003, the CPUC adopted D.21-03-056 on March 25, 2021, to direct investor-owned utilities to take action to decrease peak and net peak demand and increase peak and net peak supply in the summers of 2021 and 2022.<sup>15</sup>

As a part of a separate proceeding (CPUC 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.<sup>16,17</sup> This decision intends to address reliability needs by requiring at least 11,500 MW of additional procurement, with: 2,000 MW required by 2023; 6,000 MW required by 2024; 1,500 MW required by 2025; and 2,000 MW required by 2026. This procurement order is designed to achieve California's GHG emissions reductions targets for 2030 and to keep California on a clear path to meeting the goal of 100 percent zero-carbon electricity resources by 2045. The Staff Report was revised to add a summary of D.21-06-035.

The resources that are required to come online from 2023 through 2025 are also designed for the purposes of replacing OTC facilities scheduled to go offline, including Diablo Canyon Nuclear Power Plant, which is scheduled to fully retire by 2025, and three other OTC facilities scheduled to retire by December 31, 2023. This decision also concludes that the CPUC should not request from the State Water Board any further extensions to OTC compliance dates for the remaining OTC fleet, except for the compliance date extension currently under consideration for Redondo Beach. While the State Water Board relies heavily on the SACCWIS for recommendations regarding grid reliability, as prescribed by the OTC Policy, these actions reflect the commitment of the CPUC to meeting statewide climate change targets and enhancing the reliability of the electrical grid with clean forms of energy.

Until new capacity is online, and in light of the new uncertainties associated with climate-related changes in California and west-wide electricity supply and demand, all the above information underpins the need for the extension of Redondo Beach's

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<sup>13</sup> CPUC. November 19, 2020. [Order Instituting Rulemaking Emergency Reliability \(R.20-11-003\)](#).

<sup>14</sup> CPUC. February 11, 2021. [Decision Directing Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company to Seek Contracts for Additional Power Capacity for Summer 2021 Reliability \(D.21-02-028\)](#).

<sup>15</sup> CPUC. March 25, 2021. [Decision Directing Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas and Electric Company to Take Actions to Prepare for Potential Extreme Weather in the Summer of 2021 and 2022 \(D.21-03-056\)](#).

<sup>16</sup> CPUC. May 7, 2020. [Order Instituting Rulemaking to Continue Electric Integrated Resource Planning and Related Procurement Processes \(R.20-05-003\)](#).

<sup>17</sup> CPUC. June 24, 2021. [Decision Requiring Procurement to Address Mid-Term Reliability \(2023-2026\) \(D.21-06-035\)](#).

compliance date for two years, which is reflected in the SACCWIS' recommendation to the State Water Board. This preferred recommendation is Alternative 1 in the Final 2021 SACCWIS Report and Alternative 1 in the Staff Report is consistent with the SACCWIS' recommendation.

#### **2.2.4. Need for Energy Produced by Redondo Beach**

Some commenters referenced RA contracting and suggested that current energy market activities and prior agreements, particularly regarding Redondo Beach, indicate a strong need for fossil-fueled OTC resources to meet RA requirements and ensure grid reliability. The Amendment, based on the recommendations of the SACCWIS, is intended to address system-wide grid reliability concerns over the next two years. Neither the CPUC nor the State Water Board is party to negotiations between owners or operators of OTC facilities and load serving entities that purchase RA from those owners or operators, and neither the CPUC nor the State Water Board can advocate for or against particular RA contracts.

Some commenters suggested that procurement associated with previous CPUC decisions, such as the 3,300 MW procured through D.19-11-016, is on schedule, and as such Redondo Beach's capacity should not be needed to enhance grid reliability. While sufficient resources have been procured to meet the 3,300 MW of new resources ordered by the CPUC in 2019, some projects expected to be online by August 1, 2021, have been delayed for various reasons, including impacts of COVID-19. Furthermore, as outlined above, additional near- and mid-term reliability needs have been identified since the adoption of this decision.

A significant number of commenters recognized that additional capacity may be needed but suggested alternatives to Redondo Beach, including renewable or novel sources of energy. However, as described in Master Response 2.2.2, recent events indicate that all available resources must be kept online in the short-term until additional procurement is operational. Further, the RA fleet, of which Redondo Beach is a part, has a must-offer obligation to be available to the CAISO when and where needed, as required by CAISO Tariff section 40.6.<sup>18</sup> Non-RA resources, including economic imports and voluntary curtailment, are not beholden to CAISO dispatch. Renewable sources of energy are discussed in greater detail in Master Response 2.2.5 below.

#### **2.2.5. Dynamics of the Energy Grid**

A number of commenters called into question the role of Redondo Beach in ensuring system-wide grid reliability, with some asserting that there is adequate capacity to support either system or local grid reliability without Redondo Beach.

For background, the electrical grid is comprised of interconnected local electrical grids. These interconnections provide multiple pathways for power to flow, thereby building

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<sup>18</sup> CAISO. [California Independent System Operator Corporation Fifth Replacement Electronic Tariff](#).

redundancy into the system such that service interruptions are minimized.<sup>19</sup> System-wide grid reliability requires that power supply and demand must be equal at any given moment so as to not place unnecessary stress on the electrical transmission system. To achieve system-wide grid reliability, the operation of regional grids is relegated to entities called balancing authorities, each of which is responsible for operating a BAA. California has several BAAs, the largest of which is operated and maintained by the CAISO.

The responsible balancing authority continuously forecasts, monitors, and adjusts electrical supply to meet demand. Balancing supply and demand can be achieved through several processes, one of which is the dispatch of generation assets by the responsible balancing authority. Generally, dispatch involves two phases, the first of which involves identifying power generation units to commit to potential production in advance of forecasted demand. The second phase of this process entails dispatching generation assets, in which committed units are dispatched to operate at a particular level to meet demand. It should be noted that forecasting and monitoring electrical demand inherently contains a degree of uncertainty. However, balancing authorities conduct regular forecasting and RA analysis to predict energy demand and available production capacity. Balancing authorities may use this analysis to determine whether more capacity procurement is needed.

In California, Public Utilities Code section 380 requires the CPUC, in consultation with the CAISO, to establish RA requirements for all load serving entities to maintain physical generating capacity and electrical demand response adequate to meet load requirements, including, but not limited to, peak demand, net peak demand, and planning and operating reserves.<sup>20</sup> The RA program ensures the reliability of electric service in California, even under peak demand, or contingency, scenarios. The RA program was developed in response to the California energy crisis that occurred in 2001, and it requires a universal 15 percent Planning Reserve Margin (PRM).<sup>21</sup>

The August 2020 blackouts demonstrated a need to reevaluate the PRM given increased demand and the impacts of climate change, resulting in an interim “effective”, but not official, increase to a 17.5 percent PRM with the additional resources to be procured by the state’s three largest investor-owned utilities (see CPUC D.21-06-035). The interim effective PRM, which is intended to reflect grid challenges identified in the Final Root Cause Analysis that the 15 percent PRM may not fully address, increased the projected energy deficit. It is important to note that, even without this adjustment, the state’s energy agencies’ stack analysis still projected a shortfall in summer 2022 and Redondo Beach’s capacity would have been necessary to partially bridge the shortfall, as discussed in greater detail in Section 5.1 of the Staff Report.

As power demand is variable and production is tied to an array of factors, some types of electrical generation assets are dispatched to serve load more frequently than others,

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<sup>19</sup> U.S. Energy Information Administration. July 20, 2016. [U.S. Electric System is Made Up of Interconnections and Balancing Authorities.](#)

<sup>20</sup> [Public Utilities Code Section 380.](#)

<sup>21</sup> CPUC. August 2018. [The 2017 Resource Adequacy Report.](#)

while other generation assets are generally reserved for peak demand, or contingency, periods. Facilities reserved for peak demand periods are colloquially referred to as “peakers.” The low-capacity factors of peakers do not indicate that these facilities are unnecessary for grid reliability. For instance, peakers are dispatched when energy usage typically spikes during heat waves, when air-conditioning usage is widespread. Peakers also play a role in maintaining grid reliability during emergency scenarios, such as natural disasters that damage, destroy, or otherwise require the shutdown of electrical generation or transmission infrastructure. These periods often require dispatching facilities that are or can operate like peakers. It is sometimes necessary to dispatch multiple peaker units in a similar time frame to meet demand because some conventional generators take time to reach their allocated output and serve load. Redondo Beach’s ability to act like a peaker is described in Master Response 2.2.8.

In another vein, several commenters alleged that Redondo Beach is not needed for grid reliability because of electricity import and export patterns in the past. Some commenters specifically suggested that Redondo Beach exports electricity to other states, or that Redondo Beach only exports electricity to Arizona. As noted in Section 5.1 of the Staff Report, electricity import and export markets play a vital role in the operation and maintenance of the nation’s grids. During the August 2020 blackouts, the CAISO was scheduled to export electricity; however, the CAISO was import-dependent during all hours of the outage events, and in fact was a net importer of energy across all hours of both the day-ahead and real-time markets from August 13 through 15, 2020.

The CAISO balances its responsibility to meet internal energy demands with its responsibility to collaborate with the rest of the Western Interconnection Grid in maintaining an open and fair market. Exports ultimately play an important role in the operation of this regional system, upon which the CAISO depends for imports. However, in response to the August 2020 blackouts, the CAISO conducted a stakeholder initiative to ensure treatment of exports and native load are given the appropriate prioritization to maintain reliability. Additionally, no evidence was provided by commenters to support the assertion that all of Redondo’s electricity is exported to nearby states. Rather, Redondo Beach’s capacity is regularly employed in supporting system-wide grid reliability within California.

## **2.2.6. Renewable Energy and Energy Storage**

Several commenters requested that renewable energy be used to replace Redondo Beach’s capacity. A number of commenters also suggested that existing renewable energy sources or energy storage resources negate the need for Redondo Beach. Some commenters also referenced state regulations or statutes requiring that California’s energy grid incorporate more renewable energy resources in coming decades. A number of these commenters alleged that the state is not meeting its clean energy goals. Finally, comments were received expressing a desire for alternative or novel energy sources to meet projected peak demand.

Energy and environmental policy initiatives are already driving changes in California to support increased usage of renewable resources to satisfy the state’s electricity demands. Balancing authorities may employ a number of generation resources to ensure grid reliability. In California, renewable energy resources, such as wind and

solar, are progressively playing a larger role in electrical generation, as required by Senate Bill 100 (SB 100, De León) and Senate Bill 350 (SB 350, De León).<sup>22,23</sup> Incorporating renewable energy resources into the grid is an important step in reducing GHG emissions and mitigating the impacts of climate change.

Further, the CPUC indicated to the State Water Board that it is committed to keeping California on a path towards meeting its goal of 100 percent, zero-carbon electricity resources by 2045, as well as its 2030 greenhouse gas emissions reduction goals, as prescribed by Senate Bill 100 (SB 100, De León) and Senate Bill 350 (SB 350, De León). As referenced above, the CPUC's D.21-06-035, was specifically designed towards achieving this goal.

Wind and solar resources are increasingly playing a greater role in renewable electricity production in California; however, they are inherently variable and production is directly tied to wind and solar availability and activity. As discussed below, current RA planning does not focus on the hours after sunset when demand still remains high yet solar generation is at or near zero MW.

The proposed compliance date extension of Redondo Beach does not mean this power plant will operate at a higher capacity to serve base load. As noted in Section 5.1 of the Staff Report, Redondo Beach is used like a peaker and generally operates at a low capacity over an annual period. If the compliance date for Redondo Beach is extended, it would continue to be used like a peaker and would be expected to run at or below its current operating capacity. Furthermore, if future CPUC Integrated Resource Planning processes show that Redondo Beach is no longer necessary to ensure system-wide grid reliability during the approved extended compliance date period, AES could elect to retire the facility early.

### **2.2.7. Projected Energy Supply**

Several commenters supported the Amendment, expressing concern regarding the impacts of the ongoing drought, wildfires, and other climate change-induced events on grid reliability. Some of these commenters highlighted the increasing frequency of flex alerts and blackouts to support their assertions. Some commenters expressed concerns on the impacts of potential shortfalls in power supplies to larger communities, such as the Los Angeles area, and others to smaller disadvantaged or marginalized communities. Finally, a number of commenters supported the Amendment based on the impacts of COVID-19.

The Amendment is based on energy supply projections made by the state's energy agencies and associated concerns regarding system-wide grid reliability, including those presented by extreme weather and/or climate change-induced conditions such as drought and wildfires. The increased interim effective 17.5 percent PRM is in part intended to reflect increased variability that might occur as a result of these conditions.

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<sup>22</sup> California State Legislature. September 10, 2018. [Senate Bill No. 100](#).

<sup>23</sup> California Energy Commission. [Clean Energy and Pollution Reduction Act – SB 350](#).

Recent RA program changes and CAISO actions further support the need for the energy produced by Redondo Beach. For instance, current resource planning targets, which include the PRM, are focused on the peak period as a whole (i.e. approximately 6:00 pm PST) versus later in the evening (i.e. 7:00 pm – 8:00 pm PST) during and after sunset, when net peak demand may remain elevated and yet generation from solar resources is at or near zero MW. On June 29, 2021, Marybel Batjer, President of the CPUC, and David Hochschild, Chair of the CEC, sent a letter to Elliot Mainzer, President of the CAISO, detailing this matter.<sup>24</sup> The letter cites several significant changes in the assumptions underlying the RA program and in system conditions, including:

1. Significantly reduced hydroelectric production due to worsening drought conditions;
2. Unforeseen limitations on output of thermal resources;
3. Extreme heat events that have begun unseasonably early;
4. Delays in planned online dates for several new resources beyond the summer of 2021;
5. Uncertainty for further development of demand-side resources in response to emergency procurement authorizations;
6. Periodic inadequacy of peak demand resources to support peak demand net of wind and solar generation (i.e., the net peak demand); and
7. Limited ability to address changed conditions in the near-term given the timeline of the RA compliance process.

In this letter, the CEC and the CPUC requested that the CAISO use its tariff-based authority to procure additional capacity for summer 2021, in response to these factors. Consequently, on July 1, 2021, the CAISO announced its intent to procure additional capacity through its tariff authority due to a “significant event” as described by the joint letter.<sup>25</sup> It is important to note that this lack of capacity occurred despite considering all of the OTC units through their current compliance dates, including Redondo Beach, and the additional units the CAISO had designated as reliability-must-run (RMR), as described in the Final 2021 SACCWIS Report.

During the public comment period, some commenters suggested that the issuance of system RMRs should negate the need for Redondo Beach’s capacity. However, the CAISO RMR designation is a “last-resort” mechanism used to retain retiring resources for system and local reliability needs. Designating RMR resources for system level reliability indicates that all resources within the CAISO system are needed to maintain reliability, including Redondo Beach. System RMRs indicate that the system cannot afford to lose any generation while the state’s energy agencies actively seek to enhance grid reliability. System-wide grid reliability may be bolstered through procurement and

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<sup>24</sup> Batjer, M. and Hochschild, D. July 1, 2021. [Joint Statement from the CPUC President Marybel Batjer, CEC Chair David Hochschild, and California ISO CEO Elliot Mainzer on decision to procure additional energy resources for summer.](#)

<sup>25</sup> CAISO. July 2, 2021. [Capacity Procurement Mechanism Significant Event – Intent to Solicit and Designate Capacity.](#)

retaining all available resources in the interim, particularly in the face of evolving circumstances.

Shortly after the CAISO announced its intent to procure additional capacity through its tariff authority, Governor Gavin Newsom issued an emergency proclamation to expedite clean energy projects and relieve demand on the electrical grid on July 30, 2021.<sup>26</sup> This proclamation is intended to free energy supply and demonstrates the stress that climate change is placing on the electrical grid. After this announcement, the CAISO received RA reports that demonstrated a 400 MW deficiency in September 2021. This fact indicates that the total RA capacity shown to the CAISO for September 2021 across all load serving entities was over 400 MW below the legal RA requirement.

On August 11, 2021, the CEC released its Preliminary 2022 Summer Supply Stack Analysis, which stems from recommendations to reduce the likelihood of additional outages included in the Final Root Cause Analysis.<sup>27</sup> The CEC adopted a final revised version of this stack analysis at its September 8, 2021 Business Meeting.<sup>28</sup> Following a May 4, 2021, joint agency Integrated Energy Policy Report workshop, it became apparent that an update of the stack analysis conducted in early 2021 was necessary due to the conditions outlined above. For instance, the early 2021 stack analysis did not account for the significant impacts of the ongoing drought on hydroelectric generation. Therefore, the CEC developed, with input from the CPUC and CAISO, this stack analysis to better inform the public about potential implications should the ongoing drought and extreme heat events persist into summer 2022, as current National Oceanic and Atmospheric Administration models predict.<sup>29</sup>

This stack analysis focused on July, August, and September of 2022, and accounted for average (15 percent) and extreme weather (22.5 percent) PRMs. Assumptions about demand and available resources were based on the best available data. Results of the stack analysis suggest that contingencies are needed in September under the average demand curve using the 15 percent PRM. The demand curve using the 22.5 percent PRM projects contingencies of up to 4,350 MW. These results demonstrate that additional resources are needed to provide electric system resiliency against climate change-induced drought and extreme heat events, as well as wildfire-related outages or west-wide heat events that threaten interstate energy transfers. Either PRM scenario results in projected shortfalls that further indicate Redondo Beach's capacity is needed to partially offset the shortfalls during periods of high net peak demand. The Staff Report was revised to add a summary of the 2022 Summer Supply Stack Analysis.

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<sup>26</sup> Office of Governor Gavin Newsom. July 30, 2021. [Proclamation of a State of Emergency](#).

<sup>27</sup> CEC. [California Energy Commission Preliminary 2022 Summer Supply Stack Analysis \(CEC Docket 21-ESR-01\)](#).

<sup>28</sup> CEC. [California Energy Commission 2022 Summer Supply Stack Analysis CEC Docket 21-ESR-01](#).

<sup>29</sup> National Oceanic and Atmospheric Administration – National Weather Service Climate Prediction Center. [Experimental Unofficial Long-Lead Forecasts: Two-Class Probabilities](#).

Some commenters pointed to other factors as necessitating or negating the need for the compliance date extension for Redondo Beach, or suggested critiques of the methodologies and analyses that the state’s energy agencies employed in supporting the proposed compliance date extension for Redondo Beach. The justification for this Amendment is included in Section 5.1 of the Staff Report. Uncertainty in the stack analysis or regarding system-wide grid reliability was considered by the SACCWIS in its adoption of the Final 2021 SACCWIS Report and recommendation to the State Water Board to extend the compliance date for Redondo Beach. Furthermore, the State Water Board does not have the authority, jurisdiction or expertise to reevaluate the assumptions and analysis included in methodologies, models, and decisions employed by the state’s energy agencies in supporting the proposed Redondo Beach extension. It should also be noted that the State Water Board does not have the authority or jurisdiction to make determinations regarding: the impact of energy resources, including hybrid resources, on grid reliability; arguments regarding the legal adequacy of decisions of the state’s energy agencies, which are pursued in proceedings separate from the Amendment; underlying concerns of energy policy or barriers to interstate trade; requirements or enforcement actions, including associated penalties incurred, imposed by the state’s energy agencies pursuant to their authority; and any prior or ongoing litigation between the state’s energy agencies and other parties, which will proceed separately from this Amendment in the appropriate legal forum.

#### **2.2.8. Redondo Beach’s Role in System-Wide Grid Reliability**

Several commenters suggested that there is a lack of evidence that Redondo Beach is needed for grid reliability purposes. The state’s energy agencies have conducted rigorous forecasting and, for the reasons stated above and in Section 5.1 of the Staff Report, have recommended that the compliance date for Redondo Beach be extended to ensure system-wide grid reliability through 2023.

During the public comment period, a substantial number of comments were received that called into question Redondo Beach’s role in maintaining grid reliability. Redondo Beach was erected in the mid-twentieth century to serve baseload, with Units 5 and 6 being the oldest and constructed in 1954 and 1957, respectively. While originally constructed and used as a baseload resource, Redondo Beach now primarily functions like a peaker plant, and thus for the reasons noted in Section 5.1 of the Staff Report and further explained in Master Response 2.2.5, a short-term extension is needed to ensure system-wide grid reliability.<sup>30</sup>

Several commenters suggested that Redondo Beach is too antiquated to be useful for peak demand use or that it takes too long to activate to be useful as a peaker during contingency or emergency scenarios. Master Response 2.2.6 contains information regarding Redondo Beach’s usefulness as a peaker. Additionally, as noted above, the dispatch process often involves two phases, in which near-future forecasting of demand

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<sup>30</sup> State Water Board. March 18, 2020. [Draft Staff Report to the Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling for Extension of Compliance Schedules of Alamitos, Huntington Beach, Ormond Beach, and Redondo Beach Generating Stations.](#)



elicits the balancing authority to commit resources in the forecasted period. However, even with rigorous forecasting and monitoring of system conditions, future system demand projections inherently contain a degree of uncertainty and are impossible to predict exactly. This fact also means that potential capacity shortfalls cannot be calculated with unequivocal certainty. Therefore, as the CAISO must respond to system demands in real-time, it is necessary to maintain enough resources to adequately meet rapid shifts in demand. While Redondo Beach may not be able to spin-up to full capacity in a sudden demand-shift scenario, it can still be useful in producing some degree of generation that, when combined with other fleet resources and demand-response programs, may allow the CAISO to meet its obligations during periods of high peak or net peak demand.<sup>31</sup>

Many commenters suggested that Redondo Beach uses outdated technology and needs to be shuttered. The OTC Policy provides several methods for owners and operators of OTC facilities to come into compliance. In its implementation plan and subsequent annual updates to the State Water Board, AES opted to retire this facility to comply with the OTC Policy. The proposed compliance date extension of Redondo Beach does not reverse the owner and operator's decision to ultimately retire this facility but provides additional time to ensure system-wide grid reliability is maintained in the CAISO BAA while new generating resources come online.

Redondo Beach employs older generating technology, similar to the other fossil-fueled OTC units that were constructed from the late 1940s to the early 1960s. However, the facility has transitioned over time from being used as a baseload resource to being operated like a peaker, the latter of which generally operates in times of high demand. This transition was largely due to the costs associated with operating older power plants. The age of Redondo Beach's generators means they require more energy input per unit output, and thus have higher marginal costs to operate. The CAISO generally dispatches resources when demand drives energy prices above those resources' costs, so resources such as Redondo Beach are dispatched less frequently than newer, more efficient generators.

Many commenters suggested that Redondo Beach is unreliable and cannot, or should not, be counted upon to serve load during times of peak demand or emergencies. Some of these commenters referenced recent unit downtime when energy was needed, such as extreme heat waves that have occurred in the last year. In contrast, some commenters suggested that Redondo Beach is reliable and has a proven track-record.

CAISO's Outage and Curtailment reports for August 2020, note that a portion of Redondo Beach's capacity was unavailable for at least part of the time during the August 2020 blackouts. However, Redondo Beach's capacity may help to alleviate projected shortfalls. Additionally, CAISO can prepare the system for stressed conditions (i.e., heatwaves, fires, reduced generation) by starting "long-start" resources like Redondo Beach ahead of the need. The CAISO relies on its day-ahead market to match supply to demand and start resources ahead of time rather than waiting until the

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<sup>31</sup> CPUC. November 7, 2019. [Decision 19-11-016](#).

last minute. This preliminary start-up phase corresponds with the first phase of dispatch discussed above.

Several commenters also expressed concern regarding Redondo Beach's maintenance activities, suggesting that the facility may not receive adequate maintenance to serve reliably or safely. Redondo Beach, like all generators, is subject to comply with 28 Operation Standards and 18 Maintenance Standards under CPUC General Order No. 167. The CPUC indicated to State Water Board staff that Redondo Beach has submitted all necessary operation filings to the Safety and Enforcement Division. CPUC staff also indicated that Redondo Beach is current regarding 2020-2021 maintenance and operational plan filings as required by the CPUC General Order 167 Enforcement of Maintenance and Operation Standards for Electric Generating Facilities. The CPUC monitors facility outages and performs audits to determine compliance with these safety and maintenance measures.

Relatedly, several commenters suggested that Redondo Beach provides negligible capacity towards system-wide grid reliability, pointing to Redondo Beach's approximate two percent operational capacity in 2018. Low-capacity factors do not negate the significance of Redondo Beach in maintaining grid reliability. As noted above in Section 2.2.5, fossil-fueled OTC generators such as Redondo Beach, which are often operated like peakers, are typically dispatched when demand is high and the CAISO has limited other options to maintain grid reliability.<sup>32</sup>

## **2.3. Water Quality and Impacts to Marine Life and Mitigation**

### **2.3.1. Water Quality**

Many comments were received stating concerns about impacts to water quality and marine life from operating Redondo Beach. Several comments specifically asserted that water intake associated with Redondo Beach's operations harms or threatens marine life. Impacts to water quality and marine life are addressed through the OTC Policy, which ensures 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 citizens of the state are met. The State Water Board considers impacts on water quality along with grid reliability in extending compliance dates.

The OTC Policy implements CWA section 316(b), which addressed impacts to water quality and marine life by requiring that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. The provisions of the OTC Policy are implemented through National Pollutant Discharge Elimination System (NPDES) permits, issued pursuant to CWA section 402, which regulate the point source discharge of pollutants to navigable waters. The Regional Water Quality Control Boards ("Regional Water Boards") issue NPDES permits within their jurisdiction. Redondo Beach is within the

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<sup>32</sup> Joint Letter of the CPUC, CEC, and CAISO. May 27, 2020. [Extension of Once-Through Cooling Policy Compliance Deadlines.](#)

Los Angeles Regional Water Quality Control Board's ("Los Angeles Regional Water Board") jurisdiction.

Some comments alleged that Redondo Beach's effluent is toxic or polluting. The effluent discharges of Redondo Beach are currently regulated by NPDES Permit No. CA0001201 (Order No. R4-2016-0222 and Order No. R4-2016-0222-A01). Additionally, Redondo Beach has a Time Schedule Order (TSO) issued by the Los Angeles Regional Water Board. TSOs are enforcement actions issued in accordance with Section 13300 of the California Water Code that require the discharger subject to the TSO to submit a time schedule establishing actions that the discharger will take to address actual or threatened discharges of wastes in violation of requirements, such as discharging identified constituents over the approved maximum limitation.

On April 1, 2021, the Los Angeles Regional Water Board received a Report of Waste Discharge from AES. On April 29, 2021, after reviewing the Report of Waste Discharge, the Los Angeles Regional Water Board responded with a letter that stated that the AES application was complete. As a result, "...the terms and conditions of the Order R4-2016-0222-A01, including the accompanying Monitoring and Reporting Program, continue to be in full effect pending action on a new/revised permit by the Los Angeles Water Board."

Further, the current TSO for Redondo Beach was amended in December 2020, to allow for continued operation of the facility through its current compliance date. However, the TSO expires on December 31, 2021. Therefore, Los Angeles Regional Water Board staff have indicated to the State Water Board that they anticipate the Los Angeles Regional Water Board will consider adopting a new TSO in December 2021.

Several comments were received stating that Redondo Beach is outdated or inefficient. The 2010 Final SED showed that OTC units among the nineteen power plants operated at varying efficiencies (volume of cooling water in millions of 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. Redondo Beach Units 5, 6, and 8 are all steam boilers, and are the least efficient among the OTC fleet, requiring more OTC intake water to produce a MW-hour than the other power plants (Figure 11 in the 2010 Final SED).<sup>33</sup>

Since adoption of the OTC Policy, Redondo Beach has generally operated at decreasing capacities, with average annual capacity factors decreasing from 4.7 percent in 2012 to 1.6 percent in 2019. If the compliance date for Redondo Beach is extended, its operational capacity is expected to be operated at or below its annual average capacity factor from 2019, thereby minimizing impingement and entrainment impacts from 2010 and pre-2010 impacts. Impacts to marine life are expected to be at or below the baseline established in the 2010 Final SED if the compliance date for Redondo Beach is extended.

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<sup>33</sup> State Water Board. May 4, 2010. [Final Substitute Environmental Document. P.41 Figure 11. Ratios of Average Cooling Water Flow to Energy Generation.](#)

Several comments expressed concerns that continued operation of Redondo Beach would exacerbate impacts to ocean waters and coast lines from climate change. Section 35630 of the Public Resources Code recognizes that anthropogenic GHG emissions responsible for climate change are also driving major shifts in the chemical properties of the world's oceans. Although the geographic scope of ocean changes resulting from climate change may be widespread, local stressors can increase their occurrence and compound their effects on both marine ecosystems and coastal communities.<sup>34</sup> The wastewater discharge from OTC power plants may act as a local stressor, though impacts are expected to be equivalent to or less than the baseline established in the 2010 Final SED.

Commenters also expressed concern that thermal discharges from OTC facilities contribute to harmful algae blooms in coastal waters. The State Water Board implements CWA section 316(a) through the Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California ("California Thermal Plan").<sup>35</sup> Regulation of thermal discharges is outside the scope of OTC Policy. However, the California Thermal Plan requires that elevated temperature wastes from existing discharges shall comply with limitations necessary to assure protection of beneficial uses and Areas of Special Biological Significance. This provision is incorporated in Redondo Beach's NPDES Permit No. CA0001201, which is enforced by the Los Angeles Regional Water Board. Redondo Beach's effluent discharges are also subject to the requirements in the Water Quality Control Plan for Ocean Waters of California, which aims to protect the beneficial uses of California's marine waters.<sup>36</sup>

The Amendment does not prevent Redondo Beach from ultimately retiring or modifying its cooling systems to reduce the use of OTC water, as discussed in Master Response 2.1.1. If the compliance date for Redondo Beach is extended, the daily average OTC water use is projected to be at or below the design flow rates from the original OTC Policy compliance schedule, as noted in Section 5.2 of the Staff Report.

### **2.3.2. Impacts to Marine Life and Interim Mitigation Payments**

Several comments expressed concerns about impacts to marine life due to the use of cooling water intake structures that OTC facilities employ for generating electricity. 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 drawn through cooling systems and exposed to high pressures and temperatures (entrainment). Impingement and entrainment may cause injury or mortality to aquatic organisms. The magnitude of

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<sup>34</sup> State Water Board. December 3, 2019. [Final Staff Report and Work Plan for 2019 Review of the Water Quality Control Plan for Ocean Waters of California.](#)

<sup>35</sup> State Water Board. September 18, 1975. [Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California.](#)

<sup>36</sup> State Water Board. July 6, 1972. [Water Quality Control Plan for Ocean Waters of California](#) (most recently amended 2019.)

environmental impacts on marine organisms caused by impingement and entrainment of seawater intakes is site specific and varies significantly from one project to another.<sup>37</sup>

CWA section 316(b) requires that existing power plants employ the best technology available for minimizing impingement and entrainment mortality. Until final compliance is achieved, OTC Policy Section 2.C(3) requires that existing power plants must implement measures to mitigate the interim impingement and entrainment impacts resulting from the cooling water intake structure(s). 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 several options for owners and operators to comply with interim mitigation requirements. Each option requires that the owners and operators demonstrate to the State Water Board's satisfaction that the measures are compensating for the impacts or require State Water Board approval. Owners and operators could also elect to comply via a combination of the interim mitigation options presented in Section 2.C(3) of the OTC Policy.

In 2015, the State Water Board adopted Resolution No. 2015-0057, delegating authority to the Executive Director to approve, on a case-by-case basis, mitigation measures that owners and operators of OTC facilities shall undertake to comply with requirements for interim mitigation.<sup>38</sup> Resolution No. 2015-0057 set forth measures by which owners and operators could comply with the interim mitigation option in Section 2.C(3)(b) of the OTC Policy, based on the findings of the Expert Review Panel II ("ERP II"). The owner and operator of Redondo Beach elected to comply with interim mitigation requirements via Section 2.C(3)(b) of the OTC Policy, which directs interim mitigation funds to be paid to the Ocean Protection Council (OPC) and California Coastal Conservancy ("Conservancy") to fund appropriate mitigation projects.

Section 2.C(3)(e) of the OTC Policy states that it is the preference of the State Water Board that interim mitigation funding is provided to the Conservancy, working with the OPC, for mitigation projects directed toward increases in marine life associated with the state's Marine Protected Areas (MPA) in the geographic region of affected facilities, including restoration of wetlands. The OTC Policy defines mitigation projects as those to restore marine life lost through impingement mortality and entrainment. Restoration of marine life may include projects to restore and/or enhance coastal marine or estuarine habitat, and may also include protection of marine life in existing marine habitat, for example through the funding of implementation and/or management of MPAs. Projects that the OPC funds with interim mitigation payments are intended to support and protect the MPA network. In accordance with the 2016 Memorandum of Agreement entered into by the State Water Board, the OPC, and the Conservancy, the State Water Board participates in the selection process and approves appropriate mitigation projects.

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<sup>37</sup> State Water Board. March 14, 2012. [Mitigation and Fees for the Intake of Seawater by Desalination and Power Plants](#).

<sup>38</sup> State Water Board. August 18, 2015. [Resolution No. 2015-0057](#).

## Process for Calculating Interim Mitigation Payments

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 had previously contracted with Moss Landing Marine Laboratory to establish ERP II on minimizing and mitigating intake impacts on marine life from power plant and desalination facility seawater intakes. ERP II developed a scientifically defensible mitigation payment calculation for facility interim mitigation that would compensate for continued intake impacts due to impingement and entrainment, which was the basis of the interim mitigation calculation method set forth in Resolution No. 2015-0057.

The interim mitigation payment calculation developed by the ERP II is comprised of an entrainment, impingement, and a management payment for implementation and monitoring of the mitigation project. The entrainment payment calculation utilizes empirical transport models coupled with the habitat production forgone 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 interim mitigation payment calculation developed by the ERP II was intended to compensate for continued intake impacts due to impingement and entrainment and was determined to be adequately protective of marine life and water quality.

In accordance with Resolution No. 2015-0057, interim mitigation payments are calculated annually for each individual OTC facility, comprised of the elements discussed above. 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 ERP II's Mitigation and Fees for the Intake of Seawater by Desalination and Power Plants Report. Resolution No. 2015-0057 states that when site-specific entrainment data is available for a facility, the Executive Director shall determine whether this data is suitable for calculating a specific habitat production forgone for that facility. Otherwise, owners and operators electing to comply with interim mitigation requirements consistent with Section 2.C(3)(b) of the OTC Policy, shall use the default method for calculating the entrainment component of the interim mitigation calculation. Each site-specific or general entrainment rate is multiplied by three percent each year to account for inflation. The impingement payment is calculated 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 payment is calculated by taking 20 percent of the sum of the entrainment and impingement calculations.

## Species Specificity of Interim Mitigation

Several comments expressed concerns about the impacts of OTC facilities on endangered species, such as *Stereolepsis gigas* (the Giant Sea Bass). Interim mitigation requirements are species non-specific and generally offset the impacts to marine life from impingement and entrainment. As described above, interim mitigation determinations are based on the Habitat Production Forgone, or Area of Production Forgone (APF), methodology, which applies to all species including the Giant Sea Bass.

As discussed in Appendix 1 of the Mitigation and Fees for the Intake of Seawater by Desalination and Power Plants Report of the ERP II:

*The key assumptions of [Area of Production Forgone, or, Habitat Production Forgone] that makes it useful in estimating the fee that should be applied per million gallons of water are: (1) it should reflect impacts to measured and unmeasured resources (e.g. invertebrate larvae). This is because its calculation assumes that those species assessed are representative of those not assessed. Practically this means that should the amount of habitat calculated using APF be created or substantially restored, the habitat will support species that were assessed as well as those that were not assessed in the [Empirical Transport Models]. Importantly that amount of habitat will also compensate for impacts to species only indirectly affected. For example, species feeding on larval fish will be positively affected by the creation of habitat that will produce more larval fish, even if those species are not affected directly by entrainment. (2) The losses are directly compensated in time. This means that should the mitigation take place according to APF estimates there will be no net impact. Importantly (for calculations that occur later), benefits do not need to accrue to be compensatory.<sup>39</sup>*

Additionally, as discussed in Section 5.2 of the Staff Report, impacts to marine life are expected to be at or below the baseline established in the 2010 Final SED if the compliance date for Redondo Beach is extended. As stated in Section 7 of the Staff Report, the continued operation of Redondo Beach to support system-wide grid reliability is within the original baseline and does not lead to new significant environmental impacts or a substantial increase in the severity of previously identified environmental effects.

Importantly, owners or operators are required to satisfy interim mitigation requirements until the OTC facilities achieve final compliance with the OTC Policy. Although the State Water Board recognized that these requirements incentivize early compliance with the OTC Policy, interim mitigation is generally intended to address the interim impacts of impingement and entrainment due to continued operation of these facilities during the phase-in period established for final compliance. The interim mitigation requirements of the OTC Policy will continue to apply to Redondo Beach if its compliance date is extended.

#### Additional Interim Mitigation Requirements

Several comments urged the State Water Board to increase the monetary amount of interim mitigation payments that AES would have to pay annually in the event of a compliance date extension for Redondo Beach, and that the current method of calculating interim mitigation payments to offset the impacts of entrainment and impingement are not sufficient. A number of commenters also quoted State Water Board members from the joint public hearing and consideration of adoption meeting for

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<sup>39</sup> State Water Board. March 14, 2012. [Mitigation and Fees for the Intake of Seawater by Desalination and Power Plants](#) (pg. 6).

the 2020 OTC Policy Amendment as directing staff to examine additional mitigation measures.

The assertion that additional mitigation is needed may imply that there are additional environmental impacts not previously analyzed or addressed in the 2010 Final SED or in the addendum to the 2010 Final SED in the Staff Report. In 2010, the State Water Board conducted a full CEQA analysis on the potential impacts of the proposed adoption of the OTC Policy, including significant or potentially significant adverse environmental impacts of the project and impacts associated with reasonably foreseeable methods of compliance. The Amendment was considered within the scope of the OTC Policy as it was adopted in 2010, since the OTC Policy from its inception recognized the need for potential modifications to the original compliance schedule to maintain grid reliability. Any requirement for new or additional mitigation to satisfy CEQA would conflict with this conclusion. Please refer to Master Response 2.6 for a more detailed CEQA discussion.

The State Water Board authorized the Executive Director, on a case-by-case basis, to approve the measures by which owners and operators proposed to comply with the interim mitigation requirements. Neither Resolution No. 2015-0057 nor the OTC Policy include provisions to increase interim mitigation requirements or payments if an owner or operator is complying with Section 2.C(3)(b) of the OTC Policy when a compliance date is modified to ensure grid reliability. See above in Master Response 2.3.2.

Importantly, the State Water Board did not direct staff to undertake specific or additional mitigation efforts, but to analyze additional feasible mitigation. State Water Board staff has undertaken such an analysis of requiring additional mitigation to address marine life impacts associated with the continued operation of Redondo Beach and concluded that, at a minimum, it would require the State Water Board to reconvene an expert review panel to assess intake impacts and determine whether additional marine life mitigation is scientifically supported. Once completed, any change to existing interim mitigation requirements could warrant revisiting State Water Board Resolution No. 2015-0057, which delegated authority to the Executive Director to approve on a case-by-case basis any measures undertaken to comply with interim mitigation and set forth parameters for approving such measures. Imposing additional mitigation without an adequate scientific basis would be arbitrary. Additionally, the State Water Board does not have statutory or regulatory authority to order mitigation measures beyond those affecting marine life impacts from coastal power plants.

Despite staff's determination that it would not be appropriate to require additional interim mitigation pursuant to the OTC Policy, AES submitted a letter to the State Water Board on June 10, 2021, indicating its intent to invest in a \$1.5 million voluntary environmental benefits package for watershed improvements and community benefits if the operation of Redondo Beach is extended through December 31, 2023. AES specifically expressed interest in supporting three existing projects that enhance marine life in MPAs, facilitate coastal access, or foster science education opportunities for stakeholders in underserved areas near OTC facilities in Los Angeles and Orange Counties. AES proposed to:



- Grant a total of one million dollars (\$1,000,000) to support the continued development of the Los Cerritos Wetlands, a restoration project managed by the Los Cerritos Wetlands Authority;
- Grant a total of two hundred and fifty thousand dollars (\$250,000) to the Tree People to fund outreach and education programs; and
- Grant a total of two hundred and fifty thousand dollars (\$250,000) to fund continued wetland facilities upgrades, and new outreach and education programs at Bolsa Chica Conservancy.

Regardless of proposed voluntary environmental benefits, AES, or any future owners and operators of Redondo Beach, will be required to continue complying with interim mitigation requirements up to and until final compliance with the OTC Policy.

## **2.4. Wetlands**

This master response focuses on comments received regarding the 5.93 acres of wetlands on the Redondo Beach property. Many comments expressed the importance of protecting wetlands and their role in promoting healthy ecosystems. Wetlands are important features that provide a variety of benefits including shelter and feeding grounds for wildlife, water quality improvements, resiliency against climate change impacts, and aesthetic appeal. In 1976, the Coastal Act was enacted by the State Legislature to provide long-term protection of California's coastline through implementation of a comprehensive statewide planning and regulatory program designed to manage conservation and development of coastal resources. The Coastal Commission, created by and charged with administering the Coastal Act, plans and regulates the use of land and water in the coastal zone and has regulatory authority over all federal activities and federally licensed, permitted, or assisted activities, wherever they may occur.

Additionally, coastal cities may develop a Local Coastal Program (LCP), which is a planning tool used by local governments to guide development in the coastal zone in partnership with the Coastal Commission. The LCPs contain ground rules for future development and protection of coastal resources, including land use plans and measures to implement the plan, such as zoning ordinances. Following adoption of a LCP by a city council or county board of supervisors, the LCP is submitted to the Coastal Commission for review for consistency with Coastal Act requirements.

As stated in the Staff Report and discussed in Master Response 2.3.2 above, the OTC Policy requires owners or operators of existing power plants to implement measures to mitigate interim impingement and entrainment impacts resulting from their cooling water intake structures. Most owners and operators elected to comply with interim mitigation requirements via Section 2.C(3)(b) of the OTC Policy, which directs interim mitigation funds to the OPC and the Conservancy to fund appropriate mitigation projects to increase life in MPAs, including restoration of wetlands. For more information on the OTC Policy's interim mitigation requirements, please refer to Master Response 2.3.2.

### 2.4.1. Impacts to Wetlands

Some comments expressed opposition to extending Redondo Beach's compliance date due to the presence of wetlands on the property and dewatering of the onsite wetlands. A number of comments also asserted that the Amendment would result in wetland restoration delays. In 2014, the Coastal Commission determined the presence of 5.93 acres of jurisdictional wetlands within the former tank basin area in the northeastern part of the Redondo Beach property. The wetlands were determined to be part of a historic natural wetland area, referred to as the "Old Salt Lake," which existed before the site was filled and developed for power generation in the 1940s and 1950s. Southern California Edison, who owned and operated Redondo Beach prior to AES, installed and operated groundwater wells in the former tank basin area.

On May 26, 2020, AES received a Notice of Violation (NOV) from the Coastal Commission acknowledging that AES disputes the Coastal Commission's conclusion that there are wetlands at the site.<sup>40</sup> The NOV also acknowledges that AES asserts that:

*Any wetlands characteristics within the site were artificial hydrological features resulting from water moving to the site from a series of injection wells located from about one half-mile to a mile from the site and operated by the County of Los Angeles Public Works Department.*

The series of injection wells referred to here are a part of the Barrier Project, which was installed to provide a freshwater barrier to mitigate seawater intrusion into freshwater aquifers that were over-pumped. However, the Coastal Commission found that the wetlands on the Redondo Beach property have exhibited wetland characteristics several times in the past century, as well as prior to development. The NOV states:

*It appears that, instead of the injection well system creating artificial hydrology, the facility's dewatering system has acted to mask existing wetland characteristics within the site. These characteristics appear to be present even when the dewatering system is apparently functioning as intended. Moreover, even if the wetland features were shown to be anthropogenic, that would not stop those features from causing the area to be appropriately characterized as a wetland.*

In a letter to AES dated August 27, 2015, the Coastal Commission detailed several unpermitted development activities, including, but not limited to, installation and operation of new groundwater pumps in the former tank basin area adversely affecting, or having the potential to adversely affect, the identified wetlands.<sup>41</sup> AES subsequently stopped dewatering the former tank basin area. On August 17, 2017, AES obtained an emergency Coastal Development Permit from the City of Redondo Beach to perform limited pumping, which was followed by two approved extensions of the emergency

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<sup>40</sup> California Coastal Commission. May 26, 2020. Notice of Violation (Violation File No. V-9-20-0041).

<sup>41</sup> California Coastal Commission. August 27, 2015. [Coastal Commission Enforcement Staff letter to AES](#).

Coastal Development Permit that expired on February 15, 2018. AES requested a third extension of the emergency Coastal Development Permit, which was denied by the City of Redondo Beach due to failures to comply with previous emergency Coastal Development Permit conditions.

The City of Redondo Beach informed the Coastal Commission of two subsequent unpermitted dewatering events: one in 2019 and 2020. At some point in time and without first obtaining a Coastal Development Permit from the City of Redondo Beach, AES had begun using sump or portable pumps to pump water out of electrical and utility vaults serving the facility. AES stated in its comment letter dated May 18, 2020, that there are no on-going safety or operational risks and the power plant can be safely and reliably operated through 2023 due to operation of the portable pumps.

As stated in the Staff Report, the Coastal Commission's May 26, 2020 NOV addresses illegal dewatering of Redondo Beach's wetlands through the unpermitted installation and use of groundwater pumps in the former tank basin area, as well as the installation and use of new portable pumps to dewater utility vaults that may be hydrologically connected to the wetlands in the former tank basin. The Coastal Commission informed State Water Board staff in April 2021 that AES complied with the NOV and accordingly completed the following actions:

- AES ceased any unpermitted dewatering of the former tank basin area;
- AES submitted by June 30, 2020, a Coastal Development Permit application to the City of Redondo Beach seeking authorization to remove the dewatering system in the former tank basin and either retain or remove the vault pumping system; and
- AES submitted by June 30, 2020, a response to information requests in the NOV related to the vault pumping system to the City of Redondo Beach and the Coastal Commission.

As of August 2021, the Coastal Commission indicated to State Water Board staff that it is not aware of any unpermitted dewatering events occurring in the past year. The Coastal Commission also acknowledged that it still considers the facility to contain jurisdictional wetlands, and that continued operation of Redondo Beach will not impact those wetlands. However, a compliance date extension would delay land-use changes of the facility's site, such as a restoration of the property to open space and wetlands. The City of Redondo Beach, which administers a LCP applicable to Redondo Beach, indicated in its July 16, 2021 comment letter to the State Water Board that AES' most recent Coastal Development Permit application was not deemed complete until October 2020, and that the proceeding is still in progress.

If the OTC compliance date extension is granted, neither AES, nor the current owner of the facility's property, are absolved from complying with existing state and local permits, laws, and regulations. Additionally, any litigation pertaining to the wetlands on Redondo Beach's property by any parties will proceed in an action separate from the Amendment. This issue is outside the purview of the State Water Board's authority under CWA section 316(b). Further, the OTC Policy does not prevent the Coastal Commission or the City of Redondo Beach from administering the Coastal Act and

associated LCP pursuant to their authority. All related happenings are under the jurisdiction of the Coastal Commission and City of Redondo Beach and outside the scope of the Amendment.

#### **2.4.2. Comments Regarding Purchase of Wetlands**

Several commenters stated that the City of Redondo Beach has actively been working towards purchasing a portion of the Redondo Beach power plant property to restore the historical wetlands and develop an open greenspace or park. Additionally, it is clear from many comments that there is community support for restoring and protecting the onsite wetlands and developing a park on the property, which is located in a densely populated area.

AES and SLH Fund, LLC. negotiated a Covenant at the time of sale of the Redondo Beach property. The Covenant is outside the State Water Board's authority to oversee or administer. The State Water Board was not involved in the negotiation of the Covenant and is unaware of the status of the agreement between SLH Fund, LLC., or the current owner of the property, and AES. Additionally, local land use or the merits of any specific proposal for post-shutdown remediation and associated land use implications or zoning laws are not appropriate for the State Water Board to resolve pursuant to its regulatory authority.

Some comments alleged a connection between the 2020 OTC Policy Amendment and the loss of grant funds previously awarded to the City of Redondo Beach, and then withdrawn, by the Resources Agency. Some of these commenters suggested that the Staff Report's language on this issue is misleading.

Prior to 2020, the City of Redondo Beach applied for and was awarded a grant from the Resources Agency in the amount of \$4,829,000 from Proposition 68. This grant was intended for the partial funding of a land purchase by the City of Redondo Beach from SLH Fund, LLC., who owned the Redondo Beach property. The purpose of the purchase was to eventually restore approximately 15 acres of the Redondo Beach property, including historical wetlands, as part of a regional park.

In 2020, under the Resources Agency's interpretation of the statute associated with the grant and its administration, the Resources Agency confirmed that the funding would not be withdrawn if Redondo Beach's compliance date was to be extended beyond December 31, 2020, because the project met the requirements of Public Resources Code Section 80137(a)(2).

The Resources Agency has since informed the State Water Board this grant was terminated in January 2021. According to the Resources Agency, the City of Redondo Beach submitted a letter regarding the seller's retraction of the offer to sell along with a request to reallocate the grant acquisition to another property adjacent to the power plant site. The Resources Agency was unable to accommodate the request as property substitutions are not allowed once the grant is awarded and the grant program guidelines require an acquisition project to have a willing seller.

Section 5.4 of the Staff Report has been revised to clarify that the Resources Agency terminated the grant agreement because the seller of the site retracted their offer, and

that Proposition 68 guidelines require that acquisitional projects have a willing seller. The Staff Report has also been revised with the most current information on the status of the wetlands at Redondo Beach.

## **2.5. Air Quality**

This master response responds to many comments on air quality regarding the compliance date extension in the Amendment. Many comments received regarding air quality were in opposition to the proposed extension of Redondo Beach. Other comments included, but are not limited to: the State Water Board is not fulfilling its mission of protecting the environment by not considering concerns regarding regional and greenhouse gas emissions; Redondo Beach impacts local air quality and community health, including potential odor events; Redondo Beach poses environmental justice concerns for nearby communities; and Redondo Beach increases vulnerability for individuals to the effects of COVID-19.

In contrast, some commenters asserted the emissions produced by Redondo Beach have a lower impact in comparison to other anthropogenic sources.

### **2.5.1. Role of the California Air Resources Board in the Statewide Advisory Committee on Cooling Water Intake Structures**

Some commenters expressed concerns regarding air quality impacts associated with Redondo Beach's operation.

To prevent disruption in the state's electrical power supply when the OTC Policy was adopted, the State Water Board convened the SACCWIS, which includes representatives from the CARB. The CARB provides expertise and guidance on issues pertaining to impacts to air quality, air quality management districts, and associated air quality permits.

Local air quality management districts and CARB regulate air pollutants and emissions to ensure compliance with applicable standards by issuing and enforcing air quality permits. The South Coast Air Quality Management District (SCAQMD) has jurisdictional authority over Redondo Beach.

Prior to 2010, during development of the OTC Policy and at the request of State Water Board staff, the CARB contacted local air districts housing active fossil-fueled OTC facilities to obtain information regarding required air quality permits and the permitting process. Since adoption of the OTC Policy in 2010, State Water Board staff has worked closely with the CARB and the local air districts to ensure that implementation of the OTC Policy is consistent with the CARB's standards and regulations as implemented in air permits by these air districts.

### **2.5.2. Air Emissions: Pollutants & GHGs**

Many commenters expressed concern regarding emissions of pollutants, particulate matter, and GHGs from the Redondo Beach facility, including methane and carbon dioxide (CO<sub>2</sub>). These air pollutants are produced as by-products when burning fossil fuels.

To establish a basis of comparison for power plant facilities, baseline emission levels were determined at the time of OTC Policy adoption for both pollutants and greenhouse gases based on emissions patterns at the facilities, as set forth in the 2010 Final SED. Baseline emissions levels were established by the emittance level of a facility complying with local air permits and regulations at required levels prior to the adoption of the OTC Policy in 2010.

In the 2010 Final SED, State Water Board staff compiled air emission data from 2006 for the active fossil-fueled OTC facilities using reported values obtained from the U.S. EPA Clean Air Markets database to establish baseline levels of pollutants, including CO<sub>2</sub> and methane. For individual pollutant outputs of Redondo Beach, please refer to the 2010 Final SED.

Baseline CO<sub>2</sub> emissions for Redondo Beach from 2006, 2018, and the updated emissions from 2019 are shown in Table 1.<sup>42,43</sup> As seen in Table 1, there has been a significant reduction in CO<sub>2</sub> between the operating years of 2006 through 2019.

**Table 1: 2006 vs. 2018 CO<sub>2</sub> Emissions**

| <b>Facility</b> | <b>2006<br/>CO<sub>2</sub> Emissions<br/>(tons/yr)</b> | <b>2018<br/>CO<sub>2</sub> Emissions<br/>(tons/yr)</b> | <b>2019 CO<sub>2</sub><br/>Emissions<br/>(tons/yr)</b> |
|-----------------|--|--|--|
| Redondo Beach   | 422,884  | 209,737  | 171,501  |

Some comments expressed concern for California’s ability to meet clean energy targets. The State Water Board Resolution No. 2017-0012, *Comprehensive Response to Climate Change*, acknowledges that one of the most effective ways to reduce GHGs in the atmosphere is to reduce emissions sources.<sup>44</sup> Additionally, CARB requires agencies to consider and implement strategies to reduce GHGs through 2030 (previously 2020 and updated to 2030 in the 2017 Scoping Plan Update).<sup>45</sup> Statewide GHG emissions are required to reduce over time pursuant to Health and Safety Code Section 38550 and Health and Safety Code Section 38566.<sup>46,47</sup>

<sup>42</sup> State Water Board. October 1, 2010. [Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling.](#)

<sup>43</sup> U.S. Energy Information Administration. [2019 Carbon Dioxide Emissions Calculator.](#)

<sup>44</sup> State Water Board. March 7, 2017. [Resolution 2017 0012 – Comprehensive Response to Climate Change](#)

<sup>45</sup> California Air Resources Board (CARB). November 2017. [California’s 2017 Climate Change Scoping Plan.](#)

<sup>46</sup> [Health and Safety Code Section 38550: AB-32 Air pollution: greenhouse gases: California Global Warming Solutions Act of 2006.](#)

<sup>47</sup> [Health and Safety Code Section 38566: AB-32 Air pollution: greenhouse gases: California Global Warming Solutions Act of 2006.](#)

The Clean Energy and Pollution Reduction Act of 2015 further requires that load serving entities reduce GHG emissions through the Integrated Resource Planning process.<sup>48</sup> Notably, these statutes and programs, implemented to ensure that targets are met, do not require specific individual facilities to reduce emissions. The GHG emissions reductions from these measures may be indirectly realized through reduced energy requirements.

The State Water Board acknowledges the environmental impacts of OTC facilities like Redondo Beach, including their contribution to air pollution. The OTC facilities have been operating subject to local air quality management district permits, and emissions/GHG emissions have reduced significantly since adoption of the OTC Policy. If its compliance date is extended, Redondo Beach would continue to be regulated by SCAQMD subject to applicable air quality permits. Additionally, the continued operation of Redondo Beach for grid reliability reasons is within the original baseline and does not lead to new significant environmental impacts or a substantial increase in the severity of previously identified environmental effects.

### **2.5.3. Redondo Beach Air Permit Compliance and Emissions History**

A number of commenters expressed concerns regarding Redondo Beach's impact on local air quality and public health, with some highlighting specific issues including: visual pollution and potential odor events; particulate matter causing asthma and lung cancer; a reduction of air quality in the region; and emissions from the facility could be a major contributor of pollution in the South Coast Air Basin.

Redondo Beach is subject to all regional, state, and federal air standards. Redondo Beach is currently operated by AES. AES currently holds a SCAQMD Title V Facility Permit and participates in the SCAQMD Regional Clean Air Incentives Market program for nitrogen oxide (NO<sub>x</sub>) emissions. Title V is a federal program designed to standardize air quality permits and the permitting process for major sources of emissions across the country. AES submitted a report from Yorke Engineering that evaluated Redondo Beach's air quality history on behalf of AES through June 2021, and the associated information below provides an overview of the facility's compliance and emissions data.

#### Redondo Beach Recent Breakdowns & Deviations

Several public comments discussed events that produced visible emissions from Redondo Beach, while some contend that there have been no recent NOVs and infrequent upset events. Based on information available to CARB, AES is currently in compliance with applicable CARB regulations as of July 2021. AES has no outstanding NOVs or Notices to Comply (NTC) related to air quality. The latest NOV was issued in 2017 and the latest NTC was issued in 2021, both of which have been resolved.

The SCAQMD has a formal process of agency notification in the event of an unforeseen equipment breakdown or deviation from permitted operations caused by broken or malfunctioning equipment outside of an operator's reasonable control that could result in a permit exceedance potentially producing visual pollution/black smoke, noise

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<sup>48</sup> SB 350, De León. [Clean Energy and Pollution Reduction Act of 2015.](#)

pollution, or the presence of an odor. These events are irregular occurrences, and not part of normal daily operations, and may occur upon start-up after long periods of inactivity.

In the event of a breakdown or deviation, the operator is required to immediately notify the SCAQMD of the event and potential permit excursions or releases due to the event and must immediately work on rectifying the issue. A NOV may not result from a reported breakdown or deviation if the SCAQMD determines that the operator took all reasonable steps to prevent the issue and can rectify the issue within a specified period. If reporting is not done in a timely manner, the facility may be subject to a violation. The SCAQMD staff informed State Water Board staff that smoke becomes a violation if it is an ongoing event for three minutes and monitored by a SCAQMD compliance inspector who is certified to read, or visually observe, smoke, in order to evaluate the density or opacity of the plume. If there is a breakdown that is an "operator error," it must be reported within the hour. There would be a resulting investigation in the event of breakdown. Any ongoing investigations are outside the scope of the Amendment and outside the jurisdiction of the State Water Board.

One breakdown and/or deviation resulting in excess emissions was the breakdown of a fan feeding oxygen to Unit 6 that resulted in visible emissions (i.e. black smoke) on July 25, 2019; the breakdown was rectified, and the event stopped in eight minutes. This black smoke event not result in a NOV. According to information provided from CARB and SCAQMD to State Water Board staff, there were no breakdowns reported during the 2020 Compliance Year.

As stated in the Staff Report, AES reported two Title V deviations at Redondo Beach during the 2020 compliance year. AES reported the first deviation, which occurred between December 16, 2019, and March 31, 2020, when the V-cone pressure transmitter on Device D23 failed and was stuck at full output. On July 31, 2020, the second deviation reported by AES occurred when a fuel-to air ratio imbalance resulted in Device D23 smoking intermittently for approximately 35 minutes. The SCAQMD staff reports that it was unable to determine a violation.

Some public comments expressed concern that compliance action could not be taken for the visual emission event occurring July 31, 2020, due to a certified inspector not being present. The SCAQMD informed State Water Board staff that SCAQMD Rule 401 establishes specific requirements necessary to determine a visual emission violation. These requirements include the observation of emissions above a density or "opacity" level for a specified period of time by a SCAQMD compliance inspector who is certified by the CARB to read visible emissions. SCAQMD compliance inspectors are required to hold a valid CARB Method 9 Visible Emission Evaluation Certification. Additionally, the requirements include observing the plume from specific locations relative to the sun. When these standards are met and a violation has been documented, the facility may be subject to compliance action. Due to the infrequency and relatively short duration of the visual emission events, SCAQMD has not been able to observe these events in which visual emissions have been reported.

Another breakdown notification that reportedly involved visible emissions was made on June 4, 2021. SCAQMD staff reported that the breakdown was due to a failure of the



forced draft fan that feeds oxygen into Unit 8. The issue was immediately resolved, and visible emissions (i.e. black smoke) lasted for approximately two minutes. The SCAQMD staff reports that it was unable to determine a violation.

According to the third-party evaluation report conducted by Yorke Engineering, LLC on the air quality compliance of the Redondo Beach facility, there were no reported deviations for 2021 as of August 3, 2021.

### Redondo Beach Generating Station Emissions History

Commenters expressed concerns that facilities like Redondo Beach have caused air pollution to worsen in the region. Additionally, commenters were concerned that pollution may be more concentrated or have more deleterious impacts because of the topography and meteorological conditions of the region surrounding Redondo Beach.

Redondo Beach emits very few toxic air contaminants (TACs), and those that are released are done so at low levels. Releases are regulated by the SCAQMD under the facility's air permit, California Health and Safety Code Section 44360 (b) (2), and the Air Toxics Hot Spots Information and Assessment Act.<sup>49</sup> The Air Toxics Hot Spots Information and Assessment Act requires facilities to do a health risk analysis every four years to determine if people will be exposed to any harmful pollutants. These health risk studies consider the topography of the entire basin, the potentially high-risk areas with large populations, and mobile source impacts. Some of these studies include further tests to account for specific meteorological data.

Since 2000, the SCAQMD has monitored and published the air quality record in its regulated areas, including the Southwest Coastal Los Angeles County region that Redondo Beach is located in. The SCAQMD uses specified monitoring stations throughout Southern California to collect air quality data in a variety of geographical regions. This data has been translated into a scale known as the Air Quality Index (AQI). The AQI assigns each measured pollutant in each monitoring region a number from 0-500 and, based on this number, assigns it one of six categories (Good, Moderate, Unhealthy for Sensitive Groups, Unhealthy, Very Unhealthy, or Hazardous) to indicate the "cleanliness" of the air with regards to that pollutant.

Historical air quality records from the Southwest Coastal Los Angeles County Monitoring Station are available on the CARB 2016 State Implementation Plan Standard Emission Tool, which provides emissions data from 2000 forward for all air basins in California.<sup>50</sup> Emissions from Redondo Beach have been consistently at or below standards for each pollutant, which are the strictest current standards set by either federal or state regulatory agencies to protect public health and welfare for the past five years. Additionally, Redondo Beach is considered a low priority health risk facility by the SCAQMD based on total facility-wide air toxic emissions from all sources.

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<sup>49</sup> [California Air Resources Board Toxic Hot Spots Information and Assessment Act](#) (AB 2588, 1987, Connelly).

<sup>50</sup> CARB. [California Emissions Pollution Analysis Metric: 2016 State Implementation Plan – Standard Emissions Tool](#).

## Comparison of Emissions by Sector

Some commenters expressed concern that Redondo Beach has been a major contributor to pollution in the South Coast Air Basin. The CARB developed emission estimates by source sector as part of the 2016 California State Strategy for the State Implementation Plan for Federal Ozone and PM2.5 Standards.<sup>51</sup> Table 2 shows the 2020 industrial emissions in the South Coast Air Basin, to which Redondo Beach belongs, broken down by sector reported in tons per day (tpd). The data was taken from the CARB 2016 State Implementation Plan Standard Emission Tool.<sup>52</sup> When comparing the emissions of the Redondo Beach facility to the various other sectors in Table 2, it is a relatively minor contributor to air pollutant emissions in the South Coast Air Basin.

**Table 2: Emissions by Sector**

| <b>Sector</b>                      | <b>CO (tpd)</b> | <b>NO<sub>x</sub> (tpd)</b> | <b>PM (tpd)</b> | <b>SO<sub>x</sub> (tpd)</b> | <b>VOC (tpd)</b> | <b>ROG (tpd)</b> |
|------------------------------------|-----------------|-----------------------------|-----------------|-----------------------------|------------------|------------------|
| Fuel Combustion                    | 48.3            | 40.6                        | 5.8             | 6.3                         | 51.8             | 11.2             |
| Waste Disposal                     | 1.1             | 2.5                         | 0.4             | 0.6                         | 693.2            | 14.1             |
| Cleaning and Surface Coatings      | 0.07            | 0.04                        | 1.8             | 0.002                       | 105.7            | 43.0             |
| Petroleum Production and Marketing | 5.2             | 1.2                         | 2.7             | 2.1                         | 65.8             | 20.5             |
| Industrial Processes               | 0.5             | 0.4                         | 18.0            | 0.3                         | 14.1             | 12.0             |
| Solvent Evaporation                | 0               | 0                           | 0.03            | 0                           | 121.5            | 102.7            |
| Miscellaneous Processes            | 56.0            | 14.1                        | 197.6           | 0.5                         | 44.1             | 12.8             |
| On-Road Motor Vehicles             | 578.4           | 151.6                       | 24.5            | 1.8                         | 85.8             | 76.3             |
| Other Mobile Sources               | 695.5           | 101.4                       | 6.4             | 3.5                         | 84.2             | 74.8             |
| Natural Sources                    | 243.8           | 4.5                         | 26.1            | 2.2                         | 157.4            | 137.5            |
| <b>Air Basin Total</b>             | <b>1,629</b>    | <b>316</b>                  | <b>283</b>      | <b>17</b>                   | <b>1,424</b>     | <b>505</b>       |

| <b>Sector</b>            | <b>CO (tpd)</b> | <b>NO<sub>x</sub> (tpd)</b> | <b>PM (tpd)</b> | <b>SO<sub>x</sub> (tpd)</b> | <b>VOC (tpd)</b> | <b>ROG (tpd)</b> |
|--------------------------|-----------------|-----------------------------|-----------------|-----------------------------|------------------|------------------|
| <b>AES Redondo Beach</b> | 2.4             | 0.047                       | 0.008           | 0.004                       | 0.033            | 0.033            |

<sup>51</sup> CARB. [2016 California State Strategy for the State Implementation Plan for Federal Ozone and PM2.5 Standards.](#)

<sup>52</sup> CARB. Data from [CARB 2016 State Implementation Plan Standard Emission Tool](#) ; tables were originally compiled by Yorke Engineering.

#### **2.5.4. COVID-19 Response from the CARB**

Several commenters communicated concerns that potential pollution from Redondo Beach could make individuals more susceptible to COVID-19. The CARB is ramping up its research efforts on air quality and health to better understand the effects of COVID-19. Currently, CARB staff is collecting data on changes in air quality, traffic counts, vehicle miles traveled, and freight activity since California's COVID-19 stay-at-home orders commenced and comparing this to data from earlier months and years. The CARB is also planning to fund two health studies to assess the COVID-19 situation. For more information on these efforts and studies, please refer to Harvard's COVID-19 study on particulate matter and researcher Yaron Ogen's study on nitrogen dioxide (NO<sub>2</sub>) levels contributing to COVID-19 fatality.<sup>53, 54</sup>

#### **2.6. California Environmental Quality Act and Other Analyses**

Many commenters assumed that the State Water Board must analyze the environmental impacts associated with continued operations of any facility past the current compliance date pursuant to CEQA as part of approving a revision to the compliance date for Redondo Beach in the OTC Policy. Some commenters asserted that the State Water Board must disclose, analyze, and attempt to mitigate the impacts from an additional extension for operation of Redondo Beach. Other comments received suggested that the State Water Board continues to apply incorrect legal standards in concluding that the Amendment is not a project as defined by CEQA. A new CEQA analysis is not required for the reasons explained below.

CEQA authorizes the Secretary for Natural Resources to certify that state regulatory programs meeting certain environmental standards are exempt from the majority of the procedural requirements of CEQA, including the preparation of a separate environmental impact report (EIR), negative declaration, or initial study. (Cal. Code of Regs., tit. 14, §15250.) The Secretary for Natural Resources has certified as exempt the State Water Board's adoption or approval of standards, rules, regulations, or plans to be used in the Basin/208 Planning program for the protection, maintenance, and enhancement of water quality in California. (Cal. Code of Regs., tit. 14, § 15251, subd. (g).) This includes state policies for water quality control, including the OTC Policy. Regulatory programs are certified when they involve "the same consideration of environmental issues as is provided by use of EIRs and negative declarations." (Guidelines, § 15002, subd. (l).) Approval of a certified regulatory program is not specific to each decision by an agency, but rather covers a range of agency actions that may be taken pursuant to that agency's regulatory authority covered by the certified

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<sup>53</sup> Wu, X., Nethery, R. C., Sabath, M. B., et al. April 24, 2020. [Air Pollution and COVID-19 Mortality in the United States: Strengths and Limitations of an Ecological Regression Analysis.](#)

<sup>54</sup> Ogen, Yaron. July 15, 2020. [Assessing nitrogen dioxide \(NO<sub>2</sub>\) levels as a contributing factor to coronavirus \(COVID-19\) fatality.](#)

program. The CEQA Guidelines provide for the use of a “substitute document” by State agencies with approved certified Programs. (Cal. Code. of Regs., tit. 14, § 15252.)

Regulations specifying the objectives, criteria and procedures to be followed by the State Water Board in implementing CEQA, including the exclusive procedural requirements for certified regulatory programs are found in Cal. Code of Regs., tit. 23, §§ 3720, 3775.

State Water Board regulations require that Substitute Environmental Documentation (SED) be prepared when approving a project that is part of a certified regulatory program. Requirements for a SED include: a written report prepared for the board that contains a brief description and an environmental analysis of the proposed project; an identification of any significant, or potentially significant, adverse environmental impacts of the proposed project; an analysis of reasonable alternatives to the project; an analysis of mitigation measures that would avoid or reduce any significant, or potentially significant, adverse environmental impacts; and an environmental analysis of the reasonably foreseeable methods of compliance. (Cal. Code of Regs. tit. 23, § 3777.)

CEQA regulations further allow for an environmental analysis of “a series of actions that can be characterized as one large project and are related . . . [i]n connection with issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program.” (Cal. Code of Regs., tit. 14, § 15168, subd. (a).) For subsequent modifications within the same program, the agency can approve the activity as being within the scope of the project covered by the program environmental document if the agency finds that, pursuant to CEQA Guidelines section 15162, no new significant effects would occur or no new mitigation would be required. (Cal. Code of Regs., tit. 14, § 15168, subd. (c)(2).)

In assessing the potential environmental impacts of adopting a proposed regulatory program such as the OTC Policy, an agency seeks to identify impacts resulting from the project, reasonable alternatives to the project, and impacts from reasonably foreseeable methods of compliance. In so doing, the agency must describe the environmental setting, defined as the “physical environmental conditions in the vicinity of the project as they exist at the time the notice of preparation is published.” (Cal. Code of Regs., tit. 14, § 15125, subd. (a).) The environmental setting “will normally constitute the baseline physical conditions by which a Lead Agency determines whether an impact is significant.” *Id.* At the time the OTC Policy was adopted, the State Water Board included a description of the environmental setting that encompassed all existing coastal OTC power plants then in operation that would be subject to the new regulatory requirements. The physical environmental conditions, as they existed, included impacts resulting from operation of these power plants. The environmental setting or baseline contained within the SED was used for comparison to determine whether the proposed regulatory action could result in new, significant environmental effects.

The OTC Policy established technology-based performance standards to address adverse environmental impacts from use of OTC systems and an implementation plan to address potential effects to the state’s electrical transmission system while coordinating the efforts of the State and Regional Water Boards. The OTC Policy allowed facilities to demonstrate compliance with the OTC Policy’s performance

standards using one of two alternatives: Track 1, achieving reductions in intake flow rate and screen intake velocity levels; or Track 2, minimum impingement and entrainment reductions comparable to Track 1 that would be achieved through a combination of operational or structural controls, or both. Recognizing the likelihood that many fossil-fueled OTC units would achieve compliance through retirement, re-powering, or infrastructure upgrades, the State Water Board sought input from California's energy and permitting agencies to ensure that the implementation schedule would be accomplished in an orderly and coordinated fashion to ensure grid reliability. The State Water Board chose to continue this collaborative approach by establishing the SACCWIS to assist in reviewing scheduled conversions to the best technology available as established in the OTC Policy for existing power plants and periodically report to the State Water Board with recommendations on modifications to the implementation schedule, addressing potential unforeseen changes through re-assessing compliance dates. The OTC Policy, as adopted, thus included a process for revisiting compliance dates with respect to grid reliability needs and consideration of OTC Policy amendments as needed.

In 2010, the State Water Board prepared a programmatic SED for the OTC Policy, the 2010 Final SED, which included an environmental analysis of the significant impacts or potentially significant impacts of adopting the regulations described above, as well as an assessment of significant or potentially significant effects resulting from reasonably foreseeable methods of compliance with those regulations. Methods to reduce impingement mortality and entrainment that were considered as part of this analysis included: closed-cycle wet cooling systems or closed-cycle dry cooling; as well as measures such as aquatic filtration barriers, barrier nets, intake relocation, velocity caps, variable frequency drives, seasonal operation, fine-mesh cylindrical wedgewire screens, and modified traveling screens. The State Water Board considered all relevant resource areas and analyzed whether use of the above compliance methods could result in potentially significant environmental effects relative to the environmental baseline, finding "less than significant impacts with mitigation incorporated" for aesthetics, noise, and grid reliability, "less than significant impacts" for hydrology and water quality, greenhouse gas emissions, and air quality, and no other impacts. The analysis noted that certain impacts were difficult to accurately assess because it was not known what specific measure from among the measures listed above would be chosen by the owner or operator for each facility for final compliance with the OTC Policy.

The State Water Board described adverse impacts associated with continued, unmitigated use of OTC as part of the environmental setting, or baseline, in the 2010 Final SED. However, the State Water Board was not required to analyze environmental impacts associated with allowing coastal power plants to continue operating with OTC. The plants were all existing and operational at the time of OTC Policy adoption and their impacts were all within the baseline physical conditions against which the State Water Board assessed the potential environmental impacts of adopting the OTC Policy. Nor was the State Water Board required to assess what impacts would result from allowing the physical conditions in the baseline environmental setting to continue as they existed at that time for differing periods during the compliance phase-in.

Absent including a “no-project alternative” for comparison to the potential for significant impacts resulting from adoption of the OTC Policy, the State Water Board was not required to analyze the effects of allowing continued operation of Redondo Beach in part because the State Water Board’s authority does not extend to requiring this facility to shut down or to shut down on any particular timeframe. The State Water Board’s authority is to require compliance with CWA section 316(b) which, as stated above, could be accomplished through repowering or other infrastructure upgrades by owners and operators of OTC power plants. The issue before the State Water Board in 2010 was whether to adopt a policy establishing intake flow rate and velocity reductions to comply with CWA section 316(b), among other related requirements, and the environmental analysis set forth in the 2010 Final SED evaluates the potential significant impacts of measures to implement these requirements. As explained in Master Response 2.1.1 above, Redondo Beach is not required to shut down in order to comply with the OTC Policy. The choice to shut down in order to effectuate compliance with the OTC Policy was a decision on the part of the owner and operator.

As illustrated by the project description contained in the 2010 Final SED, consideration of Redondo Beach’s compliance date extension is “within the scope of the project” covered by the programmatic SED. (2010 SED, Section 1.6, at p. 13; Cal. Code of Regs., tit. 14, § 15168, subd. (c)(2).) Because the original project acknowledged the possibility of compliance date extensions to address grid reliability, the Amendment is within the scope of the original environmental analysis conducted in 2010.

Commenters suggested that the State Water Board did not provide any technical analysis or data to justify the conclusion that this Amendment does not constitute a project under CEQA and thus does not require a full CEQA review. The State Water Board’s proposed addendum is based not upon a lack of data, but upon the legal conclusion that any impacts resulting from continued operation of Redondo Beach do not constitute a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment (see, Pub. Resources Code § 21065). Rather, the Amendment is a continuation of the status quo or baseline that existed absent the OTC Policy. (See, *Citizens for East Shore Parks v. State Lands Commission* (2011) 202 Cal.App.4th 549, 560, interpreting the CEQA baseline to include previously existing development and activities.)

Further, some commenters contended that this action would require an initial study, environmental checklist, or other analysis as required by CEQA, apparently pursuant to a tiered CEQA analysis (see, Cal. Code of Regs., tit. 14, § 15152.) However, any further environmental documentation required pursuant to a tiered CEQA analysis would involve measures or activities undertaken in order to achieve compliance with the OTC Policy, such as installing screens or closed-cycle wet cooling, not continuation of pre-existing operations, particularly where the OTC Policy, as analyzed in the 2010 Final SED, allowed for compliance date extensions to address grid reliability concerns associated with adoption of the OTC Policy. As stated above, compliance date extensions for the purposes of grid reliability were within the scope of the project analyzed in the 2010 Final SED.

Pursuant to Public Resources Code section 21080.5, subd. (c), certified regulatory programs are not exempt from sections addressing the need for supplements or subsequent EIRs where applicable. The State Water Board thus prepared an addendum to the programmatic SED to address “some changes or additions” to the previously adopted 2010 Final SED but concludes that “none of the conditions described in section 15162 calling for preparation of subsequent EIR have occurred.” (Cal. Code of Regs., tit. 14, § 15164, subd. (a).) California Code of Regulations, title 14, section 15162 requires a subsequent EIR where:

- (1) Substantial changes are proposed in the project 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;
- (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.

Any new significant effects described in California Code of Regulations, title 14, section 15162 as requiring new analysis do not refer to continuing effects considered as part of the baseline environmental setting, which was comprised of existing coastal power plant operation and ongoing impacts associated with those facilities. Rather, California Code of Regulations, title 14, section 15162 refers to new significant effects of changes to the OTC Policy regulating the impingement and entrainment effects of cooling water intake structures or of any new measures or actions required to comply with the OTC Policy, as set forth more fully above. Continued operation does not constitute a new significant effect.

California Code of Regulations, title 14, Section 15164 provides that an addendum to an EIR or negative declaration is appropriate if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a

subsequent EIR have occurred. The Amendment does not include any substantial changes to the requirements of the OTC Policy, given the clear provisions allowing for ongoing evaluation of grid reliability concerns and consideration of revisions to compliance dates in order to maintain grid reliability. Nor does the Amendment involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects resulting from OTC Policy compliance methods. Therefore, an addendum to the 2010 Final SED is appropriate. Furthermore, the addendum contained in the Staff Report complies with requirements for an addendum set forth in California Code of Regulations, title 14, Section 15164.

Comments contending that the State Water Board must analyze impacts associated with continued operation of power plants subject to the OTC Policy when revising compliance dates fail to acknowledge that these impacts are included with the baseline (environmental setting) and are not the result of adoption of the OTC Policy or of the reasonably foreseeable methods of compliance with the OTC Policy. For instance, several commenters allege that environmental conditions such as climate change or the presence of wetlands constitute new changes that were not considered a part of the baseline at the time of the adoption of the 2010 Final SED. However, the OTC Policy adopted in 2010 included a compliance schedule for affected power plants and moreover included a process for assessing and adopting compliance date extensions to address grid reliability. Impacts associated with continued operation do not constitute new significant effects or more severe effects resulting from adoption or implementation of the Policy. The commenters do not explain how climate change effects or a wetlands designation will result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects of adopting and implementing the OTC Policy.

In particular, some commenters asserted that the State Water Board must conduct another CEQA review because the 2010 Final SED did not fully assess air quality impacts associated with OTC Policy compliance. However, the State Water Board in the 2010 Final SED included a discussion of baseline emissions data in order to assess the potential for impacts associated with methods by which power plant operators would achieve compliance with the OTC Policy. (2010 Final SED, Section 2.6.) The Amendment does not involve a change in how compliance is required to be achieved, but instead extends the period until compliance is required. The Amendment will extend the period for Redondo Beach to achieve compliance and thus will continue in effect the baseline conditions that preceded adoption of the OTC Policy, as discussed above. The continued operations of Redondo Beach are expected to result in air quality impacts at or below baseline given generally lower capacity factors of plant operations in recent years, as discussed in Master Response 2.5. As a fossil-fueled spinning generator, emissions are tied to unit operation, and thus lower capacity factors relegate emissions to less than baseline. Continued air quality emissions do not constitute a change in the physical environment within the meaning of CEQA.




### 3. Table 3: Individual Comments and Responses

| Comment Letter | Individual Comment  | Response  |
|----------------|---|---|
| 01.1           | <p>The RBGS complies with all air quality rules, regulations and permit conditions of the SCAQMD. The current SCAQMD Title V and operating permit was issued on February 5, 2019, was last modified on January 1, 2020, to remove the now permanently retired OTC Redondo Beach Generating Station Unit #7, and is valid through February 4, 2024, fully supporting the operation of the facility through an OTC extension of December 31, 2023. Per both federal and state law, the SCAQMD cannot grant a new, amended or renewal of an air permit unless the facility can demonstrate current compliance with all existing permit conditions and rules. Redondo Beach made this demonstration, as confirmed by the SCAQMD’s permitting approvals.<sup>16</sup></p> <p><sup>16</sup> <a href="http://www.aqmd.gov/home/permits/title%E2%80%90v">http://www.aqmd.gov/home/permits/title%E2%80%90v</a></p> | <p>See Master Response 2.5. Additionally, air quality impacts associated with Redondo Beach, including compliance with applicable laws, rules, and regulations are outside the scope of the Amendment and fall under the authority of CARB and the SCAQMD.</p>  |
| 03.1           | <p>In April of this year, CAISO released its analysis of the ability of the generation and transmission capacity to meet projected demands from 2022 through 2026. This recent report confirms that the LA Basin has ample capacity to meet reliability requirements without the generation capacity of the Redondo Beach units. Despite substantially ramping up the demand for 2022 and beyond over the 2021 analysis, the report demonstrates capacity from Redondo is not needed. The following image from the report shows that for 2022 the generation capacity of the LA Basin substantially exceeds the demand forecast even with contingencies accounted for.</p>  | <p>See Master Response 2.2. The Amendment is intended to address system-wide grid reliability concerns arising in 2022 and 2023, as identified by the SACCWIS. Even if capacity is not needed for a specific local capacity area, it is still needed for system needs as demonstrated by the need to designate system RMRs as explained in Master Response 2.2.6.</p> |

**Comment Letter**

**Individual Comment**

**Response**


April 30, 2021

The studied results for 2022 are provided below and 2026 LCR needs are provided for comparison:

**2022 Local Capacity Needs**

| Local Area Name            | August Qualifying Capacity |                |            |            | Capacity Available at Peak | 2022 LCR Need   |
|----------------------------|----------------------------|----------------|------------|------------|----------------------------|-----------------|
|                            | QF/ Muni (MW)              | Non-Solar (MW) | Solar (MW) | Total (MW) | Total (MW)                 | Capacity Needed |
| Humboldt                   | 0                          | 181            | 0          | 181        | 181                        | 111             |
| North Coast/ North Bay     | 119                        | 715            | 0          | 834        | 834                        | 834*            |
| Sierra                     | 1193                       | 894            | 5          | 2092       | 2087                       | 1220*           |
| Stockton                   | 129                        | 445            | 12         | 586        | 574                        | 562*            |
| Greater Bay                | 611                        | 7129           | 8          | 7748       | 7748                       | 7231*           |
| Greater Fresno             | 194                        | 2819           | 357        | 3370       | 3172                       | 1987*           |
| Kern                       | 4                          | 333            | 81         | 418        | 337                        | 356*            |
| Big Creek/ Ventura         | 424                        | 4816           | 369        | 5609       | 5609                       | 2173            |
| LA Basin                   | 1160                       | 7603           | 11         | 8774       | 8774                       | 6646            |
| San Diego/ Imperial Valley | 8                          | 3985           | 369        | 4362       | 3993                       | 3993            |
| <b>Total</b>               | 3842                       | 28920          | 1212       | 33974      | 33309                      | 25113           |

\* Details about magnitude of deficiencies can be found in the applicable section below. Resource deficient areas and sub-area implies that in order to comply with the criteria, at summer peak, load may be shed immediately after the first contingency.

The table shows that the capacity available at the peak exceeds the need by over 2100 MW. Board members should note the asterisk used to denote area where there is a deficiency in capacity. The LA Basin is not asterisked.

The 2023 projection shows a similar excess capacity.

| Comment Letter             | Individual Comment  | Response       |                            |                            |               |                            |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
|----------------------------|---|----------------|----------------------------|----------------------------|---------------|----------------------------|---------------|--|-----------------|---------------|----------------|------------|------------|------------|-----------------|----------|---|-----|---|-----|-----|-----|------------------------|-----|-----|---|-----|-----|------|--------|------|-----|---|------|------|-------|----------|-----|-----|----|-----|-----|------|-------------|-----|------|---|------|------|-------|----------------|-----|------|-----|------|------|-------|------|---|-----|----|-----|-----|------|--------------------|-----|------|-----|------|------|-----|----------|------|------|----|------|------|------|----------------------------|---|------|-----|------|------|------|--------------|-------------|--------------|-------------|--------------|--------------|--------------|--|
|                            | <p data-bbox="373 272 1115 293"><b>2023 Estimated Local Capacity Needs (No technical studies conducted)</b></p> <table border="1" data-bbox="430 305 1115 743"> <thead> <tr> <th data-bbox="430 305 632 370"></th> <th colspan="3" data-bbox="632 305 919 370">August Qualifying Capacity</th> <th data-bbox="919 305 989 370">Capacity Available at Peak</th> <th colspan="2" data-bbox="989 305 1115 370">2023 LCR Need</th> </tr> <tr> <th data-bbox="430 370 632 435">Local Area Name</th> <th data-bbox="632 370 688 435">QF/ Muni (MW)</th> <th data-bbox="688 370 758 435">Non-Solar (MW)</th> <th data-bbox="758 370 827 435">Solar (MW)</th> <th data-bbox="827 370 896 435">Total (MW)</th> <th data-bbox="896 370 966 435">Total (MW)</th> <th data-bbox="966 370 1115 435">Capacity Needed</th> </tr> </thead> <tbody> <tr> <td data-bbox="430 435 632 456">Humboldt</td> <td data-bbox="632 435 688 456">0</td> <td data-bbox="688 435 758 456">181</td> <td data-bbox="758 435 827 456">0</td> <td data-bbox="827 435 896 456">181</td> <td data-bbox="896 435 966 456">181</td> <td data-bbox="966 435 1115 456">115</td> </tr> <tr> <td data-bbox="430 456 632 477">North Coast/ North Bay</td> <td data-bbox="632 456 688 477">119</td> <td data-bbox="688 456 758 477">715</td> <td data-bbox="758 456 827 477">0</td> <td data-bbox="827 456 896 477">834</td> <td data-bbox="896 456 966 477">834</td> <td data-bbox="966 456 1115 477">834*</td> </tr> <tr> <td data-bbox="430 477 632 498">Sierra</td> <td data-bbox="632 477 688 498">1193</td> <td data-bbox="688 477 758 498">894</td> <td data-bbox="758 477 827 498">5</td> <td data-bbox="827 477 896 498">2092</td> <td data-bbox="896 477 966 498">2087</td> <td data-bbox="966 477 1115 498">1338*</td> </tr> <tr> <td data-bbox="430 498 632 519">Stockton</td> <td data-bbox="632 498 688 519">129</td> <td data-bbox="688 498 758 519">445</td> <td data-bbox="758 498 827 519">12</td> <td data-bbox="827 498 896 519">586</td> <td data-bbox="896 498 966 519">574</td> <td data-bbox="966 498 1115 519">562*</td> </tr> <tr> <td data-bbox="430 519 632 540">Greater Bay</td> <td data-bbox="632 519 688 540">611</td> <td data-bbox="688 519 758 540">7055</td> <td data-bbox="758 519 827 540">8</td> <td data-bbox="827 519 896 540">7674</td> <td data-bbox="896 519 966 540">7674</td> <td data-bbox="966 519 1115 540">7418*</td> </tr> <tr> <td data-bbox="430 540 632 561">Greater Fresno</td> <td data-bbox="632 540 688 561">194</td> <td data-bbox="688 540 758 561">2819</td> <td data-bbox="758 540 827 561">357</td> <td data-bbox="827 540 896 561">3370</td> <td data-bbox="896 540 966 561">3172</td> <td data-bbox="966 540 1115 561">2069*</td> </tr> <tr> <td data-bbox="430 561 632 583">Kern</td> <td data-bbox="632 561 688 583">4</td> <td data-bbox="688 561 758 583">333</td> <td data-bbox="758 561 827 583">81</td> <td data-bbox="827 561 896 583">418</td> <td data-bbox="896 561 966 583">337</td> <td data-bbox="966 561 1115 583">375*</td> </tr> <tr> <td data-bbox="430 583 632 604">Big Creek/ Ventura</td> <td data-bbox="632 583 688 604">424</td> <td data-bbox="688 583 758 604">4816</td> <td data-bbox="758 583 827 604">369</td> <td data-bbox="827 583 896 604">5609</td> <td data-bbox="896 583 966 604">5609</td> <td data-bbox="966 583 1115 604">935</td> </tr> <tr> <td data-bbox="430 604 632 625">LA Basin</td> <td data-bbox="632 604 688 625">1160</td> <td data-bbox="688 604 758 625">7603</td> <td data-bbox="758 604 827 625">11</td> <td data-bbox="827 604 896 625">8774</td> <td data-bbox="896 604 966 625">8774</td> <td data-bbox="966 604 1115 625">6196</td> </tr> <tr> <td data-bbox="430 625 632 646">San Diego/ Imperial Valley</td> <td data-bbox="632 625 688 646">8</td> <td data-bbox="688 625 758 646">4071</td> <td data-bbox="758 625 827 646">383</td> <td data-bbox="827 625 896 646">4462</td> <td data-bbox="896 625 966 646">4079</td> <td data-bbox="966 625 1115 646">3540</td> </tr> <tr> <td data-bbox="430 646 632 743"><b>Total</b></td> <td data-bbox="632 646 688 743"><b>3842</b></td> <td data-bbox="688 646 758 743"><b>28932</b></td> <td data-bbox="758 646 827 743"><b>1226</b></td> <td data-bbox="827 646 896 743"><b>34000</b></td> <td data-bbox="896 646 966 743"><b>33321</b></td> <td data-bbox="966 646 1115 743"><b>23382</b></td> </tr> </tbody> </table> <p data-bbox="363 792 1192 898">So the CAISO’s own analysis demonstrates the LA Basin’s generation capacity exceeds the demand in the contingencies evaluated.</p> <p data-bbox="363 935 1199 1333">Of significant importance is the fact that CAISO assumed AES Redondo was retired in these analyses. In other words, these CAISO results assumed zero power generation from Redondo. If the Board reviews Attachment A to that report, it shows the generation sources used to calculate the Qualifying Capacity. Members can validate that the CAISO zeroed out all capacity from the Redondo Beach units. The image below is taken from this Attachment and clearly shows that CAISO’s analysis shows excess capacity in the LA Basin without any power from AES Redondo.</p> |                | August Qualifying Capacity |                            |               | Capacity Available at Peak | 2023 LCR Need |  | Local Area Name | QF/ Muni (MW) | Non-Solar (MW) | Solar (MW) | Total (MW) | Total (MW) | Capacity Needed | Humboldt | 0 | 181 | 0 | 181 | 181 | 115 | North Coast/ North Bay | 119 | 715 | 0 | 834 | 834 | 834* | Sierra | 1193 | 894 | 5 | 2092 | 2087 | 1338* | Stockton | 129 | 445 | 12 | 586 | 574 | 562* | Greater Bay | 611 | 7055 | 8 | 7674 | 7674 | 7418* | Greater Fresno | 194 | 2819 | 357 | 3370 | 3172 | 2069* | Kern | 4 | 333 | 81 | 418 | 337 | 375* | Big Creek/ Ventura | 424 | 4816 | 369 | 5609 | 5609 | 935 | LA Basin | 1160 | 7603 | 11 | 8774 | 8774 | 6196 | San Diego/ Imperial Valley | 8 | 4071 | 383 | 4462 | 4079 | 3540 | <b>Total</b> | <b>3842</b> | <b>28932</b> | <b>1226</b> | <b>34000</b> | <b>33321</b> | <b>23382</b> |  |
|                            | August Qualifying Capacity  |                |                            | Capacity Available at Peak | 2023 LCR Need |                            |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| Local Area Name            | QF/ Muni (MW)   | Non-Solar (MW) | Solar (MW)                 | Total (MW)                 | Total (MW)    | Capacity Needed            |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| Humboldt                   | 0   | 181            | 0                          | 181                        | 181           | 115                        |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| North Coast/ North Bay     | 119   | 715            | 0                          | 834                        | 834           | 834*                       |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| Sierra                     | 1193  | 894            | 5                          | 2092                       | 2087          | 1338*                      |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| Stockton                   | 129   | 445            | 12                         | 586                        | 574           | 562*                       |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| Greater Bay                | 611   | 7055           | 8                          | 7674                       | 7674          | 7418*                      |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| Greater Fresno             | 194   | 2819           | 357                        | 3370                       | 3172          | 2069*                      |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| Kern                       | 4   | 333            | 81                         | 418                        | 337           | 375*                       |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| Big Creek/ Ventura         | 424   | 4816           | 369                        | 5609                       | 5609          | 935                        |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| LA Basin                   | 1160  | 7603           | 11                         | 8774                       | 8774          | 6196                       |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| San Diego/ Imperial Valley | 8   | 4071           | 383                        | 4462                       | 4079          | 3540                       |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |
| <b>Total</b>               | <b>3842</b>   | <b>28932</b>   | <b>1226</b>                | <b>34000</b>               | <b>33321</b>  | <b>23382</b>               |               |  |                 |               |                |            |            |            |                 |          |   |     |   |     |     |     |                        |     |     |   |     |     |      |        |      |     |   |      |      |       |          |     |     |    |     |     |      |             |     |      |   |      |      |       |                |     |      |     |      |      |       |      |   |     |    |     |     |      |                    |     |      |     |      |      |     |          |      |      |    |      |      |      |                            |   |      |     |      |      |      |              |             |              |             |              |              |              |  |

| Comment Letter | Individual Comment   | Response   |                       |       |          |           |               |                   |                 |                   |              |           |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |  |
|----------------|--|--|-----------------------|-------|----------|-----------|---------------|-------------------|-----------------|-------------------|--------------|-----------|-----|-----------------|-------|----------|----|------|---|----------|---------|-----------------|--------|-----|-----------------|-------|----------|----|------|---|----------|---------|-----------------|--------|-----|-----------------|-------|----------|----|------|---|----------|---------|-----------------|--------|--|
|                | <p data-bbox="367 263 1108 289"><b>Attachment A – List of physical resources by PTO, local area and market ID</b></p> <table border="1" data-bbox="367 321 1108 430"> <thead> <tr> <th>PTO</th> <th>MKT/SCHED RESOURCE ID</th> <th>BUS #</th> <th>BUS NAME</th> <th>KV</th> <th>NQC</th> <th>UNI T.ID.</th> <th>LCR AREA NAME</th> <th>LCR SUB-AREA NAME</th> <th>NQC Comments</th> <th>CAISO Tag</th> </tr> </thead> <tbody> <tr> <td>SCE</td> <td>REDOND_7_UNIT 5</td> <td>24121</td> <td>REDON5 G</td> <td>18</td> <td>0.00</td> <td>5</td> <td>LA Basin</td> <td>Western</td> <td>Retired by 2022</td> <td>Market</td> </tr> <tr> <td>SCE</td> <td>REDOND_7_UNIT 6</td> <td>24122</td> <td>REDON6 G</td> <td>18</td> <td>0.00</td> <td>6</td> <td>LA Basin</td> <td>Western</td> <td>Retired by 2022</td> <td>Market</td> </tr> <tr> <td>SCE</td> <td>REDOND_7_UNIT 8</td> <td>24124</td> <td>REDON8 G</td> <td>20</td> <td>0.00</td> <td>8</td> <td>LA Basin</td> <td>Western</td> <td>Retired by 2022</td> <td>Market</td> </tr> </tbody> </table> <p data-bbox="367 474 1201 652">In this Attachment, “NQC” means “Net Qualifying Capacity”. The CAISO shaded the cells by Redondo’s three units red as they zeroed out the capacity from these units. And Board members should note the clear comment: “<i>Retired by 2022</i>”.</p> | PTO  | MKT/SCHED RESOURCE ID | BUS # | BUS NAME | KV        | NQC           | UNI T.ID.         | LCR AREA NAME   | LCR SUB-AREA NAME | NQC Comments | CAISO Tag | SCE | REDOND_7_UNIT 5 | 24121 | REDON5 G | 18 | 0.00 | 5 | LA Basin | Western | Retired by 2022 | Market | SCE | REDOND_7_UNIT 6 | 24122 | REDON6 G | 18 | 0.00 | 6 | LA Basin | Western | Retired by 2022 | Market | SCE | REDOND_7_UNIT 8 | 24124 | REDON8 G | 20 | 0.00 | 8 | LA Basin | Western | Retired by 2022 | Market |  |
| PTO            | MKT/SCHED RESOURCE ID  | BUS #  | BUS NAME              | KV    | NQC      | UNI T.ID. | LCR AREA NAME | LCR SUB-AREA NAME | NQC Comments    | CAISO Tag         |              |           |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |  |
| SCE            | REDOND_7_UNIT 5  | 24121  | REDON5 G              | 18    | 0.00     | 5         | LA Basin      | Western           | Retired by 2022 | Market            |              |           |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |  |
| SCE            | REDOND_7_UNIT 6  | 24122  | REDON6 G              | 18    | 0.00     | 6         | LA Basin      | Western           | Retired by 2022 | Market            |              |           |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |  |
| SCE            | REDOND_7_UNIT 8  | 24124  | REDON8 G              | 20    | 0.00     | 8         | LA Basin      | Western           | Retired by 2022 | Market            |              |           |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |  |
| 07.1           | <p data-bbox="367 690 1201 868">While the City and its residents disagreed, and continue to disagree, with the analysis that supported the 2020 OTC Policy extension, we took some measure of assurance that AES Redondo Beach would finally cease operations at the end of 2021.</p> <p data-bbox="367 901 1201 1406">The City’s understanding was supported by repeated Board Member statements at the September 2020 hearing. There, Chair Joaquin Esquivel clearly and correctly stated “we don’t want to be here again.”<sup>1</sup> Board Member Firestone then commented “I think it’s important for us to have our deadlines to mean something, and that’s especially true when there’s a decade of runway time to achieve them. I think it’s really frustrating for all of us to have to extend compliance dates at a really late hour.”<sup>2</sup> She went on to say “I think it is a huge deal to do an additional amendment and I think we all want to not have to have this come back next year with a further extension.”<sup>3</sup> Board Member Maguire commented “I want to have as much assurance and rigor in the analysis as we can</p>   | <p data-bbox="1228 690 2032 1161">The State Water Board adopted Resolution No. 2020-0029 on September 1, 2020. In Finding 20 of the Resolution, the Board acknowledged that the CAISO, CEC, and CPUC may be revising their forecasting models to account for the mid-August 2020 power outages, and “...may determine that there is a need to request additional extension of final compliance dates to maintain grid reliability and avoid similar blackouts in the future.” Such a determination was made by SACCWIS at its March 26, 2021, meeting by approving the recommendation made in the Final 2021 SACCWIS Report. For additional discussion, see Master Response 2.1.1.</p> |                       |       |          |           |               |                   |                 |                   |              |           |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |     |                 |       |          |    |      |   |          |         |                 |        |  |

| Comment Letter | Individual Comment  | Response  |
|----------------|---|---|
|                | <p>reasonably expect to say that these dates are best guess and we won't have to come back again or twice more or three times more."<sup>4</sup> Despite the Board's clear direction, here we are considering another two-year extension of AES Redondo Beach's compliance deadline.</p> <p><sup>1</sup> <a href="https://www.youtube.com/embed/LYcESaHotgs?modestbranding=1&amp;rel=0&amp;autoplay=1">https://www.youtube.com/embed/LYcESaHotgs?modestbranding=1&amp;rel=0&amp;autoplay=1</a>, at 15:54:23.</p> <p><sup>2</sup> <i>Id.</i> at 6:28:51.</p> <p><sup>3</sup> <i>Id.</i> at 6:40:11.</p> <p><sup>4</sup> <i>Id.</i> at 6:07:34.</p>   |   |
| 07.2           | <p>Even the State's energy regulators oppose a further extension of AES Redondo Beach's lifeline. As reported in the Los Angeles Times on April 21, 2021, "When the California Public Utilities Commission recommended 17 months ago that a gas-fired power plant on the Redondo Beach waterfront remain open beyond 2020 — over the objections of local officials and clean energy activists — Commissioner Martha Guzman Aceves made a commitment to the city's mayor. 'I pledge to you, Mayor Brand, that I will never support a further extension,' she said."<sup>5</sup> In fact, in 2019, when Commissioner Guzman made that commitment, the California Public Utilities Commission (CPUC) ordered the procurement of an additional 3,300 MW "to account for the requested ramp-down in OTC capacity."<sup>6</sup></p> | <p>The state's energy regulators, in fulfilling their role on the SACCWIS, recommended a two-year extension of the compliance date for Redondo Beach to help ensure system-wide grid reliability. The State Water Board relies on the recommendations of the SACCWIS and affords significant weight to recommendations of the state's energy agencies when considering compliance date extensions to address grid reliability concerns.</p> |

| Comment Letter | Individual Comment   | Response  |
|----------------|--|---|
|                | <p><sup>5</sup> <a href="https://www.latimes.com/environment/newsletter/2021-04-01/how-a-beachfront-gas-plant-explainscalifornias-energy-problems-boiling-point">https://www.latimes.com/environment/newsletter/2021-04-01/how-a-beachfront-gas-plant-explainscalifornias-energy-problems-boiling-point</a>, attached as Exhibit 1.</p> <p><sup>6</sup> CPUC D.19-11-016, p. 63.</p>   |   |
| 07.3           | <p>The operations at AES Redondo Beach, which have been described by AES as presenting an imminent and substantial risk to human health and safety, are causing significant harm to the environment.</p>   | <p>There is no evidence in the record to support the claim that operations at AES Redondo Beach present an imminent and substantial risk to human health and safety. Additionally, please see Master Responses 2.2, 2.3, 2.4, and 2.5 for a discussion of Redondo Beach's compliance with applicable rules, laws, and regulations.</p>  |
| 07.4           | <p>Importantly, the Water Board, in acting to adopt compliance standards on a site-specific basis, has failed to consider the relevant factors required by 40 CFR §125.94(d) when permitting existing OTC structures.<sup>9</sup></p> <p><sup>9</sup> Although this is a policy-level decision, the Chief Counsel's office has previously informed the City that it considers this proceeding to be akin to a permitting action because it deals with a specific OTC facility.</p> | <p>The Office of Chief Counsel has not specifically stated that the proceeding is akin to a permitting action, but rather that the class of facilities being considered for the amendment is sufficiently small that the State Water Board's action more closely resembles an adjudicative function in which ex parte restrictions apply. Permitting of the facility remains the responsibility of the Los Angeles Regional Water Board.</p> <p>Additionally, the commenter's reference to considerations set forth in 40 CFR §125.94, subd. (d) appears to relate to 40 CFR § 125.98, which governs NPDES permits issued to OTC facilities and directs conditions to ensure compliance with the impingement and entrainment standards required for OTC compliance. As noted in Master Response 2.1.1, the OTC Policy sets requirements for CWA section 316(b) compliance for affected coastal power plants in the State of California. Factors listed by the commenter</p> |

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|                |  | <p>are included at 40 CFR § 125.98, subd. (f)(2) and concern any proposed determination of site-specific entrainment requirements. The OTC Policy Amendment does not propose to alter requirements for compliance with entrainment pursuant to CWA section 316(b), only an extension to the compliance date.</p>  |
| <p>07.5</p>    | <p>In addition, if the proposed OTC Policy amendment is approved, then the Regional Board will be tasked with considering another modification to AES Redondo Beach’s NPDES permit and, presumably, an extension of the time schedule order (TSO) for DDT, temperature, pH, copper, and nickel. The City disagrees with the Staff Report’s representation that the NPDES permit may be extended administratively upon submission of a complete report of waste discharge. The Los Angeles Regional Board’s modification of the NPDES permit specifically incorporated the “Final Compliance Date for the Discharger of December 31, 2021” pursuant to the September 1, 2020 OTC Policy amendment in both the permit and its fact sheet.<sup>11</sup> A further modification to the permit would be needed to extend the NPDES permit’s OTC Policy compliance schedule, given that the OTC Policy is implemented through the permit.</p> <p><sup>11</sup> Order R4-2016-0222-A01.</p> | <p>The Los Angeles Regional Water Board amended the Waste Discharge Requirements and NPDES permit for Redondo Beach in Order R4-2016-0222-A01. For the OTC compliance schedule, the permit was amended to state, “The Discharger shall achieve full compliance with the OTC Policy by permanently shutting down Units 5, 6 and 8 by the Final Compliance Date for this facility established in Section 3.E, Table 1 of the OTC Policy, or any later date established in accordance with the Final Compliance Date suspension provisions in Section 2.B(2) of the OTC Policy.” (Order R4-2016-0222-A01, pp. 3). This language provides flexibility in the NPDES permit to adapt to extensions of the Redondo Beach’s OTC Policy compliance date.</p> <p>In addition, Redondo Beach’s NPDES permit is administratively extended as pursuant to the provisions of 40 C.F.R. section 122.6(1), which states that “The permittee has submitted a timely application under §122.21 which is a complete (under §122.21(e)) application for a new permit...”, and California Code of Regulations Title 23, section 2235.4, which states: “The terms and conditions of an expired permit are automatically continued pending issuance of a new permit if all requirements of the federal NPDES</p> |

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|                |  | <p>regulations on continuation of expired permits are complied with.”</p> <p>On April 1, 2021, the Los Angeles Regional Water Board received the application and the accompanying Report of Waste Discharge (ROWD) that is required under CCR Title 23, section 3843, for Redondo Beach. The Los Angeles Regional Water Board subsequently determined that the application was complete and notified AES on April 29, 2021. Please see Master Response 2.3.1 for additional information.</p>  |
| 07.6           | <p>More importantly, any further extension of the NPDES permit and TSO is detrimental to the water quality of King Harbor and the Pacific Ocean. Since 2019, AES Redondo Beach has exceeded permissible limits of pH, TSS, and zinc. Just last month, on June 7, 2021, AES settled these recent violations.<sup>12</sup> There is little question that, if allowed to continue to operate, AES Redondo Beach will continue to discharge harmful pollutants into our waters.</p> <p><sup>12</sup> See Stipulated Order On Settlement Offer No. R4-2021-0022: AES Redondo Beach, LLC, Redondo Beach Generating Station, 1100 N. Harbor Drive, Redondo Beach, California, Order No. R4-2016-0222, NPDES No. CA0001201, CI No. 0536.</p> | <p>See Master Response 2.3.1. The OTC Policy amendment addresses the date for the compliance with CWA section 316(b) requirements, while the Los Angeles Regional Water Board determines appropriate discharge limitations to meet the applicable water quality standards. In the event of an extension, the Los Angeles Regional Water Board will continue to be responsible for regulatory requirements to address any ongoing impairments within the receiving water.</p> <p>Effluent limitations, compliance with those effluent limitations, and enforcement actions or their outcomes for pollutants such as pH, TSS, and zinc will continue to fall under the authority of the Los Angeles Regional Water Board.</p> |
| 07.7           | <p>In addition to adding new resources, the CAISO is planning on shifting load from on-peak hours to off-peak hours, when plenty of solar energy is available, through a variety of means including allowing load to bid into its market and</p>   | <p>Please see Master Response 2.2. The CAISO does not shift load or directly pay customers to reduce load; rather, the CAISO relies on wholesale market participants, including demand response providers, to</p>   |



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|                | <p>change in retail rates.<sup>28</sup> This will further reduce the system peak demand and thus reduce the need for a resource such as AES Redondo Beach. Shifting load is a far more efficient, better for environment, and reliable solution than attempting to rely on the unreliable obsolete AES Redondo Beach units.</p> <p><sup>28</sup> See Comments of the California Independent System Operator Corporation, Dated: July 1, 2021, <a href="http://www.caiso.com/Documents/Jul1-2021-TechnicalConferenceComments-ElectrificationandGridFuture-AD21-12.pdf">http://www.caiso.com/Documents/Jul1-2021-TechnicalConferenceComments-ElectrificationandGridFuture-AD21-12.pdf</a>, page 6 [“The CAISO supports both the integration of flexible demand into wholesale markets and leveraging load modifications through grid informed time variant and dynamic retail rates for newly electrified resources to mitigate stress on the system y beneficially shifting and shaping load to create a flatter and more manageable system load profile”].</p> | <p>bid their preference into the CAISO market and the CAISO will optimize those bids in a security-constrained economic dispatch.</p>   |
| 20.1           | <p>At a minimum, the Board should postpone considering the 2021 OTC Policy Amendment until after the November 4, 2021 hearing in the litigation regarding last year’s CEQA violations. The Staff Report for the 2021 OTC Policy Amendment does nothing to remedy the concerns raised in the attached lawsuit.<sup>1</sup> Instead, the internally inconsistent Staff Report for the 2021 OTC Policy Amendment reveals that the Board continues to violate the California Environmental Quality Act (CEQA).</p> <p><sup>1</sup> PCF’s lawsuit is attached hereto as <b><u>Attachment 1</u></b>.</p>   | <p>Pending challenges to the 2020 OTC Policy Amendment do not justify delaying consideration of the proposed Amendment, which is necessary to ensure grid reliability in 2022 and 2023. The litigation concerns the 2020 OTC Policy Amendment and arguments raised will be addressed in that proceeding. Neither the 2020 OTC Policy Amendment nor the proposed amendment currently under consideration by the Board would violate CEQA, for reasons set forth more fully in the Staff Report at Section 7 and Master Response 2.6.</p> |

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| 20.2           | <p>The Staff Report continues to apply an incorrect legal standard in erroneously concluding that the 2021 OTC Policy Amendment is not a project as defined by CEQA.<sup>2</sup> To the contrary, an activity undertaken by the Board is a “project” when the activity, “by its general nature” would result in a change to the environment. (<i>Union of Medical Marijuana Patients, Inc. v. City of San Diego</i> (2019) 7 Cal.5th 1171, 1197-1198.) The CEQA inquiry that the Board must adhere to is limited to whether the activity “is the sort that is capable of causing direct or reasonably foreseeable indirect effects on the environment.” (Id. at 1198.)</p> <p><sup>2</sup> See e.g. Staff Report, p. 9 (“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.”)</p> | <p>See Master Response 2.6.</p> <p>The commenter cites to case law considering whether or not an activity constitutes a project within the meaning of CEQA. Public Resources Code section 21065 defines a “project” to mean “an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.” The question of whether an activity “is the sort that is capable of causing direct or reasonably foreseeable indirect effects on the environment” does not obviate the requirement that the activity must cause a change in the environment in order to meet the statutory definition. Potential compliance date extensions were included as part of the OTC Policy as originally adopted and the proposed extension continues the baseline environmental conditions that were occurring prior to adoption of the OTC Policy. Any continuing impacts therefore are not changes in the physical environment.</p> <p>Additionally, to the extent that the Amendment may constitute a project within the meaning of CEQA, the State Water Board has prepared an addendum in accordance with 14 CCR § 15164, to describe changes or additions to the information set forth in the 2010 Final SED, including new information regarding energy demand and operation of affected power plants.</p> |
| 20.3           | <p>The Staff Report interprets what the 2010 OTC Policy intended as mitigation for potential utility impacts<sup>11</sup> as negating the Board’s purpose for enacting the 2010 OTC</p>   | <p>Section 7.2 of the Staff Report of the 2010 OTC Policy states, “Impacts to the electrical grid due to implementation of the OTC Policy were considered to</p>   |

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|                | <p>Policy in the first instance.<sup>12</sup> In doing so, the Staff Report relies upon what extensive expert analyses reveals<sup>13</sup> to be inaccurate and incomplete information, and exceeds the scope of the Board's authority.<sup>14</sup></p> <p><sup>11</sup> Staff Report, p. 37 ("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.")</p> <p><sup>12</sup> Staff Report, p. 34 ("The compliance date extension is not a substantial change in the project, as compliance date extensions for grid reliability were part of the original project"); p. 33 ("the OTC Policy as adopted and as analyzed in the 2010 Final SED includes the potential for compliance date extensions, any new extension is a part of the project as originally analyzed").</p> <p><sup>13</sup> Clean Coalition Webinar: <i>What CAISO didn't tell you about the August blackouts</i> (January 28, 2021), available at <a href="https://clean-coalition.org/news/webinar-caiso-august-blackouts-28-january-10am-pt/">https://clean-coalition.org/news/webinar-caiso-august-blackouts-28-january-10am-pt/</a>. The slides to this presentation by a panel of experts are attached as <b><u>Attachment 3</u></b>.</p> <p><sup>14</sup> <i>Clean Air Constituency v. California State Air Resources Bd.</i> (1974) 11 Cal.3d 801, 819 (holding that CARB lacked</p> | <p>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." This statement does not support an argument that compliance date extensions, including the proposed extension of Redondo Beach's compliance date, would in any way negate the purpose of the OTC Policy's adoption in 2010. Rather, this statement recognizes the need to potentially revise compliance dates to ensure the reliability of the grid and the welfare of the residents of the state are met. Please see Master Responses 2.1.1 and 2.2.1.</p> <p>Additionally, the OTC Policy states that the State Water Board shall afford significant weight to recommendations of the energy agencies of the SACCWIS for implementation schedule modifications based on grid reliability. The Staff Report provides information pertaining to the unanimous recommendation of the energy agencies to extend Redondo Beach's compliance date, as adopted in Alternative 1 of the Final 2021 SACCWIS Report.</p> <p>The <i>Clean Air Constituency v. California State Air Resources Bd.</i> case concerns a different statutory requirement that allows implementation delays under a specified standard that does not apply to the Amendment.</p> |

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|                | authority to delay regulating air emissions to accommodate the energy crisis).  |   |
| 23.1           | <p>A report issued by the California Air Resources Board (<i>Improved Program Measurement Would Help California Work More Strategically to Meet Its Climate Change Goals</i>, February 2021) concluded that California will not meet its climate goals. As summarized by California State Auditor Elaine Howle: “The state will fall short of meeting the 2030 goal” of a 40% reduction in greenhouse gas emissions from 1990 levels “unless emissions reductions occur at a faster pace.” The audit found that emissions have increased since 2013, and strongly rebuked the CARB for overstating the impact of its emissions-reduction programs. Although, this is the reality on the ground, your Staff Report indicates that everything is right on target as “CARB has indicated that it is committed to meeting the state’s climate change goals through the implementation of multiple complementary policies.” (Page 29).</p> <p>Sounds reassuring (although not factual), but this “everything is okay” narrative is followed by a list of “deviations” and violations at the AES Plant over the last year. This purported deviation in particular did little to buoy our confidence in our regulatory officials: “The second deviation reported by AES occurred on July 31, 2020, when a fuel-to-air ratio imbalance resulted in Device D23</p> | <p>See Master Response 2.5. According to the CARB, the State Auditor’s report referenced by the commenter is focused on a review of the CARB’s transportation programs for reducing GHG emissions through regulatory measures and incentives. That same report states that the “vast majority of California’s GHG emissions reductions since it established the statewide emissions limits in 2006 have come from electric power generation,” based on the California GHG emissions inventory.<sup>55</sup> As shown in the latest California GHG emissions inventory released July 28, 2021, statewide GHG emissions dropped below the 2020 Assembly Bill 32 GHG Limit in 2016 and have remained below the 2020 GHG Limit since then, generally dropping since 2004.<sup>56</sup> Transportation emissions continued to decline in 2019 as they had done in 2018, with even more substantial reductions due to a significant increase in renewable diesel (up 61 percent from 2018), making diesel fuel bio-components (biodiesel and renewable diesel) 27 percent of total on-road diesel sold in California. Total electric power emissions decreased by almost seven percent in 2019, due to a continuing</p> |

<sup>55</sup> CARB. February 2021. [Improved Program Measurement Would Help California Work More Strategically to Meet Its Climate Change Goals](#).

<sup>56</sup> CARB. July 28, 2021. [California Greenhouse Gas Emissions for 2000 to 2019 – Trends of Emissions and Other Indicators](#).

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|                | <p>smoking intermittently for approximately 35 minutes. This event was not observed by South Coast AQMD enforcement staff and thus a violation could not be determined.” (Page 29). So, if AQMD enforcement did not physically see a violation happen it therefore, did not occur? It sounds like the thought experiment of “If a tree falls in a forest and no one is around to hear it, does it make a sound?”. As residents of Redondo Beach, we can assure you it makes a sound, loud frightening explosive sounds followed by belching black smoke.</p>  | <p>increase in renewable energy, including a 46 percent increase in available in-state hydropower in 2019.</p>  |
| 23.2           | <p>The [South Bay Parkland Conservancy (SBPC)] Board includes members with decades of professional experience with the California Environmental Quality Act (CEQA) and our review of your Staff Report finds your environmental review process in support of the OTC policy extension as inadequate as we did in 2020. Previously, your Staff prepared an addendum to the Final Substitute Environmental Document (SED) prepared in 2010 as CEQA compliance for the OTC policy. Your current Staff Report states your action to extend the life of this facility once again is exempt from CEQA; an exemption was not proposed for this same administrative action last year. Interestingly, the Staff Report also drafted another amendment to the SED despite stating that your Board’s action is exempt. While we understand that this is a legal maneuver crafted to provide more coverage to defend your CEQA compliance when faced with the CEQA challenge that is sure to come, but neither approach complies with CEQA.</p> | <p>The State Water Board in Resolution 2020-0029 stated that changes in OTC Policy compliance dates do not constitute a project within the meaning of CEQA. (Resolution 2020-0029, 9/1/20, at para. 30.) Nonetheless, the State Water Board in 2020 approved an addendum to the 2010 Final SED adopted with the OTC Policy on May 4, 2010, concluding that revising compliance dates does not lead to new significant environmental impacts or a substantial increase in the severity of previously identified environmental effects.</p> <p>Similarly, the Staff Report explains that 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. However, the State Water Board has nonetheless prepared an addendum in order to provide</p> |


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|                |  | additional information regarding energy demand and operation of affected power plants.   |
| 23.3           | <p>While SBPC completely disagrees with the conclusion that a policy proposing another two-year extension in operations of this highly polluting power plant constitutes “minor technical changes or additions” to the previously adopted SED, your Staff Report makes this argument with <i>virtually no environmental or technical studies to back-up their position!</i> The report repeatedly indicates that they do not have the data to conduct any analyses or derive conclusions on the severity of major impact categories including air quality and water quality. The SED was drafted over eleven years ago, and these plants have been in operation for decades. Is the California Water Board stating that they nor any other state regulatory agency have any data on environmental impacts associated with the operation of these plants?</p> | <p>Operation of Redondo Beach was occurring prior to adoption of the OTC Policy in 2010 and was thus part of the environmental baseline when the OTC Policy was adopted. Environmental impacts associated with operation of the power plant are not the result of the OTC Policy, which requires action to address impingement and entrainment of marine life and included a compliance schedule for affected power plants. The OTC Policy also allowed for compliance schedule extensions in order protect grid reliability. As stated in Section 7 of the Staff Report, the Amendment is within the scope of the OTC Policy and the provisions for compliance date extensions that were included when it was adopted and analyzed.</p> <p>Additionally, the Staff Report does not conclude that the extension of the compliance date for Redondo Beach constitutes minor technical changes or additions.</p> |
| 23.4           | <p>The SBPC finds this ongoing evasion of CEQA troubling as it demonstrates an intention by your Board to avoid full disclosure to the public of the environmental impacts associated with your decisions. As detailed in the CEQA lawsuit filed against your agency by the Cities of Redondo Beach and Hermosa Beach, you are not meeting your legal obligations as a Lead Agency under CEQA. To assert lack of data as the basis for a “no impact” conclusion is legal suicide. SBPC can state with confidence that the proposed addendum for the action before your Board is</p>  | <p>The State Water Board’s proposed addendum is based not upon a lack of data, but upon the legal conclusion that any impacts resulting from continued operation of Redondo Beach do not constitute a direct physical change in the environment or a reasonably foreseeable indirect physical change in the environment (See, Pub. Resources Code § 21065). Rather, the Amendment is a continuation of the status quo or baseline conditions that existed absent the Policy. (See, <i>Citizens for East Shore Parks v. State Lands Commission</i> (2011) 202</p>   |

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|                | <p>woefully inadequate as there were no technical analyses conducted to justify the “conclusions” of no impact put forth in this document. Moreover, purporting that the action is exempt is another shot in the dark. As decision makers, it would behoove you to be very wary of adopting “cowboy CEQA”, as is clearly the case here.</p>  | <p>Cal.App.4th 549, 560, interpreting the CEQA baseline to include previously existing development and activities.)</p>  |
| <p>23.5</p>    | <p>Your staff report states that “the NPDES permit may be administratively extended until the adoption of a new order; however, no additional time could be given to Redondo Beach to comply with certain final effluent limitations in this NPDES permit unless a revised TSO [Time Schedule Order] is adopted by the Los Angeles Regional Water Board. The Los Angeles Regional Water Board can develop a revised TSO for Redondo Beach concurrently with the OTC Policy amendment.” (Page 30). The AES Plant has been operating under “interim impingement and entrainment impacts” and interim mitigation requirements for over ten years now. Your own Staff admitted in last years’ hearing that the mitigation required by the AES Plant is insufficient. A member of your Board directed staff to review the mitigation requirements for adequacy at the very same meeting, yet there are no changes to the status quo proposed to your Board for this action. Moreover, the ultimate “mitigation” for the AES Plant for impacts to the ocean is to <i>phase out operations</i>, but your Board continues to extend operations on this plant without imposing new mitigation for these ongoing activities: “The OTC Policy includes a 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</p> | <p>See Master Response 2.3. Additionally, at the 2020 adoption hearing, staff provided information on the interim mitigation requirement in response to State Water Board Member questions and public comments, explaining that the area of production foregone method was used to calculate a per-gallon mitigation dollar amount based on intake volume, in order to address impingement and entrainment marine life impacts. While State Water Board Members did have questions about whether additional mitigation could be required, including mitigation for other resource areas, staff indicated that additional study would be required in order to assess whether additional mitigation was scientifically supported for marine life impacts. Please see Master Response 2.1 for a description of the State Water Board’s authority and role in implementing the OTC Policy.</p> |

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|                | <p>OTC Policy (Section 2.C(3)). Accordingly, the continued use of OTC waters by Redondo Beach will be subject to continued interim mitigation requirements as detailed in Resolution No. 2015-0057 until the power plant comes into final compliance.” (Page 23). At one point is “interim” no longer “interim”? Just one more example of how your Board is once again failing to fulfill your legally obligated regulatory role as entrusted to you by the people of the State of California.</p> |  |
| 26.1           | <p>Particulate matter emitted from the ongoing operation of the AES Redondo Beach power generating facility deposits upon and continues to pollute the waters of King Harbor and the Santa Monica Bay.</p>   | <p>Baseline emissions of air pollutants, including particulate matter measured with the PM10 metric, by Redondo Beach were listed in the 2010 Final SED for the OTC Policy in Section 2.6, Table 7, p. 43. These values were obtained from U.S. EPA’s Clean Air Markets database for 2006 and were considered in the baseline impacts.</p> <p>Section 5.5 of the Staff Report states that, “Extending the compliance date of Redondo Beach will extend existing air, noise, and aesthetic impacts; however, impacts are expected to remain less than the baseline condition established in the 2010 Final SED.”</p> <p>Additionally, natural gas-fired utility boilers, like other mobile and stationary sources that combust fuels, are a source of particulate matter (PM10) and fine particulate matter (PM2.5), for which there are ambient air quality standards. Air permitting requirements address exposures from inhalation and do not evaluate potential deposition in bodies of water or effects on marine life. As a source of inhalable PM2.5/PM10, AES</p> |



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|                |  | <p>Redondo Beach is subject to permit requirements that limit emissions in line with local, state, and federal air regulations. Criteria pollutant emissions that might contribute to water quality impacts may at least be partially addressed through the federal Acid Rain Program, though those requirements are triggered by NO<sub>x</sub> and SO<sub>x</sub> emissions (NO<sub>x</sub> and SO<sub>x</sub> are PM precursors). Any applicable Acid Rain regulatory requirements would be addressed in the South Coast AQMD Title V permit.</p> |
| 36.1           | <p>AES Redondo earns over \$40 million per year just to have their power plant operational, which is not always available because of its propensity to breakdown and long start-up times. Does CAISO/CPUC or rate-payers get refunds when AES fails to perform as contracted?</p> <p>New property owners have a leaseback arrangement with AES as long as they are awarded extensions to OTC December 31, 2020 compliance date. New owner shares in \$40+ million/year revenue as part of the unexpected extensions.</p> | <p>Please see Master Response 2.2. Additionally, owners and operators that are dispatched by CAISO must pay for energy they do not produce during the specified dispatch period.</p>   |
| 70.1           | <p>I'm [sic] addition, these emissions cause damage to the gel coats of our boats. There's something extremely erosive in the emissions. See photos attached. The maintenance men said AES has paid for this damage in the past, but I can't seem to reach anyone about filing a claim these days.</p>   | <p>Please see Master Response 2.3 and 2.5. Additionally, claims of damage to personal property between any individual and another party are outside the scope of the Amendment and are outside the jurisdiction of the State Water Board. Furthermore, without additional evidence and information, it is not possible to speculate on the causes of the damage and whether damage has</p>   |

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|                       |  | occurred. Although the commenter provided a photo, it is not feasible to determine what damage has occurred. |

## Appendix 1 – Index of Commenters

Note: table cells marked with an “x” indicate a master response that is responsive to the associated comment letter.

| Number | Organization   | Last Name                  | First Name         | Master Response 2.1 | Master Response 2.2 | Master Response 2.3 | Master Response 2.4 | Master Response 2.5 | Master Response 2.6 | Individual Responses in Table 3 |
|--------|--|----------------------------|--------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------|
| 01     | AES Redondo Beach, LLC   | Miller                     | Mark               |                     | x                   | x                   | x                   | x                   |                     | x                               |
| 02     | Anchor Church of Downtown Los Angeles  | Cervantes                  | Joe                |                     | x                   | x                   |                     | x                   |                     |                                 |
| 03     | Building a Better Redondo  | Light                      | James              | x                   | x                   |                     |                     | x                   |                     | x                               |
| 04     | California State Association of Electrical Workers   | Barton                     | Joël               | x                   | x                   |                     |                     |                     |                     |                                 |
| 05     | California State Pipe Trades Council   | Stockwell                  | Aaron              | x                   | x                   |                     |                     |                     |                     |                                 |
| 06     | City of Hermosa Beach  | Massey                     | Justin             | x                   | x                   |                     |                     | x                   |                     |                                 |
| 07     | City of Redondo Beach  | Webb Brand                 | Michael William    | x                   | x                   | x                   | x                   | x                   | x                   | x                               |
| 08     | Coalition of California Utility Employees  | Wetch                      | Scott              | x                   | x                   |                     |                     |                     |                     |                                 |
| 09     | Greater San Fernando Valley Chamber of Commerce  | Hoffman Vanyek             | Nancy              |                     | x                   |                     |                     |                     |                     |                                 |
| 10     | Heal the Bay   | Ehret Moe Pease            | Annelisa Katherine | x                   | x                   | x                   |                     | x                   | x                   |                                 |
| 11     | I Love Homeless Los Angeles Foundation   | Galarza                    | Geovanny           | x                   | x                   |                     |                     |                     |                     |                                 |
| 12     | IBEW Local Union 11  | Barton                     | Joël               | x                   | x                   |                     |                     |                     |                     |                                 |
| 13     | Independent Energy Producers Association   | Smutny-Jones               | Jan                | x                   | x                   |                     |                     |                     |                     |                                 |
| 14     | International Association of Sheet Metal, Air, Rail and Transportation Workers, Sheet Metal Workers' Local Union No. 104 | Stoker                     | Rob                |                     | x                   |                     |                     |                     |                     |                                 |
| 15     | Latino Educational Fund  | Sanchez                    | Herberto           | x                   | x                   |                     |                     |                     |                     |                                 |
| 16     | LAX Coastal Chamber of Commerce  | Davis                      | Christina          | x                   | x                   |                     |                     |                     |                     |                                 |
| 17     | Los Angeles County Business Federation   | Duperron Fleming Hernandez | Donna David Tracy  |                     | x                   |                     |                     |                     |                     |                                 |
| 18     | Los Angeles/Orange Counties Building and Construction Trades Council   | Miller                     | Ron                |                     | x                   |                     |                     |                     |                     |                                 |
| 19     | Orange County Business Council   | Ward                       | Jennifer           | x                   | x                   |                     |                     |                     |                     |                                 |
| 20     | Protect Our Communities Foundation   | Dickenson                  | Malinda            | x                   |                     | x                   |                     | x                   | x                   | x                               |
| 21     | Reinforcing Ironworkers Local 416  | Zambrano                   | Vidal              | x                   | x                   |                     |                     |                     |                     |                                 |
| 22     | Rescue Our Waterfront  | Craig                      | Wayne              | x                   | x                   |                     | x                   | x                   |                     |                                 |
| 23     | South Bay Parkland Conservancy   | Varvarigos                 | Jacob              |                     |                     |                     |                     | x                   | x                   | x                               |
| 24     | Southern California Pipe Trades District Council 16  | Cobos                      | Rodney             |                     | x                   |                     |                     |                     |                     |                                 |
| 25     | Structural Ironworkers Local 433   | Harkey                     | Keith              |                     | x                   |                     |                     |                     |                     |                                 |
| 26     | Surfrider Foundation South Bay Chapter   | Cadwallader                | Craig              |                     | x                   | x                   | x                   |                     |                     | x                               |
| 27     | United Association Local Union 250   | Santa Cruz                 | Glenn              | x                   | x                   |                     |                     |                     |                     |                                 |
| 28     | United Association Plumbers Local 78   | Diaz                       | Jeremy             | x                   | x                   |                     |                     |                     |                     |                                 |

| Number | Organization                                      | Last Name   | First Name | Master Response 2.1 | Master Response 2.2 | Master Response 2.3 | Master Response 2.4 | Master Response 2.5 | Master Response 2.6 | Individual Responses in Table 3 |
|--------|---|-------------|------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------|
| 29     | Western Power Trading Forum                       | Miller III  | W. Scott   | x                   | x                   |                     |                     |                     |                     |                                 |
| 30     | Western States Council SMART                      | Abril       | Dion       | x                   |                     |                     |                     |                     |                     |                                 |
| 31     | Youth Empowered Through Scholastic Sports Service | Morales     | Daniel     | x                   | x                   |                     |                     |                     |                     |                                 |
| 32     | Individual  | Adams       | Brian      | x                   | x                   |                     |                     |                     |                     |                                 |
| 33     | Individual  | Arter       | Nancy      |                     | x                   | x                   |                     | x                   |                     |                                 |
| 34     | Individual  | Ball        | Chris      | x                   | x                   |                     |                     | x                   |                     |                                 |
| 35     | Individual  | Barnes      | Michelle   | x                   |                     |                     |                     |                     |                     |                                 |
| 36     | Individual  | Brand       | Bill       | x                   |                     |                     |                     |                     |                     | x                               |
| 37     | Individual  | Carlson     | Roger      |                     | x                   |                     |                     |                     |                     |                                 |
| 38     | Individual  | Carpenter   | Aaron      | x                   | x                   | x                   |                     | x                   |                     |                                 |
| 39     | Individual  | Carroll     | Colin      | x                   |                     |                     |                     | x                   |                     |                                 |
| 40     | Individual  | Cavanaugh   | Michael    | x                   |                     |                     |                     |                     |                     |                                 |
| 41     | Individual  | Clark       | Brian      |                     | x                   | x                   |                     |                     |                     |                                 |
| 42     | Individual  | Coller      | Lee        |                     | x                   |                     |                     |                     |                     |                                 |
| 43     | Individual  | Cooper      | Jeff       |                     | x                   |                     |                     |                     |                     |                                 |
| 44     | Individual  | Crisa       | Richard    | x                   | x                   |                     |                     | x                   |                     |                                 |
| 45     | Individual  | Curry       | Lindsay    |                     | x                   | x                   |                     | x                   |                     |                                 |
| 46     | Individual  | Dangelo     | Denise     | x                   | x                   |                     |                     |                     |                     |                                 |
| 47     | Individual  | Epstein     | Barbara    | x                   | x                   |                     |                     | x                   |                     |                                 |
| 48     | Individual  | Esposito    | Richard    | x                   |                     |                     |                     |                     |                     |                                 |
| 49     | Individual  | Esser       | Dawn       | x                   | x                   |                     |                     | x                   |                     |                                 |
| 50     | Individual  | Esser       | Dirk       | x                   | x                   |                     |                     | x                   |                     |                                 |
| 51     | Individual  | Esser       | Drew       | x                   | x                   |                     |                     | x                   |                     |                                 |
| 52     | Individual  | Geary       | Joe        | x                   | x                   |                     |                     | x                   | x                   |                                 |
| 53     | Individual  | Gerez       | Paula      |                     | x                   |                     |                     |                     |                     |                                 |
| 54     | Individual  | Goodrich    | Tim        |                     |                     |                     | x                   |                     |                     |                                 |
| 55     | Individual  | Guillermo   | Marcie     | x                   | x                   | x                   |                     |                     |                     |                                 |
| 56     | Individual  | Hazeltine   | Gale       | x                   | x                   | x                   |                     | x                   |                     |                                 |
| 57     | Individual  | Hazeltine   | Jeffrey    | x                   | x                   | x                   |                     | x                   |                     |                                 |
| 58     | Individual  | Hench       | Cyndi      | x                   | x                   |                     |                     |                     |                     |                                 |
| 59     | Individual  | Hernandez   | Gwen       | x                   | x                   |                     |                     | x                   |                     |                                 |
| 60     | Individual  | Hicks       | John       | x                   | x                   |                     |                     | x                   |                     |                                 |
| 61     | Individual  | Huwe        | Mike       | x                   | x                   |                     |                     |                     |                     |                                 |
| 62     | Individual  | Johnson     | Janet      | x                   |                     |                     | x                   | x                   |                     |                                 |
| 63     | Individual  | Josefek     | Amy        | x                   |                     | x                   |                     | x                   |                     |                                 |
| 64     | Individual  | Kaplan      | Denise     | x                   |                     | x                   |                     | x                   |                     |                                 |
| 65     | Individual  | Kollias     | Bill       | x                   |                     |                     |                     |                     |                     |                                 |
| 66     | Individual  | Korban      | Jennifer   | x                   |                     |                     |                     | x                   |                     |                                 |
| 67     | Individual  | Lesser      | Andrew     | x                   |                     |                     |                     | x                   |                     |                                 |
| 68     | Individual  | Loewenstein | Todd       | x                   | x                   |                     |                     | x                   |                     |                                 |
| 69     | Individual  | Lombard     | Sharon     | x                   | x                   | x                   |                     |                     |                     |                                 |

| Number | Organization | Last Name        | First Name | Master Response 2.1 | Master Response 2.2 | Master Response 2.3 | Master Response 2.4 | Master Response 2.5 | Master Response 2.6 | Individual Responses in Table 3 |
|--------|--------------|------------------|------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------|
| 70     | Individual   | Masters-Gonzales | Jodi       | x                   |                     | x                   |                     | x                   |                     | x                               |
| 71     | Individual   | McDaniel         | Jodi       | x                   | x                   |                     |                     | x                   |                     |                                 |
| 72     | Individual   | Michaud          | Dennis     | x                   |                     | x                   |                     | x                   |                     |                                 |
| 73     | Individual   | Obagi            | Zein       | x                   |                     | x                   |                     | x                   |                     |                                 |
| 74     | Individual   | Pestle           | Rebecca    | x                   |                     | x                   | x                   | x                   |                     |                                 |
| 75     | Individual   | Petros           | Laura      | x                   |                     | x                   |                     | x                   |                     |                                 |
| 76     | Individual   | Phillips         | Jim        | x                   |                     | x                   |                     | x                   |                     |                                 |
| 77     | Individual   | Pierce           | Adrian     | x                   |                     |                     |                     | x                   |                     |                                 |
| 78     | Individual   | Pitts            | Ann        | x                   | x                   | x                   |                     | x                   |                     |                                 |
| 79     | Individual   | Pujol            | John       | x                   |                     | x                   |                     | x                   |                     |                                 |
| 80     | Individual   | Redholtz         | Vicki      | x                   |                     |                     |                     |                     |                     |                                 |
| 81     | Individual   | Riley            | Joan       | x                   |                     |                     |                     | x                   |                     |                                 |
| 82     | Individual   | Sellars          | Pam        | x                   |                     |                     |                     |                     |                     |                                 |
| 83     | Individual   | Sheldon          | Mallory    | x                   |                     |                     |                     |                     |                     |                                 |
| 84     | Individual   | Sinclair         | Greg       | x                   |                     |                     |                     | x                   |                     |                                 |
| 85     | Individual   | Skow             | Geoff      | x                   |                     |                     |                     | x                   |                     |                                 |
| 86     | Individual   | Smith            | Garrett    | x                   | x                   |                     |                     |                     |                     |                                 |
| 87     | Individual   | Smith            | Wilson     | x                   | x                   | x                   |                     | x                   |                     |                                 |
| 88     | Individual   | Solano           | Anna       | x                   |                     |                     |                     |                     |                     |                                 |
| 89     | Individual   | Solomon          | Eugene     | x                   | x                   | x                   |                     | x                   |                     |                                 |
| 90     | Individual   | Starr            | Alexander  | x                   | x                   |                     |                     |                     |                     |                                 |
| 91     | Individual   | Tallman          | Renee      | x                   | x                   | x                   | x                   |                     |                     |                                 |
| 92     | Individual   | Tchir            | Cheryl     | x                   |                     | x                   |                     | x                   |                     |                                 |
| 93     | Individual   | Telles           | April      | x                   | x                   | x                   | x                   | x                   |                     |                                 |
| 94     | Individual   | N/A              | N/A        | x                   | x                   |                     |                     | x                   |                     |                                 |
| 95     | Individual   | Voss             | David      | x                   | x                   |                     |                     |                     |                     |                                 |
| 96     | Individual   | Warner           | John       | x                   |                     |                     |                     |                     |                     |                                 |
| 97     | Individual   | Wiggins          | David      | x                   | x                   |                     |                     |                     |                     |                                 |
| 98     | Individual   | Yosnow           | Ross       | x                   | x                   | x                   |                     | x                   |                     |                                 |
| 99     | Individual   | Youngworth       | Lisa       | x                   | x                   | x                   |                     | x                   |                     |                                 |