



Fact Sheet

Once-Through Cooling Policy Protects Marine Life and Ensures Electric Grid Reliability

On May 4, 2010, the State Water Resources Control Board [adopted a policy](#) regulating the use of coastal and estuarine waters for cooling purposes at power plants in California. The statewide Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (Once-Through Cooling or OTC Policy) establishes clear standards to implement the Clean Water Act in a consistent manner to reduce the harmful effects on marine life in the ocean and estuaries associated with the cooling water intakes.

Recent Amendments

Since early 2019, several events have raised concern about system-wide grid reliability prompting the State Water Board to amend the OTC Policy.

On September 1, 2020, the State Water Board adopted an amendment to the OTC Policy to extend the compliance dates for Alamitos, Huntington Beach, and Ormond Beach generating stations by three-years to December 31, 2023, and Redondo Beach Generating Station for one-year to December 31, 2021. These compliance date extensions were adopted to support system-wide grid reliability in response to several events including: shifts in peak energy demand to later in the day and later in the year, when solar and wind resources are not as reliably available to meet peak demand; changes in the method for calculating how wind and solar resources contribute to grid reliability; an increase in projected reliance on imported electricity in the future; and earlier-than-expected closures of other power generating facilities.

On October 19, 2021, the State Water Board adopted an amendment to the OTC Policy to extend the compliance date for the Redondo Beach Generating Station to December 31, 2023. This extension was adopted in response to recent events, including widespread heatwaves and wildfires, and projected growth in energy demand. The amendment is intended to enhance grid reliability in the short-term, while the state's energy agencies expand California's renewable and zero-carbon energy resources to bolster the grid.

Please see the [OTC Policy's Official Policy Documentation](#) for additional information.



General Information

Once-Through Cooling: The Law Requires It

The State Water Board is required by law to comply with federal Clean Water Act Section 316(b), which states that the location, design, construction and capacity of cooling water intake structures must reflect the best technology available to protect aquatic life. The power plants operate under National Pollutant Discharge Elimination System (NPDES) permits adopted by Regional Water Quality Control Boards. The public is invited to participate in the permitting process.

Once-Through Cooling: Dangerous to Marine Life

The 19 power plants regulated by the OTC Policy collectively withdraw billions of gallons of water every day to cool steam for generating electricity. In the process, millions of larvae and eggs, as well as some fish, seals, sea lions, turtles, and other creatures, are killed each year because they are either trapped against screens or drawn into the cooling system and exposed to pressure and high heat. The marine life that is killed is mainly at the base of the food chain, which can adversely affect the future of certain species and impact recreational and commercial fishing.

Power Plants Have Choices Regarding Compliance

Power plant owners and operators can choose how to comply with the OTC Policy's required 93 percent reduction in their use of seawater. Eleven of the original 19 plants have complied with the OTC Policy, with most owners and operators choosing to retire their facilities to comply. Remaining owners and operators have informed the State Water Board that they intend to comply via Track 1 by retiring their existing OTC units.

A Reliable Electric Grid Is Essential

State Water Board staff meet regularly with representatives from the agencies and entities that oversee the power plants, including the California Energy Commission, California Public Utilities Commission, and the California Independent System Operator. These agencies are members of the Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS), which advises the Board on the implementation of the OTC Policy to ensure that plans and schedules submitted by the electrical generators are realistic and will not cause disruption to the state's electrical power supply.

Power Plants Affected by the OTC Policy and Compliance Dates

Facility Name	OTC Policy Compliance Date
Humboldt Bay Power Plant	December 31, 2010
Potrero Power Plant	October 1, 2011
South Bay Power Plant	December 31, 2011
Haynes Generating Station Units 5 & 6	December 31, 2013
El Segundo Generating Station	December 31, 2015
Morro Bay Power Plant	December 31, 2015

Facility Name	OTC Policy Compliance Date
Scattergood Generating Station Unit 3	December 31, 2015
Contra Costa Power Plant	December 31, 2017
Pittsburg Power Plant	December 31, 2017
Encina Power Station Unit 1	December 31, 2017
Encina Power Station Units 2, 3, 4 & 5	December 31, 2018
Mandalay Generating Station	December 31, 2020
Huntington Beach Generating Station Units 1, 3 & 4	December 31, 2020
Moss Landing Power Plant Units 1 & 2*	December 31, 2020
Redondo Beach Generating Station Unit 7	December 31, 2020
Alamitos Generating Station Units 1, 2 & 6	December 31, 2020
Moss Landing Power Plant Units 6 & 7	December 31, 2020
San Onofre Nuclear Generating Station	December 31, 2022
Huntington Beach Generating Station Unit 2	December 31, 2023
Redondo Beach Generating Station Units 5, 6 & 8	December 31, 2023
Alamitos Generating Station Units 3, 4 & 5	December 31, 2023
Ormond Beach Generating Station	December 31, 2023
Diablo Canyon Nuclear Power Plant Unit 1	November 2, 2024
Scattergood Generating Station Units 1 & 2	December 31, 2024
Diablo Canyon Nuclear Power Plant Unit 2	August 26, 2025
Haynes Generating Station Units 1, 2 & 8	December 31, 2029
Harbor Generating Station	December 31, 2029

**Note: Moss Landing Power Plant Units 1 & 2 are the only units complying via Track 2 by implementing control technology, operational, and mechanical upgrades, and therefore are in compliance with the OTC Policy without ceasing operation. Please see Section 2.A(2) of the OTC Policy.*

For more information, please visit:

http://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/

(This Fact Sheet was last updated on October 28, 2021)