

Date of Hearing: April 25, 2022

**ASSEMBLY COMMITTEE ON NATURAL RESOURCES**

Luz Rivas, Chair

AB 2140 (Muratsuchi) – As Amended April 18, 2022

**SUBJECT:** Once-through cooling policy: powerplants

**SUMMARY:** Prohibits the State Water Resources Control Board (State Water Board) from granting an operator of a powerplant any extension of time to comply with the once-through cooling policy if specified conditions are met.

**EXISTING LAW:**

- 1) Requires, pursuant to the federal Clean Water Act, that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.
- 2) Establishes the State Water Board within the California Environmental Protection Agency (CalEPA) with specified duties relating to, among other things, administering water rights, the Porter-Cologne Water Quality Control Act, and the California Safe Drinking Water Act.
- 3) Establishes the policy on the use of coastal and estuarine waters for power plant cooling under State Water Board Resolution No. 2010-0020. Establishes uniform, technology-based standards to implement federal Clean Water Act section 316 (b), which requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. (California Code of Regulations, Title 23, Division 3, Chapter 22, Sec. 2922)

**THIS BILL:**

- 1) Prohibits the State Water Board from granting an operator of a powerplant an extension of time to comply with the OTC policy if both of the following conditions are met:
  - a) The Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS) determines that the extension is not necessary to ensure statewide electricity reliability; and,
  - b) The city or county that has jurisdiction over the site of the powerplant formally adopts a resolution objecting to the extension.
- 2) Requires the Public Utilities Commission (PUC), the State Energy Resources Conservation and Development Commission (CEC), and the Independent System Operator (CAISO) to work together to identify and procure alternative energy sources to replace the powerplants that cease operations as a result of the enforcement of the OTC policy.
- 3) Defines “once-through cooling policy” as the policy described in Section 2922 of Chapter 22 of Division 3 of Title 23 of the California Code of Regulations.
- 4) Defines SACCWIS as the advisory committee convened by the state board to advise the state board on the implementation of the once-through cooling policy and that includes, pursuant

to a memorandum of agreement, representatives from the state board, the State Energy Resources Conservation and Development Commission, the Public Utilities Commission, the Independent System Operator, the State Air Resources Board, the State Lands Commission, and the California Coastal Commission.

**FISCAL EFFECT:** Unknown.

**COMMENTS:**

**1) Author's statement.**

As Chair of the Joint Legislative Committee on Climate Change, I cannot overstate the importance of maintaining our commitment to retire our outdated natural gas power plants. The OTC compliance deadline has been in place for as many years, and the plants had been scheduled to shut down by the end of this past year. I remain concerned about this latest extended the deadline as it will increase the public health and environmental impacts associated with the operation of the largest stationary source of pollution in this densely populated part of the state. The plants' outdated and inefficient technology will continue to affect nearby residents who breathe in the fine particulates generated by the natural gas plant. Further, if California is going to meet its goals to get 60 percent of its electricity from renewable sources by 2030, and to achieve 100 percent carbon neutrality by 2045, we need to remain steadfast in our timeline and commitment to shut down these power plants.

AB 2140 ensures that the water board does not grant an operator of a power plant any further extension to comply with the OTC policy if the SACCWIS determines that the extension is not necessary to ensure statewide electricity reliability, and the city the power plant is located in formally adopts a resolution objecting to any further extension. This bill also requires the Public Utilities Commission, the state energy resources development commission, and the California Independent Systems Operator to work together to identify and procure alternative energy sources to replace the power plants.

- 2) Once-through cooling.** Once-through cooling (OTC) refers to technologies at steam turbine power plants that rely on open seawater intakes to pump seawater from an ocean, estuary, or bay and then discharge the water back to the ocean after only one cycle of cooling. This technology, which became widely used in the 1950's, has detrimental effects on marine life. Marine animals, seaweeds, and billions of eggs and larvae of fish and invertebrates are taken in with the seawater and killed as they are subjected to thermal, physical, and/or chemical stresses. Larger organisms may also be pinned against seawater intake screens, causing injury or death. These impacts contribute to the decline of fisheries and the degradation of marine habitats near power plants using once-through cooling.
- 3) State policies on OTC.** California is phasing out the use of OTC technology at coastal power plants that use marine water for cooling.

The Clean Water Act requires the U.S. Environmental Protection Agency (US EPA) to ensure that the location, design, construction, and capacity of cooling water intake structures

reflect the best technology available for minimizing adverse environmental impacts. While states have enforced this requirement on a case-by-case basis since 1972, California developed a clearer, more prescriptive rule.

In March 2008, the State Water Board published a scoping document titled Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling to implement the US EPA's aforementioned policy, and subsequently adopted, in 2010, a regulatory policy to phase out the use of OTC. It included many grid reliability recommendations made by CAISO, as well as a joint implementation proposal developed by the CEC, CPUC, and CAISO. The OTC policy requires power plants that are not in compliance to make mitigation payments annually based on their annual intake volume of water until they come into compliance.

The OTC phase out regulation affected 19 California power plants that had the ability to withdraw more than 15 billion gallons per day from the state's coastal and estuarine waters using OTC systems. Of those, 16 power plants totaling about 18,000 megawatts (MW) were in the CAISO balancing authority area, and 3 (about 2,600 MW) were in the Los Angeles Department of Water & Power balancing area. The use of OTC has been phased out at 10 power plants representing 10,400 MW. The retirement of OTC power plants with 6,300 MW of capacity is expected by 2020, and the remaining 3,800 MW are expected to retire by 2029.

To ensure grid reliability, final compliance dates were negotiated with each of the operating plants. In September 2020, the State Water Board amended the OTC policy as a result of events that raised concern about system-wide grid reliability. The amendments included changes to the compliance dates for four powerplants that were scheduled to comply with the OTC policy by December 31, 2020, to address grid reliability concerns. This included a one-year extension for compliance for the Redondo Beach power plant to December 31, 2021, which is in the author's district.

On October 19, 2021, the State Water Board amended the OTC policy under Resolution No. 2021-0048 to extend the compliance date for Redondo Beach Generating Station Units 5, 6, and 8 to December 31, 2023, to further address statewide grid reliability concerns.

- 4) **Managing the energy.** The State Water Board has twice delayed the deadline to phase out OTC at specified powerplants because of grid reliability and the energy from those powerplants is factored into the state's energy planning.

The CPUC has required a larger planning reserve margin and authorized the procurement of unprecedented amounts of new, renewable energy to meet the state's ever-growing renewable portfolio standard (RPS) goals. The CPUC's actions also take into consideration the planned retirement of thermal power plants, including the Diablo Canyon Nuclear Power Plant and the OTC generating stations covered under the OTC policy.

As the state has been investing in and planning to meet the 2045 RPS procurement mandates, it has been thrown some significant curveballs that have complicated management of the energy system. The intense wildfire season lead to massive power outages across the state; the COVID-19 pandemic resultant stay-at-home orders and workforce shortages stunted renewable energy deployment; and, the subsequent supply chain shortage created delays for materials and supplies, and ultimately impacted the timing of when planned renewable energy projects would come on line and produce energy. Furthermore, the CPUC is now

planning for extreme heat events, which are occurring more frequently and at times of the year never before experienced, requiring the CPUC to adjust its modeling for energy forecasting and procurement. Because of those unexpected challenges, the CPUC needs to consider the input of the MWs the power plants covered by the OTC policy produce before they can be decommissioned.

However, the CPUC has authorized new electric resources under D.19-11-016 and D.21-06-035 to replace a portion of the OTC fleet's capacity subject to the OTC Policy. The CPUC continues to actively monitor procurement under these decisions, reporting that 2,650 MW of incremental capacity has come online as of January 2022. Additionally, the CPUC currently estimates that 12,700 MW of additional resources will be online by 2026.

SACCWIS, which includes the State Water Board, CEC, CPUC, CAISO, among others, advises on the OTC Policy to ensure that implementation plans and schedules established by the OTC Policy are realistic and will not cause disruption to the state's electrical power supply.

SACCWIS' March 2022 Report, *Statewide Advisory Committee on Cooling Water Intake Structures*, concludes that "Currently, the SACCWIS does not recommend any changes to the compliance schedules in the OTC Policy for associated generating facilities."

- 5) **This bill.** AB 2140 prohibits the State Water Board from granting an operator of a powerplant an extension of time to comply with the OTC policy if SACCWIS determines that the extension is not necessary to ensure statewide electricity reliability the city or county that has jurisdiction over the site of the powerplant formally adopts a resolution objecting to the extension.

The bill requires the PUC, CEC, and CAISO to work together to identify and procure alternative energy sources to replace the powerplants that cease operations as a result of the enforcement of the OTC policy.

#### 6) **Related legislation.**

AB 2071 (Muratsuchi, 2020) would have prohibited the State Water Board, on or after January 1, 2021, from granting to an operator of a powerplant additional time for complying with the OTC policy adopted by the state board if specified conditions were met. This bill was held due to the COVID-19 pandemic and limits on how many bills policy committee could hear.

AB 353 (Muratsuchi, 2019) would have prohibited the State Water Board from granting an operator of a powerplant additional time for complying with the OTC policy if the powerplant is situated on a site containing coastal wetlands, and a local agency, nonprofit organization, or nongovernmental land conservation organization has been awarded a grant on or before January 1, 2020, for the purposes of acquiring all or a portion of the site of the powerplant to develop parklands and restore wetlands. It was held in the Senate Environmental Quality Committee.

SB 42 (Corbett, 2009) would have prohibited a state agency, as defined, from authorizing, approving, or certifying a new powerplant or industrial facility, as defined, that uses once-through cooling. It was held in the Senate Energy, Utilities and Communications Committee.

- 7) **Double Referral.** Should this committee approve the bill, it will be referred to the Assembly Utilities and Energy Committee and heard on April 27<sup>th</sup>.

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

City of Hermosa Beach

**Opposition**

California State Association of Electrical Workers

California State Pipe Trades Council

Coalition of California Utility Employees

International Brotherhood of Electrical Workers, Local 18

Western States Council Sheet Metal, Air, Rail and Transportation

**Analysis Prepared by:** Paige Brokaw / NAT. RES. /