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Phase Out “Once-Through Cooling” at Coastal Power Plants

In Brief

California's coastal, Delta and bay-side power plants use an antiquated, "once-through cooling" (OTC) process that kills tens of billions of aquatic species each year as they are drawn with the cooling water into these older plants. This includes sea lions and sea turtles, which become trapped on the intake screens. The plants then pump heated water back into sensitive coastal and Delta ecosystems.



Moss Landing Power Plant. Source: Gerick Bergsma, 2009 Marine Photobank.

Legal Landscape

Clean Water Act (CWA) Section 316(b) requires that the capacity of cooling water operations reflect the “best technology available” for minimizing adverse environmental impacts. Permits, reissued every five years, must reflect this standard. However, virtually all of the power plants in California using OTC operate under long-expired permits and fail to use modern cooling technology. The State Water Resources Control Board’s new OTC Policy, approved as final on October 1, 2010, in essence requires action to minimize the impacts of cooling operations on fish and aquatic habitats. Regulated power entities will submit their plans to implement the Policy by April 1, 2011; both the State Water Board and energy regulatory agencies will review these plans to ensure consistency with the Policy and with grid reliability. The State Water Board will then approve or modify these plans in 2011, and the new conditions will be written into the power plants’ permits, as required by the CWA, over the next several years.

Moving Forward

Many power plants using OTC are decades old, operate in violation of environmental laws, and are far less energy efficient than more modern power operations. Several power plants have already responded to these concerns by upgrading their cooling systems and other operations, or retiring in favor of more efficient local power generation. Other plants will need to do the same as they renew their required CWA permits. Unfortunately, some ocean desalination proposals are attempting to prolong the impacts of open ocean intakes, rather than investigate less harmful intake strategies. CCKA will continue to track these issues. Check the permit status of power plants operating in your District at:

<http://www.cacoastkeeper.org/programs/healthy-marine-habitats/power-plants-otc>.

Learn More. Follow the State Water Resources Control Board’s implementation of the state’s OTC policy at: http://www.swrcb.ca.gov/water_issues/programs/npdes/cwa316.shtml.

Key Issues: Energy, Fish, Aquatic Life, Oceans, Delta