

Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling



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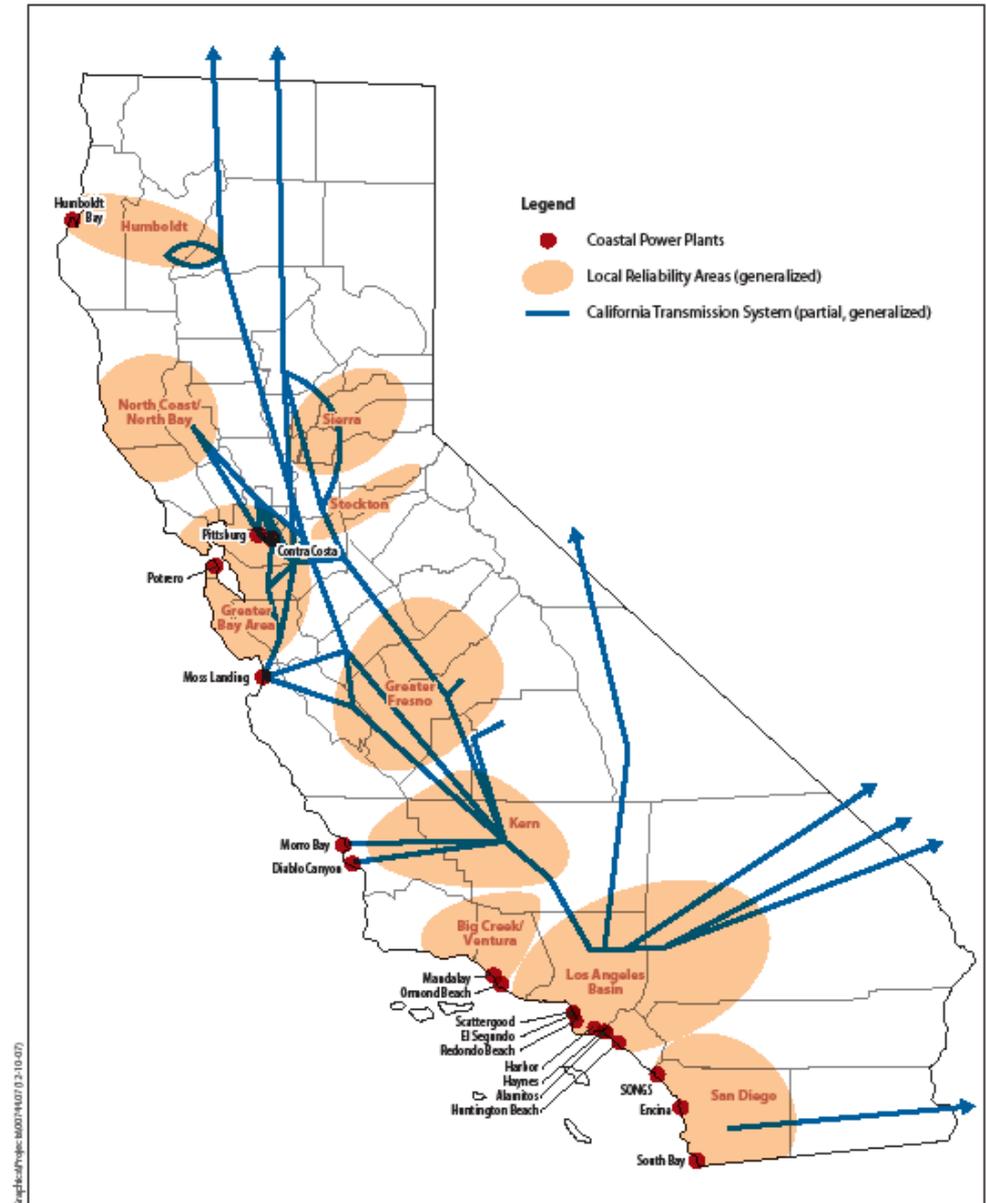
STATE WATER RESOURCES CONTROL BOARD

Existing Coastal Power Plants



19 active plants with approximately 15 billion gallons per day sent through the once-through cooling water systems.

Humboldt Bay, RB1
 Contra Costa, RB5
 Pittsburg, RB2
 Hunter's Point, RB2
 Potrero, RB2
 Moss Landing, RB3
 Morro Bay, RB3
 Diablo Canyon, RB3
 Alamitos, RB4
 El Segundo, RB4
 Harbor, RB4
 Haynes, RB4
 Long Beach, RB4
 Mandalay, RB4
 Ormond, RB4
 Redondo, RB4
 Scattergood, RB4
 Huntington, RB8
 Encina, RB9
 San Onofre, RB9
 South Bay, RB9



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Figure 1
Locations of Power Plants, Local Reliability Areas, and California's Major Transmission System

Impacts to aquatic life from Once-through Cooling

- **Thermal Discharges:**
waste heat and in-plant wastes (e.g., chlorine, treated human wastes, etc.)
- **Impingement** in intakes:
adult fish and other large organisms, including mammals and turtles
- **Entrainment** through the plant:
larval fish and other plankton, 100% mortality assumed

Estimated Impacts to Marine Life

- Impingement mortality (fish and macroinvertebrates) is about **9 million** annually = 97,000 pounds/yr
- Marine wildlife impacted – minimum of **57** annually (seals, sea lions, sea turtles)
- Entrainment mortality is about **80 billion** fish larvae, eggs, and selected invertebrates annually
- Thermal discharges



To put this in perspective, these levels of mortality would not be allowed if resulting from a discharge of waste.

Our Goal

To develop a statewide policy to protect marine life from the impacts of once-through cooling



We are working with energy agencies and other stakeholders to ensure continuity of the State's electrical grid when implementing this policy.

The LAW

- **Clean Water Act Section 316(b):**

requires “that the location, design, construction, and capacity of cooling water intake structures reflect the Best Technology Available for minimizing adverse environmental impact.”

- **California Water Code Section 13142.5:**

requires new or expanded coastal power plants to use “the best available site, design, technology, and mitigation measures feasible . . . To minimize the intake and mortality of all forms of marine life.”

Background

- 316(b) rules are implemented through NPDES permits
- No state or federal regulations issued to implement 316(b) for existing facilities
- Regional Water Boards must currently apply Best Professional Judgment when renewing permits for existing power plants

History



- USEPA issues Phase I Rule for **new** power plants in November 2001
- USEPA issues Phase II Rule for **existing** power plants in July 2004
- US Court of Appeals remands Phase II Rule in RiverKeeper II case in January 2007
- USEPA suspends Phase II Rule in July 2007
- US Supreme Court issues RiverKeeper II decision on April 1, 2009

State Water Board Action

- Early CEQA Scoping Meetings:
September 26, 2005 in Laguna Beach
December 7, 2005 in Oakland
- Scoping Document released in June 13, 2006
- CEQA Scoping Meeting on July 31, 2006
- Revised Scoping Document released in March 2008
- Later CEQA Scoping Meetings:
May 8, 2008 in San Pedro
May 13, 2008 in Sacramento

Working Groups

■ Expert Review Panel

Reviewed the scientific aspects of the proposed Policy and provided final findings in August 2008 on questions related to the March 2008 Scoping Document

■ Inter-Agency Working Group

Formed in June 2008 to assure electric reliability when implementing Policy. Includes the State Water Board, Energy Commission, Public Utilities Commission, Independent System Operator, Coastal Commission, State Lands Commission, and Air Resources Board

Next Steps

- **Proposed Policy and supporting Substitute Environmental Document**
Expected released at the end of the summer for public comment
- **Informational Workshop**
Expected at the end of August
- **Public Hearings/Adoption**
Expected at the end of the year

