

# Getting it Right

California Energy Policies and Climate Change Goals

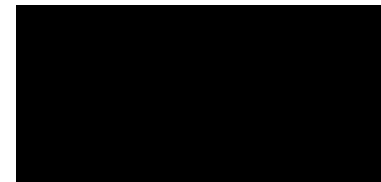
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Jesus Arredondo, NRG Energy, Inc.

## Electricity Infrastructure Challenges: Supply, Transmission and Renewables

*The Role Of Once Through-Cooling in California*



# Once-Through Cooling Background

- **What is Once-Through Cooling (OTC)?**
  - **Simply: OTC is the use of ocean water for cooling generating facilities**
  - **Think of the generator as a large engine that needs to its have its temperature regulated**
    - This process serves a similar role to that of a radiator in a car
  - **Water from the ocean is circulated for cooling of generating facilities**
  - **Why is this important?**
    - 30% of the in-state generating capacity currently uses OTC
    - Premature retirements of OTC facilities could create reliability problems for the grid

# New State Policy Seeks to Eliminate OTC

The California State Water Resources Control Board (SWRCB) is Seeking to promulgate a new policy that will lead to the end of OTC in CA

- **The Upside: According to the Proponents of the New Policy**
  - The new policy will safeguard the ecology of the oceans
  - The new policy will safeguard marine life from the potential negative impacts of OTC
- **The Downside: According to the Opponents to the New Policy**
  - The Draft Policy will significantly limit compliance options for existing power plants using OTC
  - The Draft Policy could cause several significant problems:
  - Severity of regulation is not substantiated by the record of evidence regarding power plant affects on marine resources
  - Net result = serious impacts to the ratepayer cost of power, power supply and capacity, efficiency, and reliability; as well as transfer of environmental impacts to other media (air).

# Balancing Ocean Protection and Grid Reliability

- **OTC Facilities Provide Grid Reliability**
  - **OTC facilities include the 2 nuclear units (SONGS and Diablo Canyon) and 19 other coastal facilities**
    - These facilities provide significant generation and afford the grid operator (CAISO) abilities to balance “green” generation that is required to come on-line (RPS 20%, 33% and 50%?)
    - “Balancing the Grid”
      - Nuclear units provide critical base-load grid support
      - Clean natural gas powered OTC facilities provide support for intermittent generation
        - » This is necessary flexibility according to the CAISO

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## *A Better Approach*

- **Use a collaborative approach, consult with:**
  - CAISO – CAISO is actively reviewing the impacts of OTC and analyzing this from a grid reliability viewpoint
  - CEC – CEC has offered guidance to the SWRCB process in several letters and reports (IEPR, 2005, 2007)
  - CPUC – CPUC has recommended a policy of repowering vs. retrofiting, to ensure grid reliability
- **If State Water Board believes it MUST move forward with a formal policy, then:**
  - Staff MUST conduct its own detailed evaluation of the impacts to marine biology and not rely on controversial viewpoints;
  - Staff MUST conduct a complete CEQA EIR for the draft policy
  - Restoration needs to be retained as a compliance option that can meet the entire performance standard, not just a portion;
  - Retain site specific compliance approaches including cost effectiveness determinations.