

California Energy Commission

DOCKETED
13-IEP-1J

TN 71326

JUN 18 2013

Briefing on San Onofre Nuclear Generating Station, Units 2 & 3 Retirement Plans

IEPR Nuclear Workshop

June 19, 2013

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SONGS Status

- As announced on June 7, both units of SONGS are being retired
 - A certification of permanent cessation of power operations has been submitted to the NRC
 - Preliminary planning for permanent shutdown and decommissioning SONGS is underway
- SONGS 2 & 3 provided power to Southern California for 30 years, supported by many dedicated employees
- "...the continuing uncertainty about when or if SONGS might return to service was not good for our customers, our investors, or the need to plan for our region's long-term electricity needs."

SONGS Retirement

- Nuclear Safety
 - As always, we will continue to operate SONGS's remaining systems safely, to the highest standards, to protect the health and safety of the public and our employees
- Key SONGS Issues
 - Decommissioning
 - Staffing
 - Used Fuel Storage
 - Seismic
 - Once Through Cooling
- Grid Reliability
 - Short term considerations
 - Longer term considerations

SONGS Issues

- Decommissioning
 - Long process over many years
 - Removal of radioactive material from site and storage of used fuel in approved dry cask containers
 - Funded by SONGS decommissioning trust
 - Current SCE trust is \$2.7 Billion
 - Re-evaluating estimate in light of retirement decision
- Staffing
 - Staffing will be reduced from about 1500 to 400
 - Mostly this year
 - Transition plans will ensure orderly and compliant plant closure
 - Working with unions and Human Resources for a fair transition plan
 - Evaluating contractor support on a case-by-case basis

SONGS Issues

- Used Fuel Storage
 - Assemblies in wet storage - 2346
 - Assemblies in dry cask storage - 792
 - Removal of Unit 2 fuel from the reactor will begin in July
 - Movement of used fuel from pools to dry cask storage will occur over the next 7 – 12 years
- Seismic
 - Research (e.g., GPS, shallow surveys, seismometers)
 - The seismic reliability evaluation of SONGS required by AB 1632 was completed and provided in our February 2011 Report
 - Current seismic activities are under review and likely will be terminated
 - Analysis of seismic data
 - Support of NRC's 50.54(f)
 - Assessing what analysis is required for support of used fuel pools and dry cask storage facility

SONGS Issues

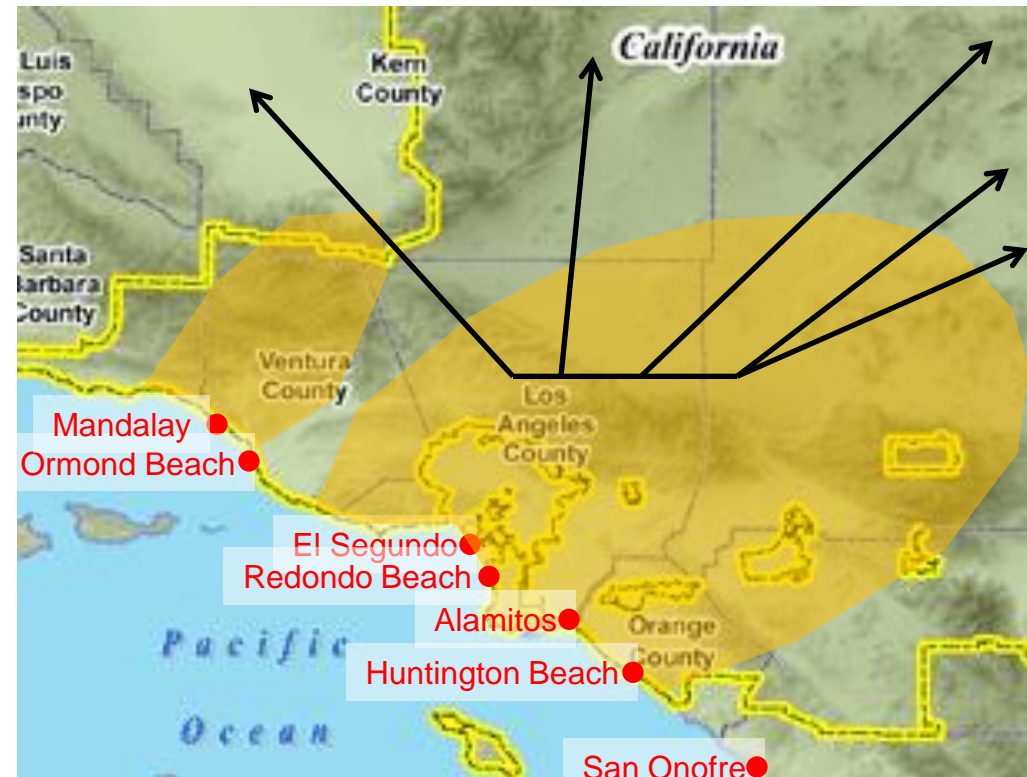
- Once Through Cooling
 - Flow through the intake and discharge conduits will be approximately 25% of that at full power operations
 - Required for used fuel pool cooling
 - May be required during decommissioning
 - Project Activities
 - OTC Nuclear Special Studies
 - No need to continue the study for SONGS
 - Implementation of selected technology is post 2022
 - Large Organism Exclusion Device
 - Assessing scope

Short Term Reliability Considerations

- SCE & SDG&E have been actively pursuing steps to provide reliable power to our communities during the summer months without SONGS
- We've worked with CAISO and CPUC since early last year
- No power outages or incidents last year
 - Moderate summer
 - Demand Side Resources
 - Generation and transmission projects
- Summer readiness plan for this year
 - New generation
 - Transmission projects
 - Demand Side Resources
 - Communications and Outreach

Longer Term Reliability Considerations: Local Reliability in the LA Area

- **SCE Service Territory Generation Reductions**
 - Fossil OTC retirements 6,592 MW
 - SONGS retirement 2,150 MW
 - Total 8,742 MW
- Recent CAISO studies show a need for 3,000-4,600 MW of “West LA Basin” generation to replace OTC plants and the SONGS retirement
- The local transmission grid (220kV) was built to serve load using coastal generation
- Re-powering at beach sites may face stiff opposition
- As a non-attainment area, AQMD rule 1304 is one of the few sources of emissions offsets for new generation



Longer Term Reliability Considerations: Resource Mix

- Aggressive use of preferred resources
 - Use of living pilots to learn how to drive deeper preferred resource penetrations and develop better understanding of efficacy and grid operational impacts
- New and Upgraded Transmission
 - Development or upgrade of lines and substations to better move power, development of reactive support as needed
- Targeted Generation
 - Construction of fossil generation in targeted locations to support grid reliability and provide a backstop to pursue higher levels of preferred resources

Longer Term Reliability Considerations: Any Solution is Multi-Jurisdictional

- Federal Law - CWA 316(b)
- State Regulations - SWRCB OTC Policy
- Reliability Assessment – CAISO
- Power Plant Permitting – Energy Commission and the Application for Certification process
- Determination of Need for IOUs – Public Utilities Commission and the Long Term Procurement Plan
- Air Permitting (Clean Air Act) – South Coast AQMD (Rule 1304) and other APCDs
- OTC Impacts on Reliability - California Assembly Bill 1318 Study
- Local Zoning – Redondo Beach Measure A (Rezone to 60-70% parks and 30-40% commercial/industrial)