San Onofre Decommissioning Project

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Strategic Planning & Stakeholder Engagement
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Overview of SONGS Decommissioning

Safe and prompt **dismantlement**

Defense-in-depth for **on-site storage** of spent nuclear fuel

Take action in an effort to **relocate spent fuel** to an off-site facility

Conduct decommissioning in a **principled** manner
Decommissioning Principles

Southern California Edison and co-owners committed to:

Safety
Stewardship
Engagement
San Onofre Plant History

• **Unit 1**
  - Online January 1968
  - Retired 1992, partially decommissioned

• **Units 2 and 3**
  - Online November 1983, April 1984
  - Retired June 7, 2013

• **Spent Fuel Storage**
  - Over 50 years
  - Dry storage since 2003
SONGS Site
Decommissioning Plan

SONGS Decommissioning Plan

Pre-Decommissioning Work
Fuel in Wet & Dry Storage
CEQA Review

Major Decommissioning Work

All Fuel in Dry Storage

Complete Transfer of Fuel from Wet to Dry Storage
ISFSI-only NRC Requirements Implemented
NRC Partial Site Release
Future milestones are tentative

Transfer Fuel Offsite
(Actual Timing Pending Offsite Storage Facility)
NEPA Review
Substructure Removal & Site Restoration
ISFSI Demo
Terminate NRC License

Onshore Post-Decommissioning

At completion of the on-shore decommissioning work only the ISFSI, Switchyard, and seawall/walkway/rip-rap will remain.
Offshore Activities
State Agency Approvals for D&D

- CSLC – EIR and Offshore Lease
  - As the CEQA lead agency, CSLC reviewed potential environmental impacts of Proposed Project (onshore & offshore)
  - On March 21, 2019, certified final EIR and approved SCE’s lease for offshore conduits and riprap through 2035

- CCC – CDPs for Onshore and Offshore Work
  - Responsible agency for CEQA review; CCC staff worked closely with CSLC during CSLC’s development of EIR
  - On October 17, 2019, the CCC approved the onshore CDP so that SCE can begin decontamination and dismantlement of the plant
  - CDP for offshore work will be submitted in 2021
Permitting Plan

Approved ISFSI (2015 to 2035)
Ongoing ISFSI operation and maintenance approved under existing CDP

Proposed Project (2019 to 2028) – Analyzed in EIR
Prompt D&D of onshore facilities to meet NRC requirements for unrestricted use of site and disposition offshore conduits

Future Activities (~2035) – Subject to future CEQA/NEPA reviews
ISFSI removal, additional substructure removal (Units 1/2/3), shoreline structure disposition (seawall, walkway, and riprap), and final site restoration (2035 or later)*

* Subject to availability of suitable offsite fuel storage facility
Dismantlement Activities
Decommissioning Next Steps

Years 0 to 5

Present (2020)
- Complete Fuel Transfer from wet to dry storage
- Transition from a plant site to a construction site
- Early building demolition
- NRC license modified to ISFSI-only

2021 to 2025
- Upgrade rail spurs, create laydown area for materials
- Large component removal
  - Reactor vessels, steam generators, pressurizers
  - Remove radiological hazards
- Dispose of components and materials
- Complete radiological releases to the ocean

400 to 600 construction jobs will be needed for decommissioning
Decommissioning Next Steps
Years 6 to 10

2026 to 2029
Following hazard removal/mitigation
• Open air demolition work
• Major building demolition
• Backfill and site grading
• ISFSI, switchyard and shoreline protection features remain

Subsequent milestones
After fuel is transferred, ISFSI demolished and site restored per Navy and Coastal Commission requirements
Spent Fuel Management
Safely manage spent fuel while it is on site while taking action to relocate it to an off-site facility

1. Promptly offload fuel from pools to passive dry storage
2. Safely manage spent fuel while it remains on site
3. Take action now to ensure spent fuel is ready for transport
4. Develop strategic plan to relocate spent fuel off-site
5. Recover spent fuel storage costs from US Dept. of Energy
On-site Spent Fuel Storage

INITIAL STATE

- Spent Fuel Pools
- 2668 fuel assemblies

Existing ISFSI
- 50 canisters (1187 fuel assemblies)

EXPANDED ISFSI

- 73 canisters (2668 fuel assemblies)
- + existing 50 canisters (1187 fuel assemblies)

FUTURE STATE

- 3855 fuel assemblies in 123 canisters

Status: Over half of the canisters have been loaded onto the ISFSI
Spent Fuel Pool
“Wet” Storage
SONGS Independent Spent Fuel Storage Installation (ISFSI)
Provides Passive Dry Cask Storage for Spent Fuel While On Site

- AREVA System (50 spent fuel canisters)
- Holtec System (73 spent fuel canisters)
NUHOMS System
Expanded System: Holtec HI-STORM UMAX

- Corrosion-Resistant Stainless Steel Multipurpose Canister
- Stainless Steel Lid
- Corrosion-Resistant Stainless Steel Cavity Enclosure Container
- Reinforced Concrete Pad (Top/Bottom)
# Used Fuel Readiness for Transportation

- Some fuel qualified for transport now
- Remaining fuel qualifies over time

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Note: Spent nuclear fuel could be re-evaluated and the qualification time for transportation would be accelerated
Environmental Monitoring

- Dry Fuel Storage Radiation Monitoring
- Liquid Batch Release Notifications

Visit www.SONGSCommunity.com
External Engagement
SCE uses several methods to educate the public on decommissioning and mobilize efforts to move the spent fuel to an offsite location:

- Community Engagement Panel
- Public Walking Tours
  - High School and College STEM classes
  - Boy Scouts
- Coalition, providing local, state and federal legislation support
- Strategic Plan to Relocate Spent Fuel to an Offsite Facility
- Conceptual Transportation Plan
Recent Visitors

- San Diego County, Health & Human Services Agency, Epidemiology/Bioterrorism Public Health Nurses
- City Council Members
- Aliso Niguel High School (126 students, teachers and chaperones)
- San Clemente High School (90 students, teachers and chaperones)
- NRC 1st Quarter Decommissioning Inspection
Staying Informed

SONGSCommunity.com website provides the following information

- Community Engagement Panel meeting dates
- Public Walking Tour dates and sign ups
- Decommissioning blog and news updates

Decommissioning Monitoring *(available starting 1Q 2020)*

- Radiological monitoring reports via the CA Depart of Health
- Ocean discharge release notifications
- Truck traffic updates
NRC Inspections
Summary of Recent NRC Activities at SONGS

• **Inspections**
  – Quarterly inspections of decommissioning activities
  – Monthly unannounced Fuel Transfer Operations (FTO) inspections
  – In last year, no violations for decommissioning activities, a small number of minor, non-cited violations for FTO

• **Communication**
  – Weekly FTO calls, bi-monthly decommissioning calls
  – Nov/Dec 2019, SCE leadership meetings with NRC Commissioners and Chairwoman, and Region IV leadership
  – NRC January visit to SONGS with NEI nuclear communicators
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