Diablo Canyon Decommissioning Engagement Panel Workshop

Economic Opportunities and Impacts Relating to Diablo Canyon Power Plant Closure

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October 17, 2019
Overview

- Diablo Canyon Power Plant (DCPP) Decommissioning Status
- DCPP Staffing Changes
- Staff Retention Until Shutdown
- Potential DCPP Repurposing
DCPP Decommissioning Status
Currently in the 2018 Nuclear Decommissioning Cost Triennial Proceeding (NDCTP) process to obtain funding approval:

- Established by CPUC to examine nuclear decommissioning issues
- Filed December 13, 2018
- Establishes annual revenue requirement for decommissioning expense
- Includes a site-specific decommissioning cost estimate (DCE)

2018 NDCTP Status

- Hearings completed in San Francisco in September
- Anticipate a proposed decision from the CPUC in Q4 2019 or Q1 2020
## DCPP DCE Cost Summary (2017$)

<table>
<thead>
<tr>
<th>No.</th>
<th>Milestone Scope Description</th>
<th>Total (in thousands)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Unassigned Cost Milestones</strong></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Program Management, Oversight, and Fees</td>
<td>$1,462,045</td>
</tr>
<tr>
<td>2</td>
<td>Security Operations</td>
<td>$560,686</td>
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<tr>
<td>3</td>
<td>Waste/Transportation/Material Management (Excluding: Breakwater, RPV/RVI Segmentation, &amp; Large Component Removal)</td>
<td>$855,211</td>
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<tr>
<td></td>
<td><strong>Discrete Cost Milestones</strong></td>
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<tr>
<td>4</td>
<td>Power Block Modifications</td>
<td>$80,707</td>
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<tr>
<td>5</td>
<td>Site Infrastructure</td>
<td>$140,972</td>
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<tr>
<td>6</td>
<td>Large Component Removal (including waste/transportation)</td>
<td>$166,370</td>
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<tr>
<td>7</td>
<td>Reactor/Internals Segmentation</td>
<td>$332,341</td>
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<tr>
<td>8</td>
<td>Spent Fuel Transfer to ISFSI</td>
<td>$235,541</td>
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<tr>
<td>9</td>
<td>Turbine Building</td>
<td>$68,667</td>
</tr>
<tr>
<td>10</td>
<td>Auxiliary Building</td>
<td>$92,122</td>
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<tr>
<td>11</td>
<td>Containment</td>
<td>$121,012</td>
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<tr>
<td>12</td>
<td>Fuel Handling Building</td>
<td>$48,627</td>
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<tr>
<td>13</td>
<td>Balance of Site</td>
<td>$80,702</td>
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<tr>
<td>14</td>
<td>Intake Structure</td>
<td>$41,654</td>
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<tr>
<td>15</td>
<td>Discharge Structure</td>
<td>$15,122</td>
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<tr>
<td>16</td>
<td>Breakwaters</td>
<td>$286,326</td>
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<tr>
<td>17</td>
<td>Non-ISFSI Site Restoration</td>
<td>$135,075</td>
</tr>
<tr>
<td>18</td>
<td>Spent Fuel Transfer to DOE</td>
<td>$24,258</td>
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<tr>
<td>19</td>
<td>ISFSI Demolition and Site Restoration</td>
<td>$54,956</td>
</tr>
<tr>
<td>20</td>
<td><strong>Total</strong></td>
<td>$4,802,395</td>
</tr>
</tbody>
</table>

**Trust fund balances end of Q2 2019**

- **Unit 1**: $1,459.3 M
- **Unit 2**: $1,908.7 M
NRC Exemption Request to use Trust Fund for pre-shutdown planning

- PG&E submitted an exemption request to allow the withdrawal of $187.8 million ($2017) from the Diablo Canyon trust fund prior to shutdown and in excess of the allowed 3 percent ($37.2M)
  - Funds decommissioning planning activities, including those associated with spent fuel management and site restoration

- NRC approved the exemption request on September 10, 2019

Key Takeaway
- This positive action by the NRC keeps the project on track for immediate decommissioning after shutdown in 2025
2018 NDCTP approval results in
• Detailed project descriptions for permitting
• Proceeding with NRC licensing efforts
• Proceeding with detailed planning and engineering work

2021 NDCTP
• Update with available results of licensing, permitting, and proposed repurposing
• Decision on contracting strategy

2024 NDCTP
• Last update prior to licenses expiring
• Will include results from issued permits and licensing approvals
Key Pre-Shutdown Planning Activities

Diablo Canyon Decommissioning Planning Path


Joint Proposal Approval
Proposed Decisions CPUC Action
Hearings Public Comment Legislative Process
Feb 2017 Sep 2018 SB-1390 Intro SB-1390 Approval

Diablo Canyon Decommissioning Panel
Phase 1: Monthly Meetings 2018 NDCTP Input
Phase 2: Quarterly Engagement Panel Meetings
Panel and public input informs PG&E preparation for milestones provided in the rows below.

NDCTPs
2015 NDCTP Decision May 2017
2018 NDCTP
CPUC Workshops Dec 2018
CPUC Hearings Apr 2019
2018 NDCTP Expected Decision Sept 2019
2021 NDCTP Expected Decision Jun 2021
2021 NDCTP Expected Decision May 2022
2024 NDCTP
Dec 2026

Emergency Preparedness
May 2018 LAR Int/Ext Input
Oct 2018

Repurposing/Future Land Use
2019 Initial Studies

NRC Actions
DCPP License Amendment Requests Oct 2019
PSDAR Submittal Dec 2020
Defueled Tech Spec Jul 2021
NRC Submittals Jul 2022
NRC Subcommittee Jul 2023
NRC Approvals Jul 2024
NRC Approval
Dec 2025

CDP Process
County CDP
CCC CDP

CSLC
Submit Restoration Plan Aug 2020
App. Dec Prep Mar 2021
CCC Submittal Dec 2021
CSLC Submittal Mar 2022
CSLC Approval Sept 2023

* A black outline indicates completed actions
Chart to be updated quarterly
Published Date: 6/11/2019

ACRONYMS:
CCC – California Coastal Commission
CPUC – California Public Utilities Commission
CDPP – Diablo Canyon (DCI) Power Plant
ISFSI – Independent Spent Fuel Storage Installation
LAR – License Amendment Request
NRC – Nuclear Regulatory Commission
NDCTP – Nuclear Decommissioning Cost Triennial Proceeding
PSDAR – Post-Shutdown Decommissioning Activities Report

NDCTP every 3 years
DCDP meetings will continue at some determined frequency

Unit 1 End of Operation
Unit 2 End of Operation

Example Timeline
DCPP Staffing Forecast
DCPP Staffing Curve Near Shutdown

* Subject to change based on regulatory approvals and contracting strategy
Decommissioning Staffing

End of Decom Phase 1: Zirc Fire Window

End of Decom Phase 2: All spent fuel at ISFSI (dry storage)

Unit 2 Shutdown

Part 50 License Retired - ISFSI Only

ISFSI Decom

* Subject to change based on regulatory approvals and contracting strategy
DCPP Staff Retention Until Shutdown
Retention Agreement Trends

### Tier 1 Program
- 2016: 1312 employees signed, 87% retention
- 2017: 1351 employees signed, 92% retention
- 2018: 1324 employees signed, 94% retention
- 2019: 1364 employees signed, 97% retention

### Tier 2 Program
- 2019: 1241 employees signed, 88% retention

Additionally, agreements not signed for each year are as follows:
- 2016: 210 employees
- 2017: 101 employees
- 2018: 83 employees
- 2019: 45 employees
Potential DCPP Repurposing
CPUC Order from A.16-08-006 – Joint Proposal

13. Pacific Gas and Electric Company will take no action with respect to any of the lands and facilities, whether owned by the utility or a subsidiary, before completion of a future process including a public stakeholder process; there will be local input and further Commission review prior to the disposition of Diablo Canyon facilities and surrounding lands. (pages 60-61)

Diablo Canyon Decommissioning Engagement Panel (DCDEP)

- Developed in 2018 to engage in open and transparent dialogue with all interested stakeholders on matters regarding decommissioning, future use of the lands and facilities around DCPP
Public Input To-Date

- The DCDEP conducted numerous public meetings and workshops on decommissioning-related topics, including repurposing and future land use
  - Obtained over 1,000 documented public comments

- The DCDEP summarized the results of the meetings/workshops in a Strategic Vision and includes specific recommendations to PG&E
Repurposing/Future Land Use Proposals

Next Steps

• PG&E evaluations of DCDEP Strategic Vision recommendations can begin in earnest now that pre-shutdown planning decommissioning funding has been approved by the NRC
  • Findings will be included in the 2021 NDCTP and future permitting process (see next slide)

• CPUC has authorized PG&E to begin discussions on repurposing and future land use

• PG&E is accepting formal proposals on repurposing / future land use through Dec. 1, 2020 (contact Tom.Jones@pge.com)
  • Proposals will be evaluated for viability to inform the 2021 NDCTP
Project and Permit Phasing

Submittal I:
Shutdown, Decommissioning, and Initial Site Restoration

Submittal II:
Breakwater and Intake Cove Decommissioning, and Diablo Creek Restoration

Submittal III:
ISFSI Decommissioning and Restoration

Program Level Description

Approval Phase

January 2021
CDP #1 Submittal

January 2030
CDP #2 Submittal

2042
All Physical Work Completed

January 2060
CDP #3 Submittal

Example Timeline
230kV yard could remain in place if requested by a third party.
Summary

- PG&E is on track for timely pre-planning activities to support decommissioning of DCPP

- Major Milestones:
  - NRC approved the exemption for pre-shutdown planning
  - Awaiting CPUC decision on decommissioning cost estimate

- Provide formal repurposing / future land use to PG&E by Dec. 1, 2020 (sooner the better)
  - Email to: Tom.Jones@pge.com
Thank You

For more information:

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