2013 IEPR Nuclear Issues Workshop Overview

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Diablo Canyon Nuclear Power Plant

San Onofre Nuclear Generating Station

Overview

- Long History of Seismic Concerns at Diablo Canyon and San Onofre
- 2008 AB 1632 Report Findings and Subsequent IEPR Recommendations (2008, 2009 & 2011)
- 2011 Fukushima Daiichi nuclear disaster also resulted in new recommendations for enhancing U.S. nuclear power and plant safety
- Purpose of the Workshop is to provide updates on seismic hazard analyses, lessons learned from Fukushima, and other perspectives on nuclear power

AB 1632

- AB 1632 (Blakeslee, Chapter 722, Statutes of 2006) directed the Energy Commission (CEC) to:
  - ✓ assess the potential vulnerability of large baseload plants (Diablo Canyon and San Onofre) to a major disruption from a seismic event or plant aging,
  - ✓ adopt AB 1632 report as part of the Integrated Energy Policy Report (IEPR), and
  - ✓ perform subsequent seismic updates as new information and understanding emerges.

Shoreline Fault

- Also in 2008, PG&E announced that the USGS had discovered a previously unknown significant offshore fault – the Shoreline Fault -- less than a mile from Diablo Canyon.
- PG&E and the NRC have concluded that Diablo Canyon's design would withstand the potential ground motions from this fault.
- Continued uncertainty exists about the Shoreline Fault's major characteristics (e.g., length, proximity to the plant, relationship to the Hosgri Fault).

AB 1632 Report Findings on Spent Nuclear Fuel Storage

- Spent fuel pools at Diablo Canyon and SONGS have been “re-racked” to increase storage capacity by placing spent fuel assemblies closer together.

- A loss-of-coolant event from an earthquake or a terrorist attack in a re-racked pool could result in extensive radiation releases and contamination.

2008 IEPR Recommendations

- PG&E and SCE should complete:
  - ✓ updated seismic and tsunami hazard/vulnerability studies;
  - ✓ assess the implications of evolving seismic standards since the plants were built; and
  - ✓ reassess the adequacy of emergency plans and access roads to the plants following a major seismic event.
- Return spent fuel pools to open racking arrangements as soon as feasible.

2011 IEPR Reporting

- SC&E reported inventory of the spent fuel pools to be almost 2x the original design capacity.
- PG&E reported inventory of the spent fuel pools to be about 4x the original design capacity.
- If Diablo Canyon is relicensed, PG&E would store spent fuel assemblies generated through the relicensing period in the spent fuel pools (also at about 4x original design capacity).