Briefing on Summer 2013 Outlook & Update on SONGS Mitigation Planning

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Board of Governors Meeting
General Session
March 20-21, 2013
2013 Summer Assessment

- Summer assessment deferred to May Board meeting to incorporate evolving hydro situation

- Preliminary results indicate ample summer supply margins for the overall system and in northern California

- Summer supply margins over the entire southern California region are also ample but reliability concerns remain for South Orange County and San Diego due to continued outage of San Onofre Nuclear Generating Station
Preliminary hydro situation showing below-average expectations, as observed by the north conditions.
Overall reserve margins in northern and southern California remain healthy

ISO, SP26 and NP26 Operating Reserve Margins (%) for Summer 2013

- **Normal Scenario**
  - ISO: 19.1%
  - SP26: 21.4%
  - NP26: 21.3%
- **Extreme Scenario**
  - ISO: 9.5%
  - SP26: 4.5%
  - NP26: 7.4%

**Notes:**
- Demand based on 1-in-2, or 1-in-10 Weather.
- Outages include Generation and Transmission curtailments.
- All Demand Response and Interruptible Load has been utilized.
- At Stage 3 Emergency firm load is shed to maintain 3% Operating Reserve (Operating Reserve cannot drop below the red line).
Supply into southern Orange County and San Diego with SONGS off-line remain the primary concern.

Focus is on non-generation alternatives to mitigate load shed risk for multiple-contingency events.

#1 South Orange County & San Diego
MVAR resource issue
Safety Net refinements

#2 Barre-Ellis 220 kV
Configuration issue

#3 South of Lugo
MW resource issue
The solutions address 2013 reliability needs without excessive reliance on load-dropping schemes:

1) Convert Huntington Beach units 3 & 4 into synchronous condensers

2) Install capacitors (80 MVAR each at Santiago and Johanna, 160 MVAR at Viejo)

3) Split Barre-Ellis 220 kV circuits (from 2 to 4 lines)

4) Confirm new resources South of Lugo

5) Support adequate funding for Flex Alerts and continue to explore applicable demand response
Next Steps

• Continue to press forward with 2013 mitigation plan

• Seek Board approval later today for additional mid-term mitigation:
  – South Orange County Dynamic Reactive Support
  – Talega area Dynamic Reactive Support
  – Sycamore – Penasquitos 230 kV transmission line

• Continue analysis on additional longer-term needs