

Overview of Draft Report by SACCWIS

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SACCWIS Meeting

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----- operating -----

- Contra Costa (2017)
- Pittsburg (2017)
- Moss Landing (2017)
- Morro Bay (2015)
- Diablo Canyon (2024)
- Mandalay (2020)
- Ormond Bch (2020)
- El Segundo (2015)
- Scattergood (2015&24)
- Redondo Bch (2020)
- Harbor (2029)
- Alamitos (2020)
- Haynes (2013, 2029)
- Huntington Bch 1-2 (2020)
- San Onofre (2022)
- Encina (2017)

----- retired -----

- Humboldt Bay (2010)
- Huntington Bch 3-4 (2012)
- Potrero (2010)
- South Bay (2010)

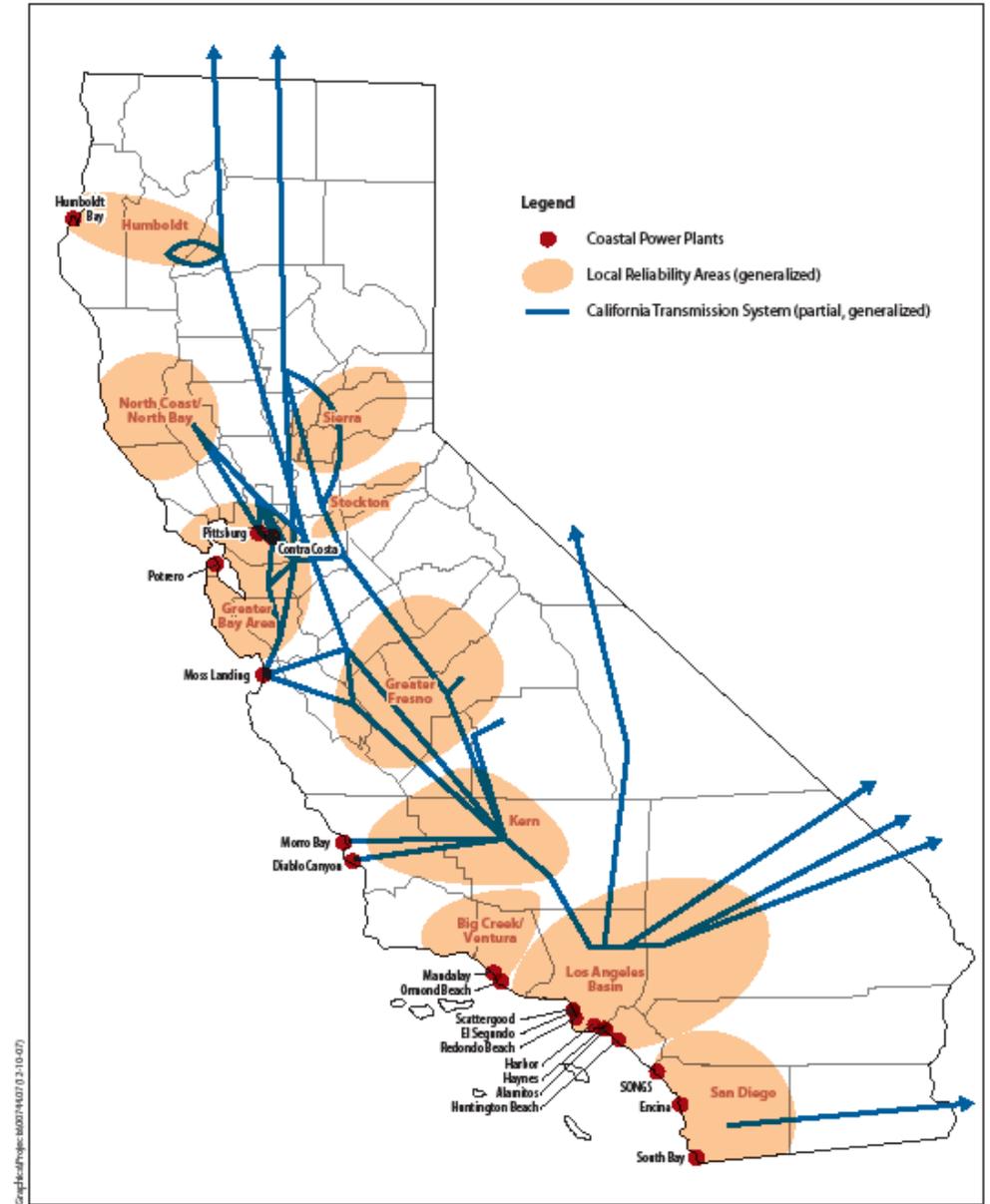


Figure 1
Locations of Power Plants, Local Reliability Areas, and California's Major Transmission System

OTC Compliance and Infrastructure Planning

- SACCWIS review of adopted OTC facility compliance dates for infrastructure realities is a key element of adopted OTC policy.
- ISO and state agencies now examining OTC facility retirement on rolling 10-year horizon.
- Continued SONGS outage is a key issue.
- ISO studies for San Diego and Los Angeles areas reveal major problems in San Diego and Orange County made much worse once various Southern California OTC facilities retire.

Focus on CAISO local capacity areas and OTC plants



Caveat
LA Basin includes 2,246 MW of capacity at the San Onofre Nuclear Generating Station currently subject to an extended outage.

CEC Actions Since 2012 Report

- On May 31, 2012, the CEC permitted Carlsbad, a 560MW combined cycle at the Encina site.
- On September 12, 2012, the CEC permitted Pio Pico, a 300MW simple cycle project adjacent to the Otay Mesa power plant in southern San Diego County.
- The CEC is processing applications for certification for:
 - Quail Brush -- a small project in San Diego, but now suspended for 12-months at the developer's request;
 - Huntington Beach and Redondo Beach repowering projects.

CPUC Actions Since 2012 Report

- In separate decisions the CPUC authorized:
 - SCE to procure 1400-1800 MW of new resources in the LA Basin and 215 to 290 MW in Big Creek / Ventura, and
 - SDG&E to procure 350 MW of new resources, including the repower of 45 MW at Escondido.
- The CPUC is conducting examinations of the SONGS outage in proceedings:
 - SONGS OII is investigating costs of alternative power.
 - The 2012 LTPP rulemaking will examine this year whether there is need for additional resources if SONGS remains offline.

CA ISO Actions Since 2012 Report

- Conducted several preliminary LCR analyses assuming no SONGS.
- Refined its operating practices to minimize impacts.
- Launched transmission system upgrades, e.g.
 - HB 3-4 synchronous condensers,
 - Dynamic reactive support near SONGS switchyard and the Talega or San Luis Rey substations, and
 - The Sycamore-Penasquitos transmission line, to improve dynamic support.

Facilities with 2015-17 Compliance Dates

- Contra Costa (2017)
- Pittsburg (2017)
- Moss Landing (2017)
- Morro Bay (2015)
- El Segundo (2015)
- Encina (2017)

Contra Costa (2017)

- Contra Costa consists of twin 340MW steam boilers.
- SACCWIS anticipates that Contra Costa will retire in 2013 when Marsh Landing is operational.
- Marsh Landing, consisting of four 190MW gas turbines, is nearly complete with an expected in service date in mid-2013.

Pittsburg (2017)

- Units 5-6 are twin 340MW steam boilers, while unit 7 is 720MW with cooling towers.
- Pittsburg is not required for local capacity reasons once transmission upgrades occur.
- Upgrades may be built later than originally planned, so one or more Pittsburg units may need a compliance date extension.

Moss Landing (2017)

- Moss Landing is the single largest power generating facility in California (2500MW).
 - Units 5-6 are old steam boilers, 750MW each.
 - Units 1-2 are new combined cycles, 500MW each.
- SACCWIS believes that the Moss Landing situation bears watching and specific recommendations to revise dates may be forthcoming later in 2013.

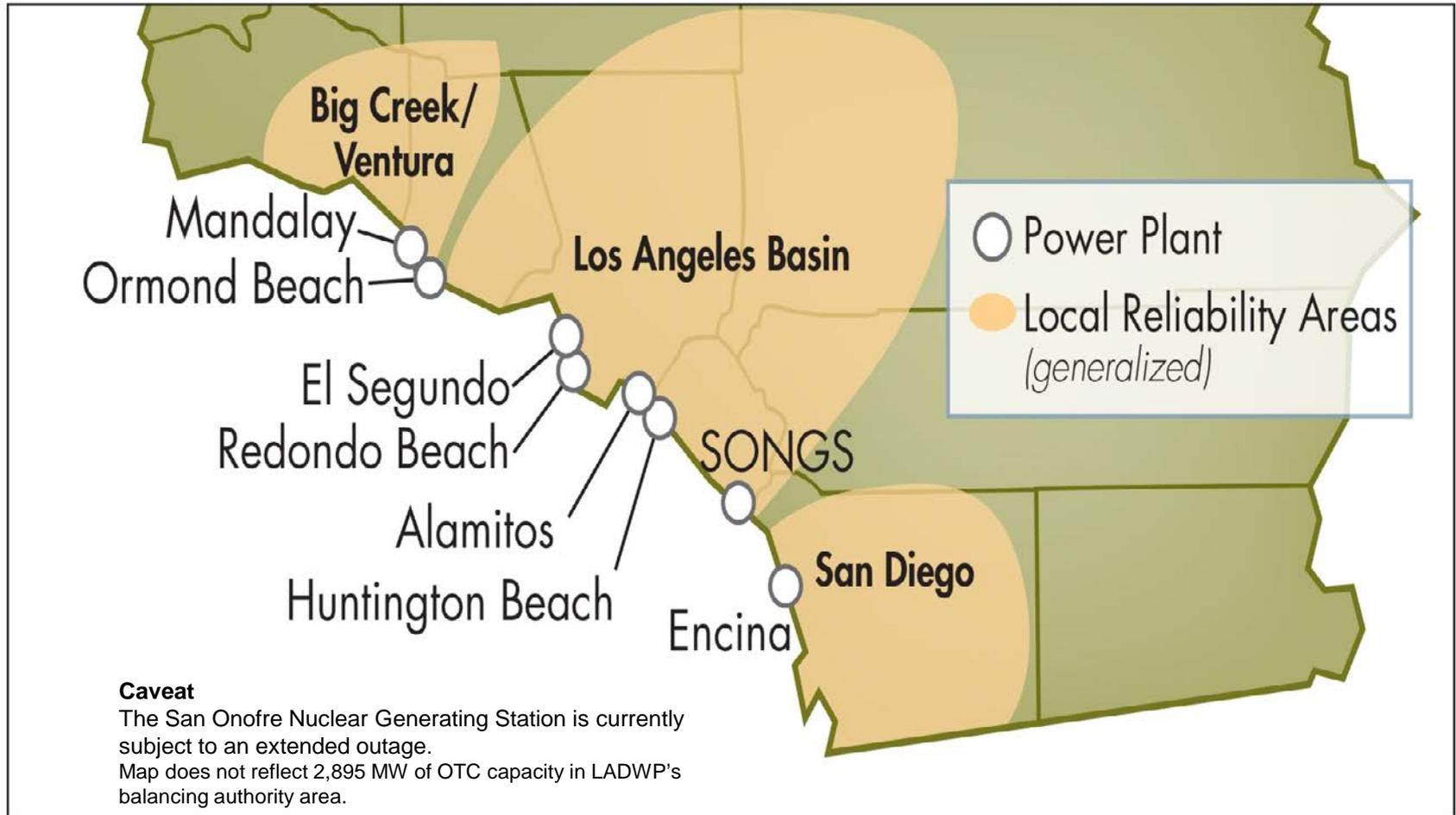
Morro Bay (2015)

- Morro Bay consists of twin 338MW steam boilers.
- Morro Bay is not a critical facility from either a local or zonal perspective, so it is likely to simply retire on or before its 2015 compliance date.

Implications of SONGS Outage

- Both units at SONGS have been offline since January 2012.
- The ISO has completed both near-term (2013) and longer-term studies (2018, 2022) evaluating the consequences.
- San Diego area and Orange County are more adversely affected than is the Los Angeles Basin.
- In 2013, the CPUC is examining both additional local capacity requirements (in the LA Basin and San Diego) and overall impacts of SONGS retirement.

Los Angeles Basin and San Diego Local Capacity Areas



Encina (2017)

- The fate of Encina's 960MW (5 units) is now closely linked to continued operation of SONGS, since ISO studies show that either Encina or equivalent capacity is needed when SONGS is offline.
- NRG has revised their OTC compliance strategy and now says they will retire Encina 4-5 on 12/31/2017.
- If SONGS is not available, the need for local generation within the San Diego area is greater.

El Segundo (2015)

- El Segundo 3-4 are twin 335MW steam boilers – two older, smaller units have already retired.
- El Segundo unit 3 will retire in 2013 once the repower project comes online later this year.
- NRG in its April 2011 plan indicated it wanted to repower unit 4 and requested an extension until 2017. In a subsequent January 2013 letter, NRG indicated it will retire no later than December 2015.
- NRG does not currently have a replacement project for El Segundo unit 4 in CEC permitting nor does it have a power purchase agreement.

Conclusion

- No explicit recommendations for compliance date changes are proposed at this time.
- Further analyses are needed to be sure this is the case.
- Technical staff of the energy agencies need to undertake specialized studies that support compliance date changes even if not currently planned as part of other proceedings.

SACCWIS Recommendations

- The Water Board should recognize that it may be necessary to modify final compliance dates for generating units.
- The Water Board should require generators to explain in writing by July 1, 2013:
 - Their intentions for the OTC facilities,
 - The status of any necessary permitting, contractual, and regulatory activities to repower, retrofit, or retire these generating facilities, and
 - Provide a detailed schedule by unit if they intend to either repower or retrofit.