



California ISO
Your Link to Power

California Independent
System Operator

2008 LCR Study

Summary of Findings

Prepared By

Catalin Micsa

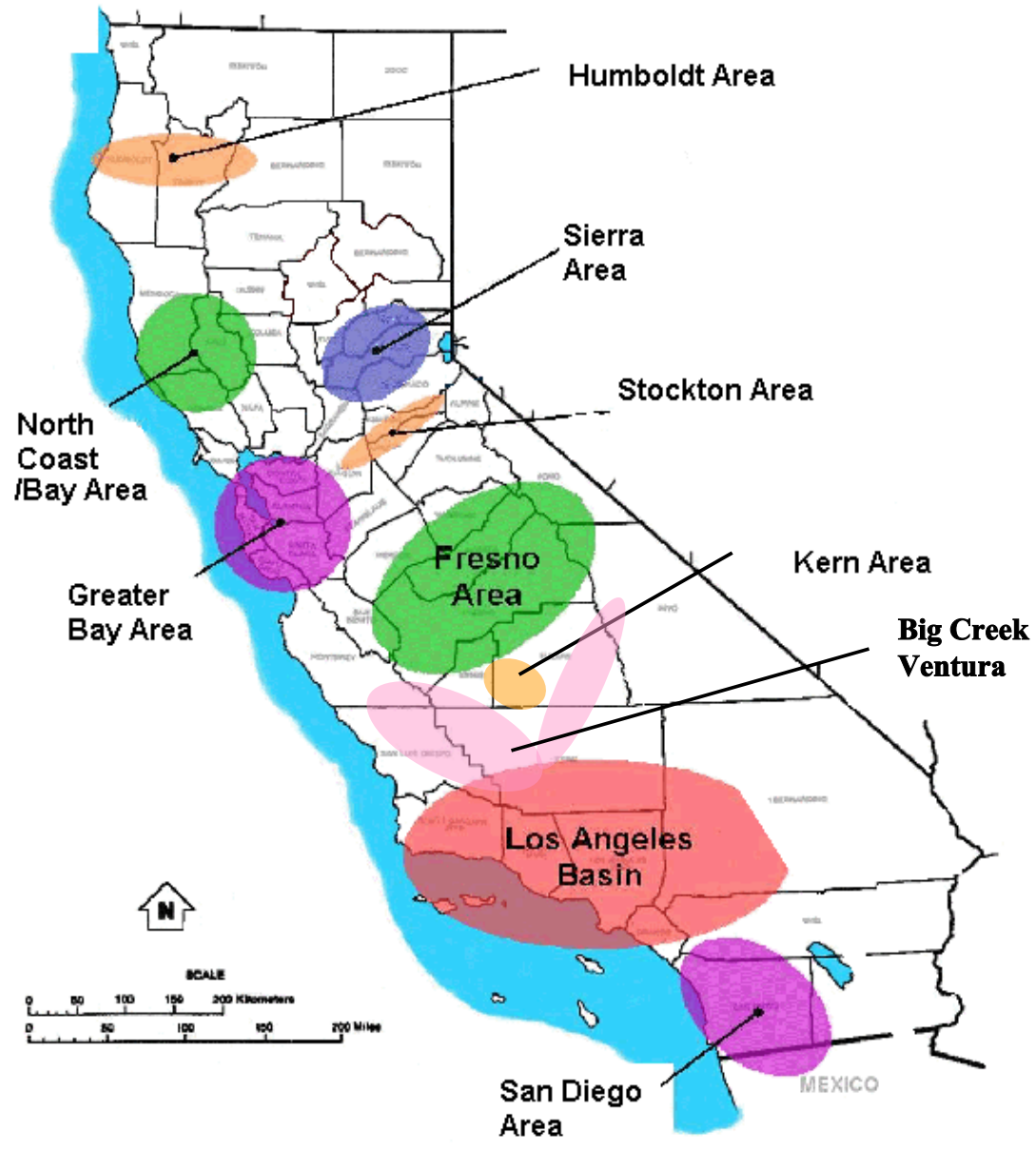
Regional Transmission North - California ISO

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Input Assumptions, Methodology and Criteria

The 2008 LCR Study results are based upon study assumptions, methodology and criteria developed through the LCR Study Advisory Group (LSAG) (see December 6, 2006 LSAG meeting notes at: <http://www.caiso.com/1b64/1b648dea14820.pdf>).

Transmission system configuration – all-projects with EDRO up to June 1, 2008

Generation – all-generation with COD up to June 1, 2008

Load Forecast – 1 in 10 local area peak (based on latest CEC forecast)

Criteria – see report for details

Methodology

1. Maximize Imports Capability into the local area
2. Maintain path flows
3. Load pocket – fix definition
4. Performance levels B & C (if equal category B is most stringent)



Major Changes from last year studies

1. **Updated NQC data.**
2. **Bay Area requirement** is decreasing mainly because of the Vaca-Dixon 500 kV transformer addition.
3. **Sub-pocket requirements in Sierra and Fresno** are decreasing mainly because of new transmission additions.
4. **New Big Creek/Ventura area** in the south.
5. **LA Basin requirement** is increasing mainly for the addition of the extra unit out under (G-1)(L-1) condition:
 - Current study: 9420MW+Songs #3 unit output = **10500 MW**
 - If 2007 study could have used the existing 6100 MW operating path rating, the requirement would have been:
 - 8843+Songs #3 unit output = 8843+1080 = **9923 MW**
 - At the time of 2007 study the operating path rating was 5600 MW as such, the requirement may have been:
 - 8843+Songs #3 unit output+900 = 8843+1080+900 = **10823 MW**
 - The South of Lugo upgrades help reduce the need from 2007 to 2008.



Sub-area requirements

The purpose of this report is to provide detailed local procurement information. As in the past there is no CPUC enforcement of sub-area requirements. However in order to minimize CAISO back-stop procurement role, each local area's overall requirement has to be procured in a fashion that satisfies all of the sub-area requirements as well.

The role of sub-area requirements:

Because each individual sub-area is a part of the interconnected electric system, the total for each local area is not simply a summation of the sub-area requirements (i.e., the sum of the parts does not necessarily equal the sum of the whole). For example, some sub-areas may overlap and therefore the same units can be counted toward both sub-area requirements. Of course some sub-areas requirements are directly counted toward the total requirements of a bigger local sub-area or the overall area. Other times the area has an overall requirement that exceeds the sum of the sub-area requirements. Each area is unique and detail analysis is provided in the report and each area's presentation.



Zonal Needs

NEW METHODOLOGY: The recently proposed method under CPUC review could allocate capacity on path 26 similar to the way imports are proposed to be allocated to LSEs.

Zone	Load Forecast (MW)	15% reserves (MW)	(-) Allocated imports (MW)	(-)Maximum Path 26 Flow (MW)	Total Zonal Resource Need (MW)
SP26	28,778	4,318	-8,598	-3,750	20,758
NP26=NP15+ZP26	26,220	3,933	-4,101	-3,250	22,802

Load forecast = Most recent 1-in-2 CEC forecast for 2008

Reserve margin = minimum CPUC approved planning reserve margin of 15%

Allocated imports = the actual 2007 numbers, not expected to change for 2008

Max. Path 26 flow = path rating adjusted for inherent WECC loop flow (250 MW)



Total 2008 LCR Needs

	Qualifying Capacity			2008 LCR Need Based on Category B			2008 LCR Need Based on Category C with operating procedure		
Local Area Name	QF/ Muni (MW)	Market (MW)	Total (MW)	Existing Capacity Needed	Deficiency	Total (MW)	Existing Capacity Needed	Deficiency	Total (MW)
Humboldt	45	135	180	175	0	175	175	0	175
North Coast / North Bay	262	621	883	676	0	676	676	0	676
Sierra	1014	766	1780	1780	89	1869	1780	312	2092
Stockton	272	264	536	460	15	475	536	250	786
Greater Bay	1116	5098	6214	4688	0	4688	4688	0	4688
Greater Fresno	496	2495	2991	2212	0	2212	2274	108	2382
Kern	615	31	646	259	0	259	463	23	486
LA Basin	3545	8545	12093	10500*	0	10500*	10500*	0	10500*
Big Creek/ Ventura	1463	3933	5396	3562	0	3562	3658	0	3658
San Diego	201	2758	2959	2957	0	2957	2957	0	2957
Total	9029	24646	33678	27269	104	27373	27707	693	28400

* - Potentially higher requirements combined with another area (see detail description).