



CALIFORNIA ISO

California Independent
System Operator

Local Capacity Requirements Technical Analysis and Procurement Issues

Market Surveillance Committee Meeting

July 7, 2005

Prepared by

Eric Hildebrandt



CALIFORNIA ISO

Resource Adequacy Requirement: Deliverability

California Independent
System Operator

- Established by October 28, 2004 CPUC decision
- Three types of Deliverability requirement:
 - Imports (Maximum Import Limits)
 - Generation Pockets (Maximum Generation Limits)
 - Load Pockets (Minimum Generation Requirements)
 - Also called Local Resource Adequacy Requirements (“LRAR”)



LRAR for Local Capacity Areas (1)

- CPUC requires LSEs to procure enough resources within transmission-constrained areas. (beginning June 2006)
- Annual CAISO technical analysis defines areas and MW requirements.
- LRAR obligations allocated among LSEs within those Local Capacity Areas.



LRAR for Local Capacity Areas (2)

- CAISO intends to phase out RMR.
- LSEs have flexibility to contract for resources, so the capacity that's procured may not fully meet CAISO reliability needs in each area. (?)
- CAISO will develop Local Area Reliability Contract (LARC) for “backstop” reliability role.



CALIFORNIA ISO

Local Capacity Technical Analysis

-- The Bottom Line -- (1)

California Independent
System Operator

- The results of this preliminary study show:
 - MWs requirements within Local Capacity Areas that are higher than current RMR contracts.
 - Additional areas that are identified, due to transmission constraints, beyond those already established in Local Area Reliability Service (LARS) studies.



CALIFORNIA ISO

Local Capacity Technical Analysis

- The Bottom Line - (2)

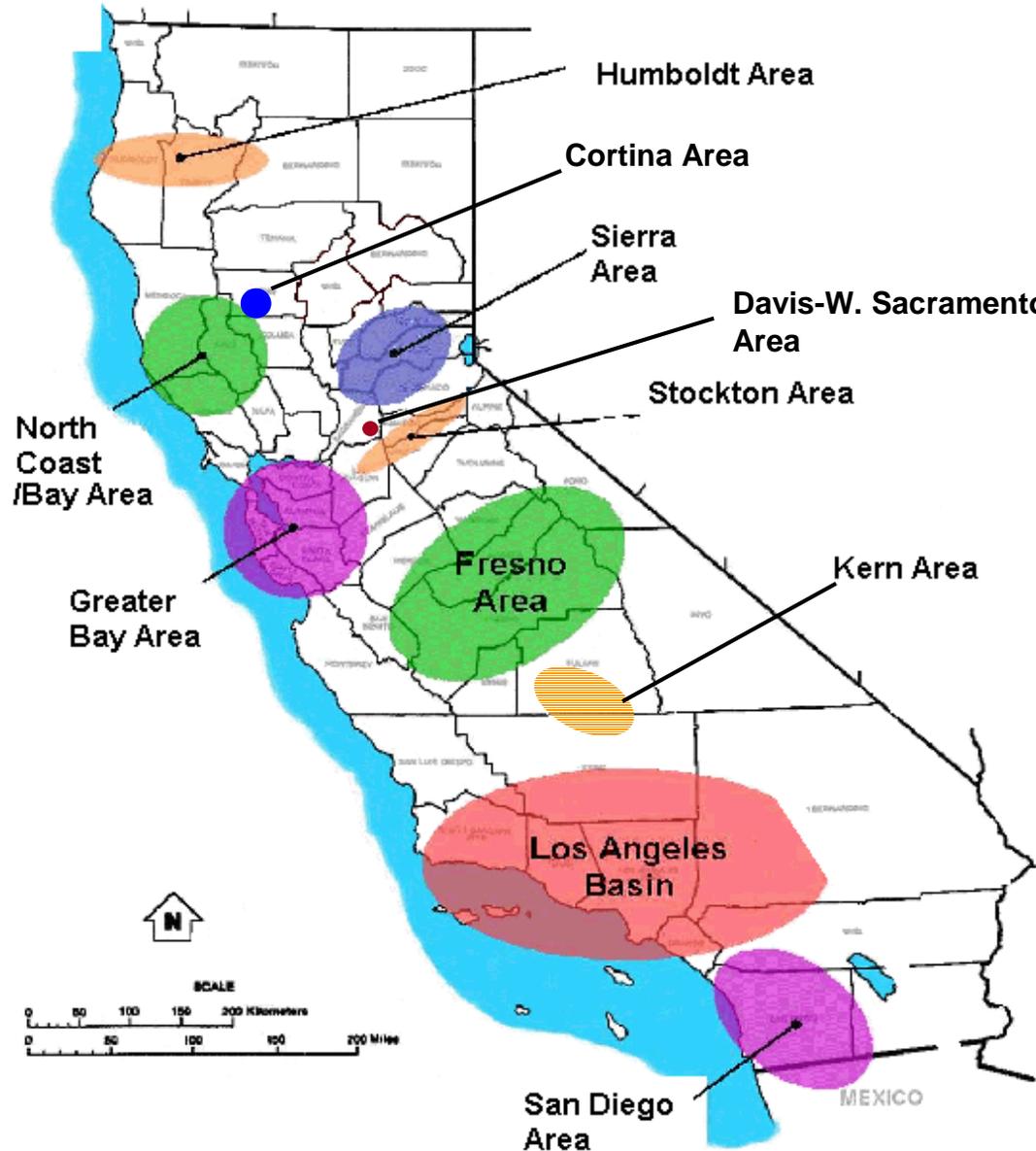
California Independent
System Operator

- Compared to RMR/LARS studies, LRAR technical analysis uses different criteria and assumptions to identify and determine the MWs needed in each Local Capacity Area:
 - LRAR includes simultaneous and overlapping contingencies that require generators inside the load pockets.
 - LRAR studies assumes a 1 in 10 summer peak load level. (vs. 1 in 5)



CALIFORNIA ISO

California Independent System Operator

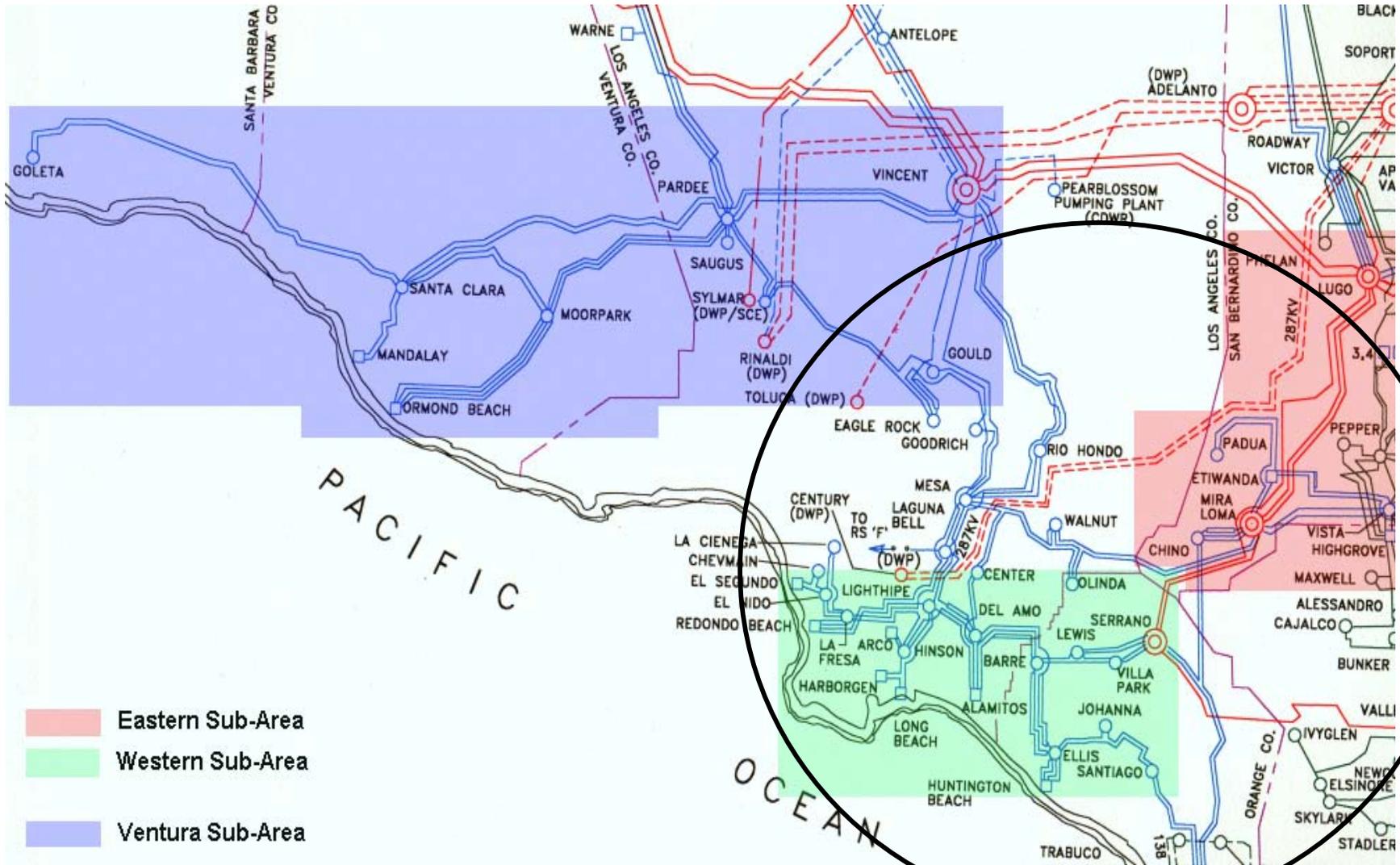


July 7, 2005



CALIFORNIA ISO

California Independent System Operator



- Eastern Sub-Area
- Western Sub-Area
- Ventura Sub-Area

July 7, 2005

MSC Meeting



CALIFORNIA ISO

California Independent System Operator

Comparison of MW Requirement for 2006 RMR and LCR

| Local Area Name | 2005 RMR/ MO | 2006 RMR/MO | 2006 LCR without Muni & QFs | 2006 LCR |
|-------------------------|--------------|----------------|-----------------------------|--------------|
| Humboldt | 124 | 125 | 126 | 162 |
| North Coast / North Bay | 517 | 273 | 518 | 658 |
| Sierra | 384 | 468 | 662 | 1587* |
| Cortina | N/A | N/A | 0 | 25 |
| Davis/W. Sac. | N/A | N/A | 0 | 25* |
| Stockton | 57 | 100 | 154 | 449 |
| Greater Bay | 4000 | 4000 | 4600 | 5769 |
| Fresno | 3220 | 2522 | 3672 | 4325* |
| Kern | N/A | N/A | 797 | 797* |
| LA Basin | 1390 4700 | 2120** 2930 | 5300*** | 8627 |
| San Diego | 2019 | 2369 | 2434 | 2620 |
| Total | 16411 | 17429 | 18263 | 25044 |

All Values shown in MW

* Generation deficient areas

** Exact amount to be determined through LARS

*** Without San Onofre NPP



Initial Review of Local Market Power in Major Local Areas

| Local Area | Supply | LCR | Pivotal Players (RSI) |
|------------------|--------|--------|---|
| San Diego | 2,095 | 2,434 | Dynegy (.39), Duke (.57), CalPeak (.80) |
| Western LA Basin | 5,057 | 4,450 | AES/Williams (.21), Dynegy (.99) |
| Eastern LA Basin | 1,696 | 850 | SCE (.75) |
| Bay Area | 8,590 | 4,600* | ? |
| | 15,343 | 12,334 | |

*Further analysis being done to identify more detailed requirements for "sub-pockets" within area.



Next Steps

- July 8, 2005 - Initial comments due on CPUC workshop report.
- July 12, 2005 – Stakeholder comments on Local Capacity Areas to CAISO.
- July 20, 2005 Second stakeholder meeting on Local Capacity Areas?
- July 29, 2005 - CAISO posts final Local Capacity Technical Analysis, as well as Phase I Baseline Deliverability Study.
- October 2005 – CPUC Order?
- Late 2005 - LSE's begin RA procurement for June 2006?