Local Capacity Requirements (LCR) for Year 2009
Study Results for the Greater Bay Area

LCR Stakeholder Meeting, March 4th, 2008, Folsom CA

California ISO
Your Link to Power

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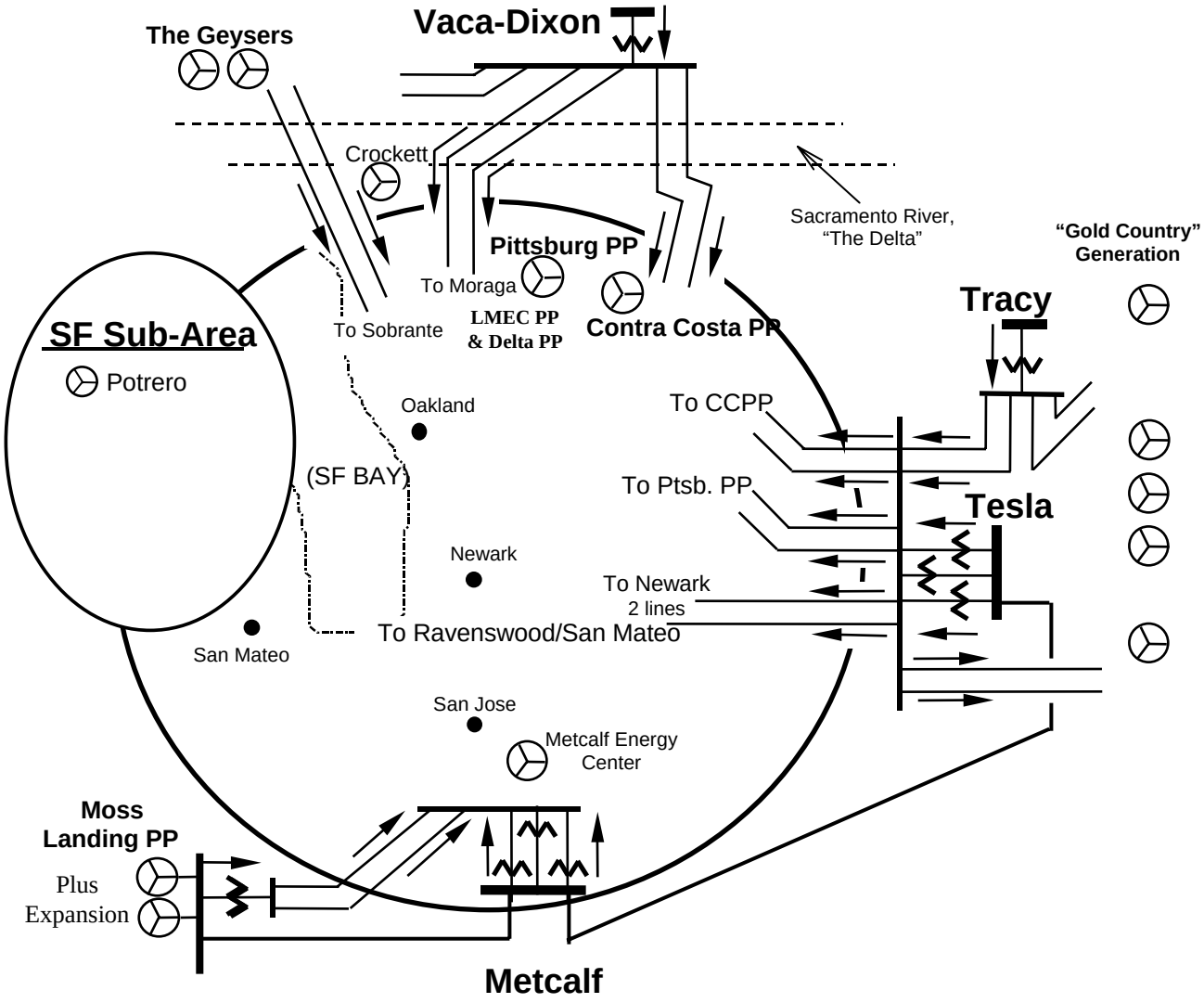
2009 LCR Greater Bay Area
General Greater San Francisco Bay Geographic Area

2009 LCR Greater Bay Area
Greater San Francisco Bay Area Transmission System



2009 LCR Greater Bay Area
Greater Bay Area Power Flow Zones

- The Greater Bay Area LCR Area is described by the following list of Zones defined by PG&E within power flow base cases.
  - San Francisco
  - Peninsula
  - DeAnza
  - San Jose
  - Mission
  - East Bay
  - Diablo
  - Silicon Valley Power
  - Portions of NCPA

2009 LCR Greater Bay Area
Greater Bay Area Load

Greater Bay Area
2009 1-in-10 Year Load Representation

Total Load = 10,041 MW

Transmission Losses = 253 MW

Total Load + Losses = 10,295 MW

2009 LCR Greater Bay Area
Greater Bay Area LCR

- The most critical contingency is the loss of the Tesla-Metcalf 500kV line with Delta Energy Center out of service. The area limitation is reactive margin within the Bay Area. Last year's limiting element (Tesla #6 500/230kV) has been re-rated.

- This limiting contingency establishes a Local Capacity Requirement of 4791 MW in 2009 (includes 150 MW of Wind, 722 MW of QF and 244 MW of Muni generation) as the minimum capacity necessary for reliable load serving capability within this area.

2009 LCR Greater Bay Area
Greater Bay Area LCR

2009	Wind (MW)	QF/Selfgen (MW)	Muni (MW)	Market (MW)	Max. Qualifying Capacity (MW)
Available generation	150	722	244	5215	6331

2009	Existing Generation Capacity Needed (MW)	Deficiency (MW)	Total MW Requirement
Category B (Single)	4791	0	4791
Category C (Multiple)	4791	0	4791

2009 LCR Greater Bay Area
San Francisco Sub Area

- Per the CAISO Revised Action Plan for SF, all Potrero units (360 MW) will continue to be required until completion of the plan as it is presently described.

- The most critical LCR contingency is an overlapping outage of the H-P #3 & #4 115 kV cables between Martin and Hunters Point Substations. The area limitation is thermal overloading of the remaining H-P #1 115kV cable.

2009 LCR Greater Bay Area
Oakland Sub Area

- The most critical contingency is an outage of the D-L 115 kV cable (with one of the Oakland CT's off-line).
- The sub-area area limitation is thermal overloading of the C-X #2 115 kV cable.
- This limiting contingency establishes a Local Capacity Need of 101 MW (includes 50 MW of Muni generation) as the minimum capacity necessary for reliable load serving capability within this sub-area.

2009 LCR Greater Bay Area
Llagas Sub Area

- The most critical contingency is an outage between Metcalf D and Morgan Hill 115 kV (with one of the Gilroy Peakers off-line). The area limitation is voltage at Morgan Hill.

- This limiting contingency establishes a Local Capacity Requirement of 112 MW as the minimum capacity necessary for reliable load serving capability within this sub-area.

2009 LCR Greater Bay Area
San Jose Sub Area

- The most critical contingency in this area is an overlapping outage of either Metcalf-El Patio #1 or #2 115 kV Lines and the Metcalf-Evergreen #1 115 kV line.
- The limiting element is overloading of the Metcalf-Evergreen #2 115 kV line.
- This establishes a Local Capacity Requirement of 246 MW (Includes 45 MW QF and 6 MW Muni) as the minimum capacity necessary for reliable load serving capability within this sub-area.
- Reconductor of Metcalf-El Patio 115 kV lines shifted problem to the Metcalf-Evergreen 115 kV lines.

2009 LCR Greater Bay Area
Pittsburg Sub Area

- The most critical contingency is an outage of the Pittsburg-Tesla #1 or #2 230 kV line (with Delta Energy Center off-line).
- The sub-area area limitation is thermal overloading of the parallel Pittsburg-Tesla 230 kV line.
- This limiting contingency establishes a Local Capacity Requirement of 2160 MW (including 678 MW QF) as the minimum capacity necessary for reliable load serving capability within this sub-area.

2009 LCR Greater Bay Area
GBA System Changes Between 2008 & 2009

- Re-rate of Tesla #4 & #6 banks. (Was 1122MVA, Now 1346 MVA 4 Hr. EMER Rating)
- Greater Bay Area load growth from 9,870 MW in 2008 to 10,294 MW in 2009.
- Addition of H-P #4 115kV Cable in San Francisco. INSVC date of 4/1/2009.
- 117 MW of new generation at East Shore Energy Center.

Stakeholder Comments

Your comments and questions are welcome

For written comments, please send to: RegionalTransmission@caiso.com