

2011 Final LCR Study Results Big Creek/Ventura and LA Basin

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Stakeholder Meeting

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Big Creek/Ventura Area



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Big Creek/Ventura Area 2011 Loads & Resources

Load

Load	Pump Load	Transmission Losses	Total
(MW)	(MW)	(MW)	(MW)
4295	263	90	4648

Available Generation

	QF/Wind	Muni	Nuclear	Market	Max. Qualifying Capacity
	(MW)	(MW)	(MW)	(MW)	(MW)
Available Gen	1012	184	0	4110	5306



Rector and Vestal Sub-areas

Rector:

Contingency: Vestal-Rector #1 or #2 230 kV line with Eastwood unit out of service Limiting component: thermal overload the remaining Vestal-Rector #1 or #2 230 kV line LCR Need: 641 MW (includes 30 MW of QF generation)

Vestal:

Contingency: Magunden-Vestal #1 or #2 230 kV line with Eastwood unit out of service Limiting components: thermal overload the remaining Magunden-Vestal #1 or #2 230 kV line LCR Need: 854 MW (includes 156 MW of QF generation)

All resources in Rector apply towards the LCR need in Vestal sub-area.



Santa Clara and Moorpark Sub-areas

Santa Clara:

Contingency: Pardee – S.Clara 230 kV N-1 followed by Moorpark – S.Clara #1 and #2 230 kV lines N-2 Limiting component: Voltage collapse LCR Need: 346 MW (includes 171 MW of QF generation)

Moorpark:

Contingency: Pardee – Moorpark 230 kV N-3 Limiting components: Voltage collapse LCR Need: 606 MW (includes 201 MW of QF generation)

All resources in Santa Clara apply towards the LCR need in Moorpark sub-area.



Big Creek/Ventura Overall

Category B LCR:

Contingency: Sylmar-Pardee #1 or #2 230 kV line followed by Ormond Beach #2 unit out of service

- Limiting component: thermal overload the remaining Sylmar-Pardee #1 or #2 230 kV line
- LCR Need: 2786 MW (includes 962 MW of QF, 184 MW of Muni and 50 MW of wind generation)

Category C LCR:

Contingency: Lugo-Victorville 500 kV followed by the loss of Sylmar-Pardee #1 or #2 230 kV line or vice versa

- Limiting components: thermal overload the remaining Sylmar-Pardee #1 or #2 230 kV line
- LCR Need: 2727 MW (includes 962 MW of QF, 184 MW of Muni and 50 MW of wind generation)



Changes

Since last year:

1) Load forecast is down by 385 MW

2) 6 existing small resource modeled in the area (previously not modeled)

3) Slight change to the boundary, due to transmission projects required under TRTP (no impact on load or resources)

4) Overall LCR has decreased by 607 MW

Your comments and questions are welcome.

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



LA Basin Area



LA Basin Area 2011 Loads & Resources

Load

Load	Pump Load	Transmission Losses	Total
(MW)	(MW)	(MW)	(MW)
19715	22	486	20223

Available Generation

	QF/Wind	Muni	Nuclear	Market	Max. Qualifying
	(MW)	(MW)	(MW)	(MW)	Capacity (MW)
Available Gen	1163	797	2246	8103	12309



Ellis Sub-area

Category C LCR:

Contingency: The loss of the Barre-Ellis 230 kV line followed by the loss of Santiago-S.Onofre #1 and #2 230 kV lines

Limiting components: Voltage collapse

LCR Need: 492 MW (includes 32 MW of QF)



El Nido Sub-area

Category C LCR:

Contingency: Two contingencies cause the same LCR need

1. The loss of the La Fresa – Redondo #1 and #2 230 kV lines

Limiting components: overload the La Fresa – Hinson 230 kV line 2. The loss of the La Fresa – Hinson 230 kV line followed by the loss of the La Fresa – Redondo #1 and #2 230 kV lines

Limiting components: Voltage collapse LCR Need: 360 MW (includes 105 MW of QF)



Western LA Basin Sub-area

Category C LCR:

Contingency: The loss of the Serrano – Villa Park #1 or #2 and Serrano – Lewis 230 kV lines

Limiting components: Thermal overload of the remaining Serrano – Villa Park #1 or #2 230 kV line

LCR Need: 5828 MW (includes 828 MW of QF, 8 MW of Wind, 392 MW of Muni and 2246 MW of nuclear generation)



LA Basin Overall

Category B LCR:

Contingency: Palo Verde-Devers 500 kV line with SONGS #3 unit out of service

Limiting Component: South of Lugo operating rating (6400 MW with Rancho Vista 500kV substation)

LCR Need: 10589 MW (includes 1127 MW of QF, 36 MW Wind, 797 MW of Muni and 2246 MW of nuclear generation)



Changes

Since last year:

1) Load forecast is up by 165 MW

2) 15 existing small resources have been modeled (previously not modeled)

3) Add Ellis sub-area and El Nido sub-area

4) As a part of TRTP project the existing Antelope-Mesa Cal 230 kV line will be permanently removed from service in 2011, in order to make room for a new 500 kV line, and this caused an LCR increase in the Western sub-area as well as LA Basin overall.

5) Total overall LCR increases by 854 MW

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