



California ISO
Shaping a Renewed Future

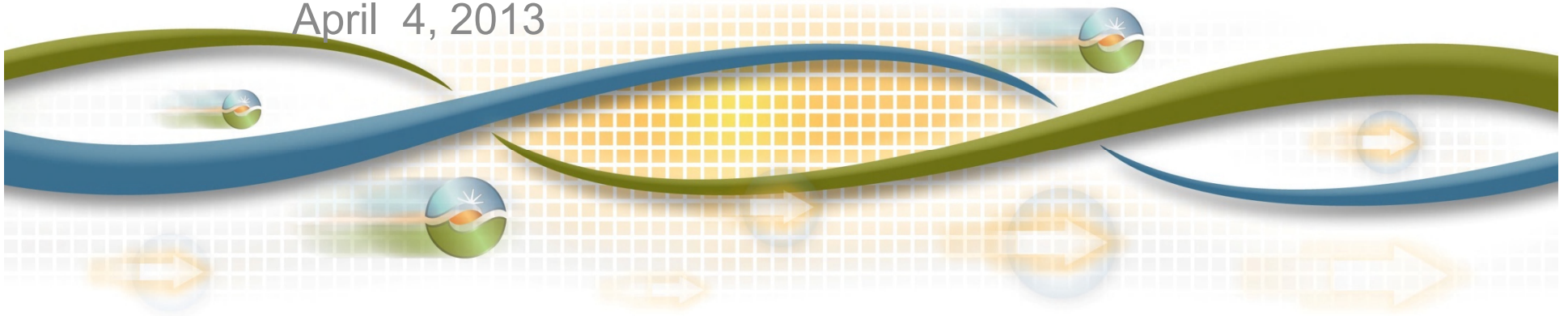
2014 and 2018 Final LCR Study Results - Big Creek/Ventura and LA Basin

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LA Basin Area Loads & Resources

Load

Year	Load (MW)	Pump Load (MW)	Transmission Losses (MW)	Total (MW)
2014	19560	21	113	19694
2018	20560	21	124	20705

Available Generation

Year	QF/Wind (MW)	Muni (MW)	Nuclear (MW)	Market (MW)	Max. Qualifying Capacity (MW)
2014	1078	1164	0	9547	11789
2018	1078	1164	2246	9547	14035

Critical Area Contingencies

Ellis Sub-area

No requirements due to Barre-Ellis 230 kV split project, as well as the use of Ellis SPS for N-1 followed by N2 conditions.

El Nido Sub-area – Category C

Contingency: Hinson-La Fresa 230 kV line out followed by Double Circuit Tower Line Redondo-La Fresa #1 and #2 230 kV lines

Limiting component: Voltage collapse

2014 LCR need: 514 MW (includes 51 MW of QF and Muni generation)

2018 LCR need: 536 MW (includes 51 MW of QF and Muni generation)

El Nido Sub-area – Category B

No requirement.

Critical Area Contingencies

West of Devers Sub-area – Category C

Contingency: San Bernardino-Etiwanda 230 kV line out followed by San Bernardino-Vista 230 kV line or vice versa

Limiting component: Voltage collapse

2014 LCR need: 485 MW (includes 2 MW of QF generation)

2018 LCR need: 468 MW (includes 2 MW of QF generation)

West of Devers Sub-area – Category B

No requirement.

Critical Area Contingencies

Valley-Devers Sub-area – Category C

Contingency: Palo Verde-Colorado River 500 kV line out followed by Alberhill-Serrano 500 kV line or vice versa

Limiting component: Camino -Iron Mountain 230 kV line

2014 LCR need (2 SONGS): 1726 MW (includes 209 MW of QF and Wind)

2014 LCR need (1 SONGS): 1817 MW (includes 209 MW of QF and Wind)

2014 LCR need (0 SONGS): 1889 MW (includes 209 MW of QF and Wind)

2018 LCR need (2 SONGS): 1689 MW (includes 209 MW of QF and Wind)

Valley-Devers Sub-area – Category B

No requirement.

Critical Area Contingencies

Western LA Basin Sub-area – Category C

Contingency: Serrano-Villa Park #2 230 kV line out followed by Serrano-Lewis #1 or #2 230 kV line or vice versa

Limiting component: Serrano-Villa Park #1 230 kV line

2014 LCR need (2 SONGS): 3,825 MW (includes 1,193 MW of QF, Muni and Wind)

2014 LCR need (1 SONGS): 4,005 MW (includes 1,193 MW of QF, Muni and Wind)

2014 LCR need (0 SONGS): 4,175 MW (includes 1,193 MW of QF, Muni and Wind)

2018 LCR need (2 SONGS): 4,211 MW (includes 1,193 MW of QF, Muni and Wind)

Western LA Basin Sub-area – Category B

Non binding – multiple combinations possible.

Critical Area Contingencies

LA Basin Overall – Category B

Contingency: Palo Verde-Colorado River 500 kV line with the biggest G-1 out of service

Limiting component: South of Lugo 500 kV Path rating

2014 LCR need (2 SONGS): 10,466 MW (includes 2,242 MW of QF, Muni and Wind)

2014 LCR need (1 SONGS): 10,342 MW (includes 2,242 MW of QF, Muni and Wind)

2014 LCR need (0 SONGS): 10,063 MW (includes 2,242 MW of QF, Muni and Wind)

Contingency: Sylmar-Gould 230 kV line out with SONGS#3 already out of service

Limiting component: Sylmar-Eagle Rock 230 kV line

2018 LCR need (2 SONGS): 9,882 MW (includes 2,242 MW of QF, Muni and Wind)

LA Basin Overall – Category C

2014 LCR need (2 SONGS and 1 SONGS) same as above.

Contingency: Miguel-ECO 500 kV line followed by Imperial Valley-Suncrest 500 kV line

Limiting component: Voltage instability

2014 LCR need (0 SONGS): 10,430 MW (includes 2,242 MW of QF, Muni and Wind)

Contingency: Sylmar-Gould 230 kV line followed by Lugo-Victorville 500 kV line

Limiting component: Sylmar-Eagle Rock 230 kV line

2018 LCR need (2 SONGS): 11,071 MW (includes 2,242 MW of QF, Muni and Wind)

Changes

Since last year:

- 1) Load forecast is up by 234 MW vs. 2013
- 2) Total overall LCR with two SONGS in service is up by 171 MW
- 3) Studying three scenarios: 2 SONGS units, 70% of SONGS #2 and 0 SONGS units in service, respectively
- 3) Segments of TRTP project
- 4) 2018 load forecast is up by 106 MW vs. 2017
- 5) Total overall Long-term LCR is up by 652 MW due to load increase and subarea LCR need changes

Since last stakeholder meeting:

- 1) Updated NQC

Your comments and questions are welcome.

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

Big Creek/Ventura Area Loads & Resources

Load

Year	Load (MW)	Pump Load (MW)	Transmission Losses (MW)	Total (MW)
2014	4189	327	64	4580
2018	4421	327	66	4814

Available Generation

Year	QF (MW)	Muni (MW)	Market (MW)	Max. Qualifying Capacity (MW)
2014	758	354	4206	5318
2018	758	354	4206	5318

Critical Area Contingencies

Rector Sub-area – Category B

Contingency: Vestal-Rector #1 or #2 230 kV line with Eastwood out of service

Limiting component: Remaining Vestal-Rector 230 kV line

2014 LCR need: 453 MW (includes 10 MW of QF generation)

2018 LCR need: 462 MW (includes 10 MW of QF generation)

Rector Sub-area – Category C

Same as above.

Vestal Sub-area – Category B

Contingency: Magunden-Vestal #1 or #2 230 kV line with Eastwood out of service

Limiting component: Remaining Magunden-Vestal 230 kV line

2014 LCR need: 631 MW (includes 123 MW of QF generation)

2018 LCR need: 633 MW (includes 123 MW of QF generation)

Vestal Sub-area – Category C

Same as above.

Critical Area Contingencies

Santa Clara Sub-area – Category C

Contingency: Pardee-S. Clara 230 kV line followed by DCTL Moorpark-S. Clara #1 and #2 230 kV lines

Limiting component: Voltage collapse

2014 LCR need: 304 MW (includes 66 MW of QF generation)

2018 LCR need: 404 MW (includes 66 MW of QF generation)

Santa Clara Sub-area – Category B

No requirement.

Critical Area Contingencies

Moorpark Sub-area – Category C

Contingency: Pardee-Moorpark #3 230 kV line followed by DCTL Pardee-Moorpark #1 and #2 230 kV lines

Limiting component: Voltage collapse

2014 LCR need: 519 MW (includes 94 MW of QF generation)

2018 LCR need: 618 MW (includes 94 MW of QF generation)

Moorpark Sub-area – Category B

No requirement.

Critical Area Contingencies

Big Creek/Ventura Overall – Category C

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

Limiting component: Remaining Sylmar-Pardee 230 kV line

2014 LCR need: 2,250 MW (includes 1,112 MW of QF and Muni)

2018 LCR need: 2,688 MW (includes 1,112 MW of QF and Muni)

Big Creek/Ventura Overall – Category B

Contingency: Sylmar-Pardee #1 or #2 230 kV line with Omond #2 out of service

Limiting component: Remaining Sylmar-Pardee 230 kV line

2014 LCR need: 2,156 MW (includes 1,112 MW of QF and Muni)

2018 LCR need: 2,397 MW (includes 1,112 MW of QF and Muni)

Changes

Since last year:

- 1) 2014 load forecast is down by 16 MW vs. 2013
- 2) Rector – Springville 230 kV line
- 3) Load reallocation between substations in the area
- 4) Segments of TRTP project
- 5) Overall LCR is up by 9 MW
- 6) 2018 load forecast is up by 182 MW vs. 2017
- 7) Overall long-term LCR is up by 117 MW

Since last stakeholder meeting:

- 1) Updated NQC

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