



California ISO

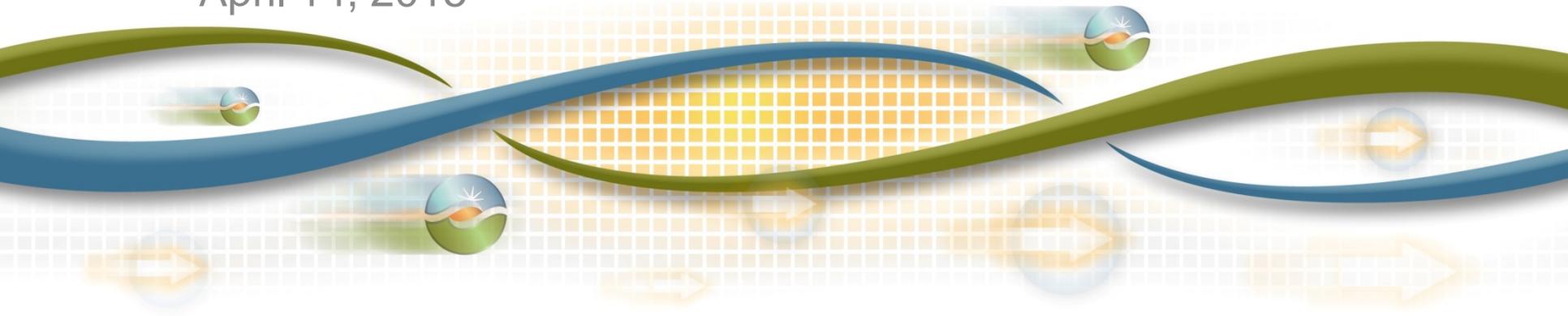
# 2016 and 2020 Final LCR Study Results - LA Basin and Big Creek/Ventura Local Areas

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# LA Basin Area Loads & Resources

## *Load*

Year	Load (MW)	AEEE (MW)	Pump Load (MW)	Transmission Losses (MW)	Total (MW)
2016	20248	273	76	117	20168
2020	21248	680	76	120	20764

## *Available Generation*

Year	QF/Wind (MW)	Muni (MW)	Nuclear (MW)	Market (MW)	Max. Qualifying Capacity (MW)
2016	547	1163	0	9259	10969
2020	547	1163	0	9259	10969

# Major new projects modeled

- Talega SVC
- Huntington Beach 3 and 4 Synchronous Condensers

Two additional projects modeled in 2020

- San Luis Rey Synchronous Condenser
- Mesa Loop-in

# Critical Area Contingencies

## **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

2016 LCR need: 580 MW (includes 47 MW of QF and Muni generation )

2020 LCR need: 580 MW (includes 47 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

2016 LCR need: 488 MW (includes 2 MW of QF generation )

2020 LCR need: 488 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 ValleySC/Alberhill-Serrano 500 kV line or vice versa

Limiting component: Camino-Iron Mountain 230 kV line

2016 LCR need: 1,722 MW (includes 88 MW of QF and Wind)

2020 LCR need: 1,260 MW (includes 88 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

2016 LCR need: 4,472 MW (includes 880 MW of QF, Muni, and Wind)

2020 LCR need: 4,993 MW (includes 880 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: Sylmar-Gould 230 kV line out with Redondo #7 already out of service

Limiting component: Sylmar-Eagle Rock 230 kV line

2016 LCR need: 7,576 MW (includes 1,710 MW of QF, Muni, and Wind)

2020 LCR need: 7,978 MW (includes 1,710 MW of QF, Muni, and Wind)

## **LA Basin Overall – Category C**

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

Limiting component: Sylmar-Eagle Rock 230 kV line

2016 LCR need: 8,887 MW (includes 1,710 MW of QF, Muni, and Wind)

2020 LCR need: 9,229 MW (includes 1,710 MW of QF, Muni, and Wind)

# Changes

## Since last year:

- 1) 2016 load forecast is up by 198 MW vs. 2015.
- 2) Total overall LCR is down by 210 MW, mainly due to decrease in load and other new transmission projects in San Diego area.
- 3) 2020 load forecast is up by 258 MW vs. 2019.
- 4) Total Long-term LCR is up by 110 MW mainly due to load.

## Since last stakeholder meeting:

- 1) Updated NQC

**Your comments and questions are welcome.**

For written comments, please send to: [RegionalTransmission@caiso.com](mailto:RegionalTransmission@caiso.com)

# Big Creek/Ventura Area Loads & Resources

## *Load*

Year	Load (MW)	AEEE (MW)	Pump Load (MW)	Transmission Losses (MW)	Total (MW)
2016	4446	74	369	65	4806
2020	4596	193	369	73	4845

## *Available Generation*

Year	QF (MW)	Muni (MW)	Market (MW)	Max. Qualifying Capacity (MW)
2016	188	396	4951	5535
2020	188	396	4951	5535

# Major new projects modeled

- none

# 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

2016 LCR need: 492 MW (includes 9 MW of QF generation )

2020 LCR need: 464 MW (includes 9 MW of QF generation )

## **Rector Sub-area – Category C**

Same as above.

# Critical Area Contingencies

## **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

2016 LCR need: 739 MW (includes 73 MW of QF generation )

2020 LCR need: 703 MW (includes 73 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

2016 LCR need: 247 MW (includes 80 MW of QF generation )

2020 LCR need: 293 MW (includes 80 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

2016 LCR need: 462 MW (includes 109 MW of QF generation )

2020 LCR need: 547 MW (includes 109 MW of QF generation )

## **Moorpark Sub-area – Category B**

No requirement.

# Critical Area Contingencies

## **Big Creek/Ventura Overall – Category B**

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

Limiting component: Remaining Sylmar-Pardee 230 kV line

2016 LCR need: 2,141 MW (includes 584 MW of QF and Muni)

2020 LCR need: 2,598 MW (includes 584 MW of QF and Muni)

## **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

2016 LCR need: 2,398 MW (includes 584 MW of QF and Muni)

2020 LCR need: Same as Category B

# Changes

## Since last year:

- 1) 2016 load forecast is down by 1 MW vs. 2015.
- 2) Overall LCR is up by 128 MW, mainly due to LA Basin and San Diego/Imperial Valley significant reduction in LCR requirements.
- 3) 2020 load forecast is down by 44 MW vs. 2019.
- 4) Long-term LCR is down by 21 MW, mainly due to load.

## Since last stakeholder meeting:

- 1) Updated NQC

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