

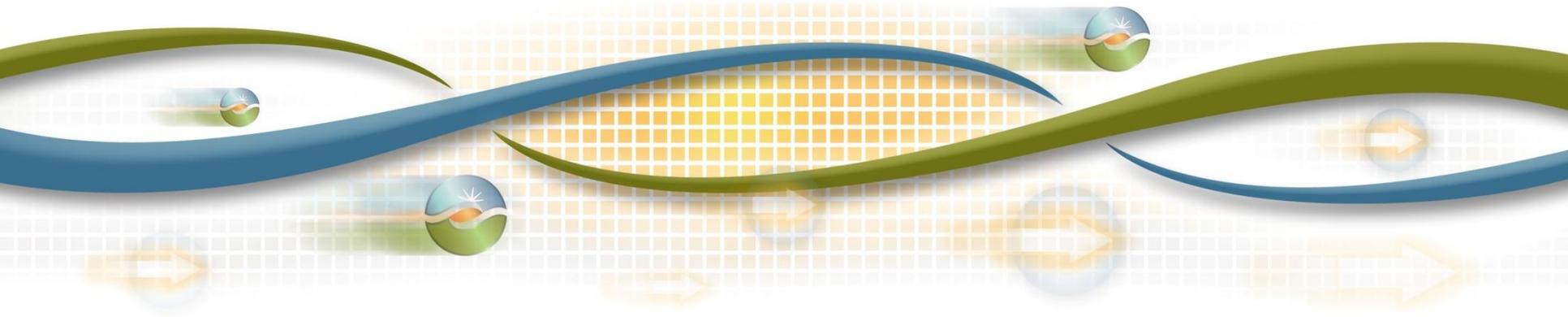
2018 & 22 Draft LCR Study Results Summary of Findings

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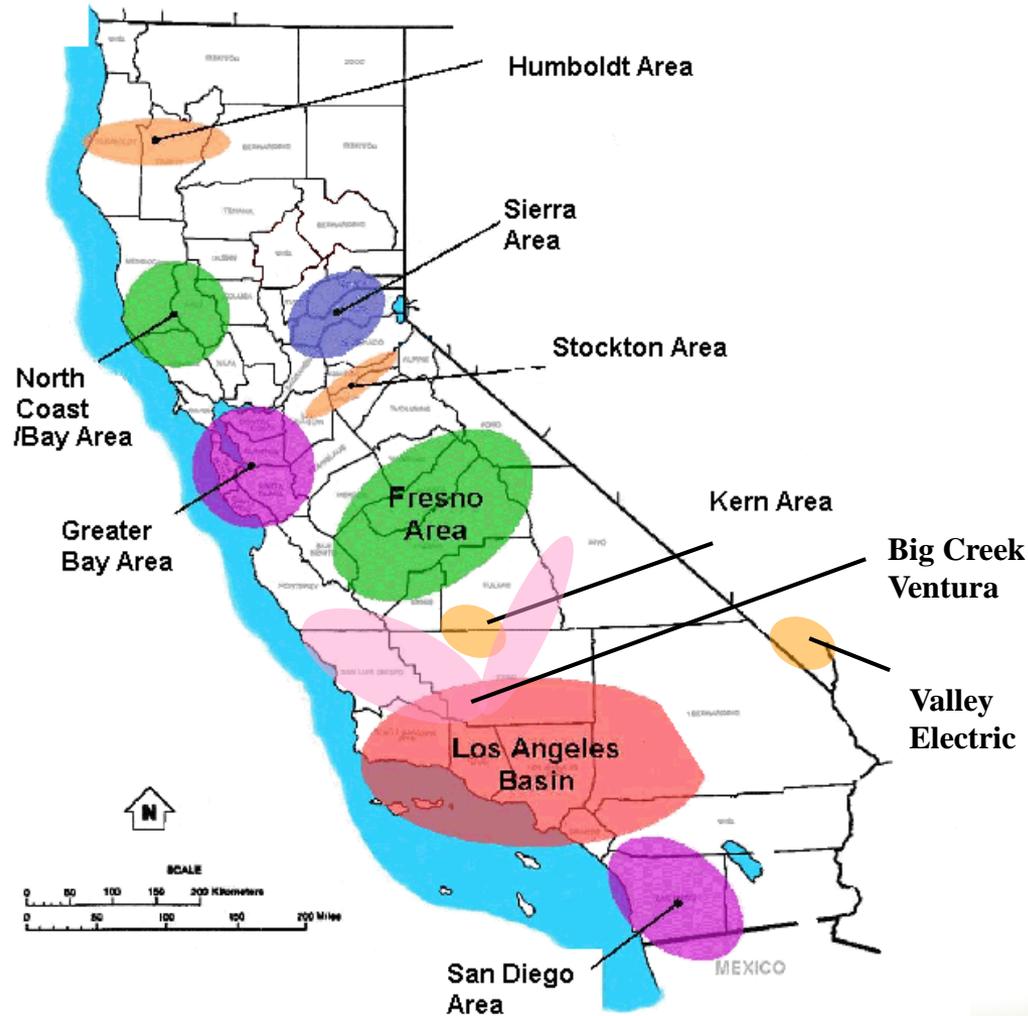
Senior Advisor Regional Transmission Engineer

Stakeholder Meeting

March 9, 2017



LCR Areas within CAISO



Input Assumptions, Methodology and Criteria

See October 31, 2016 stakeholder teleconference - for study assumptions, methodology and criteria. The latest information along with the 2017 LCR Manual can be found at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/LocalCapacityRequirementsProcess.aspx> .

Transmission system configuration – all-projects with EDRO up to June 1, 2018

Generation – all-generation with COD up to June 1, 2018

Load Forecast – 1 in 10 local area peak (based on latest CEC forecast)

Criteria – see report for details

Methodology

1. Maximize Imports Capability into the local area
2. Maintain path flows
3. Maintain deliverability for deliverable units
4. Load pocket – fix definition
5. Performance levels B & C (if equal category B is most stringent)

Major Changes from last year studies

1. **Old NQC data.**
2. **Draft LCR results herein use CEC forecast with peak shift for all southern LCR areas and non-peak shift for all northern LCR areas.**
3. **Total 2018 LCR needs have increased by 550 MW or ~ 2.2%.**
4. **2018 LCR needs decrease in: North Coast/North Bay, Kern** due to decrease in load forecast and **Bay Area, LA Basin** due to load forecast and transmission projects.
5. **2018 LCR needs increase in: Humboldt** due to different limiting contingency, **Sierra, Stockton, Fresno, Big Creek/Ventura** due to load forecast increase and **San Diego** due to inconsistent resource assumptions during the 2017 study.

2018 Draft LCR Needs

Local Area Name	Qualifying Capacity			2018 LCR Need Based on Category B			2018 LCR Need Based on Category C with operating procedure		
	QF/ Muni (MW)	Market (MW)	Total (MW)	Existing Capacity Needed	Deficiency	Total (MW)	Existing Capacity Needed**	Deficiency	Total (MW)
Humboldt	20	198	218	121	0	121	169	0	169
North Coast / North Bay	128	722	850	634	0	634	634	0	634
Sierra	1176	890	2066	1215	0	1215	1826	306	2132
Stockton	149	449	598	358	0	358	408	297	705
Greater Bay	1070	8792	9862	3910	0	3910	5160	0	5160
Greater Fresno	231	3072	3303	1949	0	1949	2081	0	2081
Kern	60	491	551	244	0	244	453	0	453
LA Basin	1615	8960	10575	7252	0	7252	7252	0	7252
Big Creek/Ventura	543	4920	5463	2023	0	2023	2321	0	2321
San Diego/ Imperial Valley	239	5071	5310	4192	0	4192	4192	0	4192
Total	5231	33565	38796	21898	0	21898	24496	603	25099

Major Changes from last year studies

1. **Total 2022 LCR needs have increased by 1372 MW or ~ 11.6%.**
(Without results from LA Basin and San Diego-Imperial Valley areas.)
2. **2022 LCR needs decrease in: Humboldt and North Coast/North Bay**
due to decrease in load forecast.
3. **2022 LCR needs increase in: Sierra, Stockton** due to delay in project implementation, **Bay Area, Big Creek Ventura** due to load forecast increase, **Fresno** due to load forecast increase and due to Path 15 S-N direction and **Kern** due to area redefinition and new limiting contingency.

Role and Purpose of sub-area LCR needs:

- Provide detail local procurement information
- Need to be satisfied in order to minimize ISO back-stop
- Sum of the parts may not equal the overall need

2022 Draft LCR Needs

Local Area Name	Qualifying Capacity			2022 LCR Need Based on Category B			2022 LCR Need Based on Category C with operating procedure		
	QF/ Muni (MW)	Market (MW)	Total (MW)	Existing Capacity Needed	Deficiency	Total (MW)	Existing Capacity Needed**	Deficiency	Total (MW)
	Humboldt	20	198	218	121	0	121	169	0
North Coast / North Bay	128	722	850	215	0	215	440	0	440
Sierra	1176	890	2066	389	0	389	1905	62	1967
Stockton	197	532	729	355	0	355	404	286	690
Greater Bay	933	5970	6903	4257	0	4257	5208	107	5315
Greater Fresno	231	3295	3526	1478	0	1478	1860	0	1860
Kern	15	106	121	52	0	52	123	0	123
LA Basin	1615	6180	7795		0			0	
Big Creek/Ventura	517	3160	3677	2208	0	2208	2597	0	2597
San Diego/ Imperial Valley	263	4577	4840		0			0	
Total	5095	25630	30725	9075	0	9075	12706	455	13161

2018 LCR Study Schedule

CPUC and the ISO have determined overall timeline

- Criteria, methodology and assumptions web conf. Oct. 31, 2016
- Submit comments by November 14, 2016
- Posting of comments with ISO response by the November 30, 2016
- Base case development started in December 2016
- Receive base cases from PTOs January 3, 2017
- Publish base cases January 15, 2017 – comments by the 29th
- Draft study completed by February 28, 2017
- ISO Stakeholder Meeting March 9, 2017 – comments by the 23rd
- ISO receives new operating procedures March 23, 2017
- Validate op. proc. – publish draft final report April 6, 2017
- ISO Stakeholder Web Conf. April 13, 2017 – comments by the 20th
- Final 2018 LCR report May 1, 2017



2017 ISO Procurement Schedule

Per ISO Tariff and BPM - overall timeline

- Final LCR Report May 1, 2017
- LSE self-guided local allocation; first week in May, 2017
- Receive new CEC coincident load forecast June 30, 2017
- ISO or CPUC to send out final local allocation; middle of July, 2017
- If Oakland under contract; LSEs to submit showings by 9/15/2017
- ISO to decide on retaining units under RMR by October 1, 2017
- Final LSE showings TBD – Usually last week of October, 2017
- ISO to send a market notice out stating deficiencies in procurement – about 3 weeks after final showing - about November 21, 2017
- ISO receives additional showing (30 days after market notice)
- ISO to enter back-stop procurement for local reasons (if needed)

Your comments and questions are welcome.

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