

Subject: 2019 ISO LCR Study Criteria -- Methodology and Assumptions

Submitted by	Company	Date Submitted
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The CPUC Staff appreciate the opportunity to comment on the California Independent System Operator (CAISO) Draft Manual, 2019 Local Capacity Area Technical Study and the October 31, 2017 presentation entitled, “2019 Local Capacity Technical Study Criteria – Methodology and Assumptions.” Energy Division Staff comments are summarized below:

- Energy Division Staff appreciates CAISO’s efforts to revise its local capacity technical study schedule;
- CAISO should provide local area and sub-area load data;
- CAISO should use a coincidence adjustment when reviewing the combined SDG&E sub-area and LA Basin;
- CAISO should work with the CPUC, CEC and the IOUs to ensure that the load forecasts are adjusted for behind-the-meter local capacity procurement;
- CAISO should consider San Diego and LA Basin separately in addition to considering it on a combined basis;
- CAISO should consider seasonal local requirements; and
- Energy Division Staff continues to be concerned about CAISO’s peak shift analyses.

Each of these points is discussed in more detail below.

Energy Division Appreciates CAISO’s Efforts to Revise Its Local Capacity Technical Study Schedule

In its October 31, 2017, presentation, CAISO presented an alternative schedule “to potentially reduce the schedule to finalize the year 1 LCR reports from May 1 to April 16, 2018 per CPUC request.” CAISO indicated that the critical path item is an adopted IEPR forecast by January 19, 2018, a reduction in time for stakeholder comments and deferring the year 5 LCR studies after the year 1 LCR study results. Energy Division staff supports these efforts and notes that it does not believe that delaying the 5 year studies modestly will have any adverse consequences.

Accordingly, Energy Division staff agrees that the timeline should be revised and an alternative schedule should be released in order to provide parties sufficient time to plan.

CAISO Should Provide Local Area and Sub-Area Load Data

In the interest of transparency, Energy Division staff recommends that CAISO provide the 1-in-10 load forecasts and historical data for each local area and sub-area. While CAISO provides the 1-in-10 forecast for the local area in aggregate, CAISO does not provide the sub-area load forecast in its final technical report in all instances. In addition, Energy Division staff recommends that CAISO provide historical load information for each local area and sub-area, similar to the historical load data for the Moorpark Subarea that was made available to parties on September 28, 2017, in response to a date request from CEERT.

CAISO Should Use a Coincidence Adjustment for its Combined LA Basin/San Diego Area

As we indicated in comments last year and on the stakeholder call, Energy Division staff continues to recommend that CAISO use a coincident peak for the combined LA Basin and San Diego sub-area analysis. It is our understanding that CAISO currently combines the 1-in-10 non-coincident peak for LA Basin and adds this to the 1-in-10 non-coincident peak for the San Diego sub-area, which we believe could materially overstate the combined 1-in-10 peak for the areas. San Diego typically peaks at a different time than LA Basin and this should be taken into consideration in the CAISO analysis for the combined areas.

CAISO Should Work with the CPUC, CEC and the IOUs to Ensure Load Forecasts are Adjusted for Behind-the-Meter Local Capacity Procurement

As we indicated in our comments last year, Energy Division staff again recommends that CAISO work with the CPUC, CEC and the IOUs to ensure that the 1-in-10 load forecast is adjusted to take into consideration incremental behind-the-meter demand side resources that have been procured to meet local capacity requirements for 2019 through 2022. The CPUC authorized SCE and SDG&E to procure supply and demand-side resources to meet its local capacity requirements. If the load forecast is not adjusted to take the *behind-the-meter* incremental demand-side resources into account (e.g., energy efficiency), we believe that the local capacity requirements will be overstated and the demand-side resources will not reduce the LCR need as anticipated. Accordingly, CAISO should work the CPUC, CEC and IOUs to ensure that this issue is addressed appropriately.

CAISO Should Conduct Separate Analyses for LA Basin and San Diego in Addition to the Combined Analysis

As indicated on the stakeholder call, Energy Division staff requests that CAISO conduct an analysis for San Diego separate from LA Basin. While in 2012 LTPP analyses it was assumed that resources were somewhat fungible between San Diego and LA Basin (and, thus, the Commission considered different allocations of requirements in those areas), more recently, CAISO has indicated that resources in the Western LA Basin are only “minimally” effective at meeting needs in San Diego, thus calling into question why these areas continue to be combined

for study purposes (especially the “overall combined LA Basin-San Diego-Imperial Valley area LCR, as conducted for 2018). At the very least, Energy Division staff would like to understand how procuring resources in one region affect the requirements in the other and requests further clarify on this issue.

CAISO Should Consider Seasonal Local Requirements

As discussed previously, Energy Division staff request that CAISO again consider seasonal local requirements. This issue is particularly important in the San Diego region, where the local requirements now exceed 4,100 MW (see below), even though the 1-in-2 load forecast is below 4,000 MW in all months, except September.

	San Diego/IV	San Diego Sub-Area	LA Basin	Contingency
2016	2,850	3,112 ¹	8,887	SD/IV –loss of 500 kV SWPL btw. IV and N. Gila and Otay Mesa outage SD Sub-Area- loss of Ocotillo-Suncrest 500 kV followed by ECO-Miguel 500 kV LA – Lugo-Victorville 500 kV followed by Sylmar-Gould 230 kV.
2017 (SD Sub-Area and LA combined)		2,743	7,094	SD Sub-Area and LA Combined – loss of ECO-Miguel 500 kV followed by Ocotillo-Suncrest 500 kV
2017 (SD Sub-Area and LA Basin combined)	3,570 (later changed to 4,635 in 2018 study)	2,915	7,368	SD/IV – SWPL btw. IV and N. Gila and TDM outage SD Sub-Area and LA Combined – loss of Lugo-Victorville 500 kV followed by Sylmar-Gould 230 kV
2018 (LA Basin-SD Sub-Area and IV combined)	4,032 (but > 4,100 with collective deficiency)	2,157	7,525	SD Sub-Area - ECO-Miguel 500 kV followed by outage of Ocotillo-Suncrest 500 kV LA Basin-SD Sub-Area and IV Combined – same as LA Basin LA Basin – loss of Lugo-Victorville 500 kV followed by Sylmar-Gould 230 kV

¹ Existing capacity needed, but 3,184 with the 72 MW deficiency.

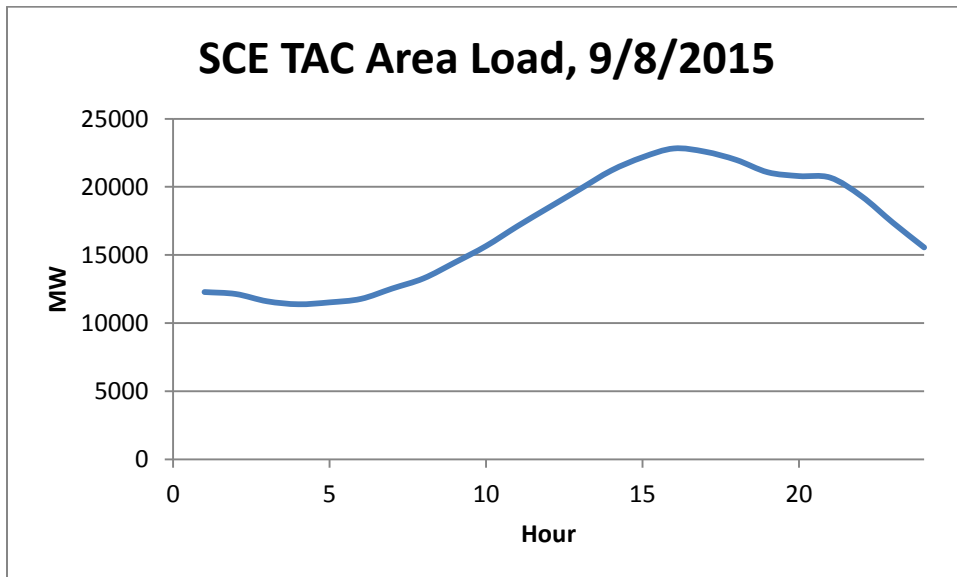
Energy Division Staff Continues to be Concerned About CAISO’s Peak Shift Analyses

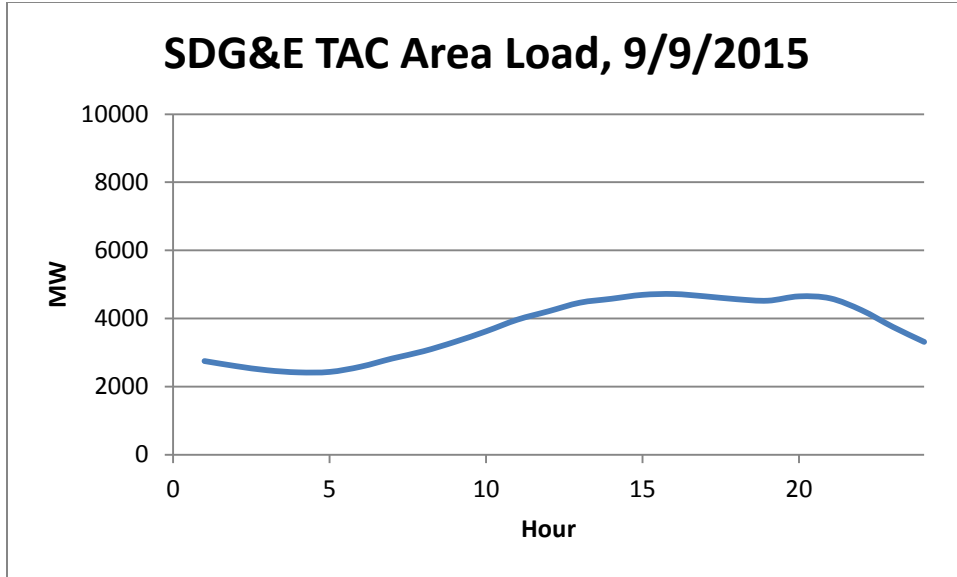
In its draft study manual, CAISO indicates the following about its base case and peak-shift analysis:

The ISO will use the CEC energy and demand forecast for the base scenario analysis. If not directly included in the CEC forecast, the ISO will conduct additional scenarios on a case by case basis regarding the peak shift issue discussed above consistent with the ISO transmission planning process and compliance comply with the NERC TPL-001-4 mandatory reliability standard. These additional scenarios will be considered on a case by case basis to avoid lowering existing or historical reliability levels when assessing the local areas, and in particular areas at risk of generation retirement, until such time as the peak shift issue discussed above has been addressed in future CEC load forecasts. At this time, only southern California’s combined LA Basin and San Diego areas have been identified as necessitating this additional scenario analysis, based on 2018 analysis. The ISO will continue to work with the CEC on the hourly load forecast issue during the development of the 2017 IEPR and the 2018 IEPR Update.

Energy Division staff remains concerned about how the CAISO will implement this peak shift analysis based on the methodology it used in the 2017 studies. For the 2018 studies, CAISO used the CEC’s peak-shift analysis, but provides no detail on how it will conduct a peak shift analysis for 2019, if necessary.

Energy Division staff believes that CAISO’s previous methodology, of adding back in all of the behind-the-meter generation to the CEC’s base case forecast would be flawed and would overstate the loads in these areas. CAISO’s methodology is flawed because it does not take into consideration the fact that consumption loads decline by 6 p, so adding behind-the-meter generation that occurs during the 4 pm peak to the 6 pm hour will result in a higher load than will be seen at the 6 pm hour. This is illustrated in the figures below.





As illustrated, for the SCE TAC area, if PV is added back in at 4 pm, this will vastly overstate the sales load at both the 4 pm and certainly the 6 pm hour. Moreover, the CAISO’s peak shift adjustment is likely even more problematic for the combined area, for which the peak is likely to be driven by the SCE area. In sum, given the shape of these sales load curves, we believe that CAISO’s peak shift adjustment used for 2017 is likely to be flawed and this methodology should not be used in the 2019 study.

In addition, the final draft study manual should be revised to indicate that the time of peak demand could be 6 pm – that is, page 9 should be revised to state that “the ISO will continue to perform additional assessment of the reliability impacts when loads continue to remain high as forecasted by the CEC but without the contribution of solar voltaic distributed generation at an early evening hour (*e.g.*, 6:00 p.m.)” rather than (*i.e.*, 6 p.m.).