

The ISO received comments on the topics discussed at the April 9, 2018 stakeholder meeting from the following:

1. [AES Redondo Beach](#)
2. [Cogentrix Energy Power Management, LLC](#)
3. [Pacific Gas & Electric \(PG&E\)](#)
4. [San Diego Gas & Electric \(SDG&E\)](#)
5. [Sempra Renewables \(SR\)](#)

Copies of the comments and economic study requests submitted are located on the Local Capacity Requirements Process page at:

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

The following are the ISO's responses to the comments.

1. AES Redondo Beach, LLC
Submitted by: Eric Pendergraft

No	Comment Submitted	CAISO Response
1a	<p>AES Redondo Beach, LLC (AESRB) appreciates the opportunity to comment on the California Independent System Operator (CAISO) 2019 draft Local Capacity Requirements (LCR) study results. At the April 9, 2018 stakeholder meeting, the CAISO indicated that the draft study results assume AESRB will remain in service at least through December 31, 2020. Given the challenges associated with maintaining reliability in the western Los Angeles basin, AESRB wants to make sure the CAISO is aware that the four operating units at AESRB are only contracted through December 31, 2018 and unless we can secure a contract to support continued operations beyond 2018, we will be permanently retiring all four generating units as of January 1, 2019. AESRB would prefer to continue operating until the end of 2020, but requires the certainty of a contracted source of revenue in order to remain in service.</p> <p>AESRB plans to participate in the Resource Adequacy (RA) solicitation that Southern California Edison (SCE) typically launches each summer, but there is no guarantee we will be selected, especially considering that the 1,355 MW of available capacity from AESRB is restricted by 435 MW through at least October 2019 due to the NQC reduction necessitated by the ongoing work on the Mesa Loop-In transmission upgrade. AESRB views the SCE RA solicitation as its only real viable competitive procurement path as it is very unlikely we would be able to contract enough RA capacity with other potential customers at a price sufficient to cover ongoing fixed costs.</p> <p>If unsuccessful in the SCE procurement process, AESRB would consider a Reliability Must Run (RMR) Agreement with the CAISO but we are concerned with the expected timing of the respective procurement schedules. SCE generally notifies the winners of their annual RA solicitation during the first week of October, however, based on past practice the CAISO makes its RMR designations by October 1. If AESRB is needed to maintain local reliability, this schedule is challenging since we will not find out if we secured a contract through the traditional competitive process until the deadline for making RMR designations for 2019 will have already passed.</p>	<p>October 1st is the timeline for renewing existing RMR contracts. However, AESRB does not currently have an RMR contract, so the October 1st timeline does not apply. Because the RMR contract for AESRB would be a new RMR contract, if found to be needed, the development of that contract could start after October 1st.</p>



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1b	<p>Before finalizing the 2019 LCR study results, AESRB recommends that the CAISO run a scenario without the capacity of AESRB. If the results of the analysis indicate a potential local reliability problem would exist if AESRB is retired January 1, 2019, then it would be prudent for the CAISO to begin discussions with AESRB about a potential contract well before October 1, 2019. To address the uncertainty and schedule of the SCE procurement process, AESRB and CASIO could negotiate a contingent contract that would only become effective if we are not successful in the SCE procurement. This would ensure the AESRB capacity remains available for 2019 even with the current sequencing of the SCE and CAISO procurement schedules.</p>	<p>Please see response to 1a.</p>
1c	<p>AESRB understands the importance of maintaining a reliable supply of electricity and will continue to work collaboratively with the CAISO to ensure any capacity necessary for local or system reliability remains in service. If CAISO studies determine that AESRB is needed beyond 2018, we have offered one potential solution for ensuring uninterrupted service from AESRB and would welcome the opportunity to discuss alternative approaches with the CAISO.</p>	<p>Please see response to 1a.</p>

2. Cogentrix Energy Power Management, LLC
Submitted by: Julie McLaughlin

No	Comment Submitted	CAISO Response
2a	<p><u>2019 & 2023 Draft LCR Study Results: All Local Areas</u></p> <p><i>Net Qualifying Capacity (NQC)</i> – Cogentrix continues to support both CAISO and CPUC initiatives underway to reform the Resource Adequacy program that are intended to help address proper identification of needed resource attributes, adequate compensation for reliability benefits, and better short- and long-term market signals for resources based on reliability needs. While Cogentrix supports current initiatives, it must be recognized that these initiatives are meant not to improve functional processes in place, but to repair broken ones. As was the case this time last year, Cogentrix’s two peaker plants in the San Diego area provide valuable flexibility to the CAISO that is frequently accessed, yet are uncontracted for 2019 and face the risk of unavailability absent receiving a full year contract. Cogentrix reiterates comments made in previous forums before the CAISO, CPUC and CEC. It is imprudent to assume that the NQC of all generation currently connected to the grid is available for the purposes of determining resource adequacy requirements, broadly speaking. This is true when looking at the following year requirements and it is especially concerning when looking at requirements five years away.</p>	<p>The current methodology agreed upon by stakeholders is that only announced retirements are to be excluded from “available resources”. The ISO must provide Local Capacity Requirements (LCR) results before procurement occurs; therefore the “list” of available resources merely represents those resources that have not indicated their intent to retire. The ISO is not making any assumption regarding their contractual viability or the ultimate procurement of particular resources to meet the identified LCR needs.</p>
2b	<p><i>Sensitivities</i> – Cogentrix notes that sensitivities that are studied by the CAISO are generally not fully addressed or discussed during draft study presentations, which makes the vetting process difficult following the release of the final studies. In particular, Cogentrix urges the CAISO to carefully consider including several sensitivities in the final studies, with a particular emphasis on Aliso Canyon gas storage availability and transmission project delays.</p>	<p>Sensitivity studies are only performed if they are necessary.</p>
2c	<p><u>2019 & 2023 Draft LCR Study Results: LA Basin and San Diego-Imperial Valley Areas and San Diego-Imperial Valley non-bulk sub-areas</u></p> <p><i>NQC of Navy QF resources</i> – Based on publically available information, three QFs at Navy and Marine installations in San Diego with a combined NQC of 96 MW should be removed from the QF qualifying capacity totals for 2019 and beyond as project owner does not have site control for any of the projects. The resources known as North Island and Naval Station, with NQCs of 34.47 and</p>	<p>The ISO has not directly received or been copied on any official retirement notice for any of these facilities. Also, the information provided in the referenced articles suggest that the facilities are in the process of obtaining power purchase agreements.</p>



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	<p>41.54MW respectively, ceased operations on February 7, 2018^{1,2} in relation to loss of site control. The resource known as Naval Training Center, with an NQC of 20.47MW also lost site control in February 2018³. These resources should not be reflected in the available resources for the San Diego-Imperial Valley Area. Cogentrix encourages a thorough review of the NQC data, as inconsistencies arise from time to time and non-deliverability situations may occur.</p>	

3. Pacific Gas & Electric (PG&E)
Submitted by: Matt Lecar

No	Comment Submitted	CAISO Response
3a	<p>First, PG&E requests that the CAISO flag in its results when an approved operating procedure has been used to optimize the results of the most critical contingency. The CAISO currently enforces validated and approved operating procedures in its local capacity requirements (LCR) analysis but doesn't identify when these are actually enforced in the results. This flag would identify when an operating procedure was enforced in the analysis and increase transparency within the results that would be especially important in the instances where the PTO is considering the submission of new operating procedures for review as a potential solution for the most critical contingency.</p>	<p>Certain existing operating procedures are market sensitive. Flagging all operating procedures used may release market sensitive information and would not produce different LCR results. The ISO does not see a benefit from releasing this information (some already used operating procedures have actually moved the requirement to a different contingency or limiting element). If the PTO is unsure of the ISO's use of a certain existing operating procedure, it can ask the ISO about its use. Also, stakeholders, including PTOs, can always propose new operating procedures.</p>
3b	<p>Second, PG&E requests additional information with regard to unresolved deficiencies that may still exist following the cure period for LSEs. Through the LCR process, the CAISO recommends local capacity requirements for the transmission systems under its operational control. LSEs are responsible for procuring capacity to meet those local requirements. After the annual showings each fall, the CAISO publishes a deficiency report regarding how well LSEs have done, in aggregate, at meeting the local requirements. For any deficiencies, the CAISO tariff allows LSEs to make up those deficiencies prior to exercising its backstop authority. PG&E requests that the CAISO provide information regarding how well LSEs, in aggregate, were able to meet the local requirements. The current deficiency report provides information prior to final showings; the request would be to provide the list of deficiencies after the make-up period has ended. This would allow LSEs to assess better the likelihood of being assessed CPM costs associated with CAISO backstop procurement activity. In particular, PG&E requests, as a part of the annual LCR process, the CAISO publish the final results of any remaining deficiencies from the previous year after LSEs have shown any additional capacity during the cure period.</p>	<p>Based on the current Tariff and BPM provisions, the ISO posts the RA deficiency report after final day to provide year ahead showings. The report gives LSEs a 30 days cure period to address identified deficiencies. LSEs should assess their likelihood of being assessed year-ahead CPM cost based on the current RA deficiency report. The ISO tariff currently does not provide for a second cure period. Accordingly, it is unclear how publishing another report after the 30 days cure period would facilitate better procurements or reduce the likelihood of being assessed year ahead CPM costs. After the Tariff required cure period has passed and after including all resources procured in the cure period, the ISO may exercise its back stop authority. Effectively the process ends with a CPM report if the ISO exercises its CPM authority to procure backstop capacity.</p>

4. San Diego Gas & Electric
Submitted by: Halibou Maiga

No	Comment Submitted	CAISO Response
4a	<p><u>Dispatch of solar photovoltaic generators in year 2023 and beyond do not agree with assumptions used in the 2018/2019 CAISO TPP process.</u></p> <p>There seems to be a disconnect on the dispatch of local solar photovoltaic generators available during the San Diego area system peak (which the CEC is forecasting to occur at hour ending 8 PM). Reviewing the CAISO's 2023 Local Capacity Requirement (LCR) case, solar generators in the San Diego and Imperial Valley areas, were being dispatched at levels above zero. SDG&E believes solar photovoltaic generation at 8:00 pm should be zero. This dispatch assumption does not agree with dispatch assumptions used by the CAISO in the 2018/2019 Transmission Planning Process (TPP) study plan. In Table 4.11-2 (Base Scenario Definitions and Renewable Generation Dispatch) of the 2018/2019 TPP study plan, solar photovoltaic resources in these areas are dispatched at zero.</p> <p>The dispatch level of solar photovoltaic resources – and other generators -- in the Imperial Valley and southern and central Arizona areas has a significant impact on the determination of the Greater Imperial Valley SDG&E (GIV-SD) LCR and SDG&E's ability to meet it. Dispatch levels for all generators should be consistent with system conditions typical of a 6:00 pm – 10:00 pm window on a day with one-in-ten peak load levels.</p>	<p>The LCR study objective is to identify the minimum quantity of local resources that need to be under an RA contract to meet local requirements. In the RA process all resources count based on their NQC values, therefore the ISO uses NQC values in the studies as a base scenario.</p> <p>The hourly load forecast provided by the CEC, adjusted for a 1-in-10 year heat wave load using the CEC-provided adjustment factors for the peak day of the year, indicated that peak loads for SDG&E service area are essentially flat between 4:00 p.m. – 8:00 p.m. Last year's peak load for SDG&E occurred around the 4 p.m. timeframe. The Consumption Loads (i.e., loads before adjustments) are forecast to peak at 4 p.m. by the CEC. Given that the other adjustments may not materialize as exactly as forecasted, the ISO took the approach discussed above in determining the potential minimum local resource needs under the RA process.</p> <p>The 2018/2019 TPP reliability assessment studies are run with resource output at the particular time selected for the study scenario.</p>
4b	<p>LCR results using new NQC values based on the Effective Load Carrying Capacity (ELCC) methodology need to be benchmarked.</p> <p>Although considered more accurate, it is challenging to compare CAISO's new LCR results with its previous LCR results. New results are different from previous results mainly because of the change in NQC methodology. This makes it harder to assess the net impact that lower load forecasts and new projects, such as the recently approved S-line project, have on the LCR computations. SDG&E is not suggesting that the new LCR results should be modified to reflect a different NQC methodology. Rather, SDG&E believes the CAISO should benchmark its most recent results against last year results to specifically identify the effect the new NQC values have on the LCR computations. Comparing last year's LCR results to the new LCR results gives a false sense of LCR variations (increase or decrease) because of other factors</p>	<p>The LCR starting base cases were provided so that stakeholders can perform their own sensitivity studies, as desired.</p> <p>The ISO notes that in a full-loop WECC power flow case, there are other changes in the system in other areas (i.e., generation additions or retirements, transmission network upgrades, modeled load changes, etc.) that would likely render the benchmarking effort an unproductive exercise. For these reasons the ISO provided only the most plausible explanation for the major change, in this case lower NQC values, that most impacted the overall LCR needs. In addition, regarding SDG&E's comments of the 511 MW difference between the previous 2022 LCR study results with the 2023 draft LCR results, the difference is not entirely attributed to the effect of the S-line upgrades but it is also</p>

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	<p>such as load behaviors or new projects. This observation was shared by most of the stakeholders during the presentation.</p> <p>A possible option to benchmark the new results would be for the CAISO to re-run cases from last year LCR study with today's load forecast to determine the effect of the new load forecast. Or vice versa, the CAISO could re-run cases from this year LCR study with last year's load forecast to extract the effect of the new load forecast on the new cases. A similar approach can be used to determine the effect of the new NQC values of solar generators.</p> <p>For instance, the new 2023 LCR need (4132 MW), post S-line upgrades, is very similar to the 2018 LCR need computed the previous year (4032 MW) before the S-line project was approved. This is despite having lower load forecasts. If we compare last year's 2022 LCR need (4643 MW) and this year's 2023 LCR need (4132 MW) there is a difference of more than 511 MW, which is almost double the estimated effect of the S-line upgrades (260 MW).</p>	<p>attributed to lower load forecast for SDG&E, as well as the use of the 20-minute demand response and LTPP LCR preferred resources in the western LA Basin to help lowering the LCR need for the overall San Diego-Imperial Valley area. Slides 14 and 21 of the presentation of the LA Basin and San Diego-Imperial Valley draft study results includes brief discussion regarding the primary reasons for this difference.</p>
4c	<p><u>Study assumptions used for each specific area should be more transparent and documented in the study plan.</u></p> <p>Each LCR area calculation uses a unique set of assumptions specific to the area. In addition to the generic study assumptions, it would be helpful if specific assumptions used for an area could be documented. SDG&E appreciates the CAISO trying to work with PTOs after the LCR results are published to clarify some of the assumptions. However, due to the short time period available for the PTO to provide comments, it would be good if the CAISO could provide assumptions at the beginning of the process or as part of the study plan. For instance:</p> <ul style="list-style-type: none"> • Assumptions regarding the Phase Shifter operating policy pre- and post-contingency are not clear. During the stakeholder meeting, SDG&E was informed that the assumptions used for the phase shifter this year were different than the ones used last year. A clear understanding of the updated study assumptions is needed to help stakeholders understand CAISO results. SDG&E notes that construction of the phase shifters was justified on the basis of its effectiveness in reducing LCRs. The phase shifters should be operated pre- and post-contingency in a manner which is consistent 	<p>If necessary the ISO would include additional non-market sensitive assumptions in the LCR study plan.</p> <p>The Imperial Valley phase shifters are utilized as part of the system readjustment between the first and second contingency to help mitigate reliability concerns. The use of the Imperial Valley phase shifters were discussed previously with SDG&E as well as CENACE/CFE.</p>

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	<p>with reliable operations and which minimizes LCRs for San Diego area consumers.</p> <ul style="list-style-type: none"> • There is no clear set of assumptions related to the dispatch of resources outside of the San Diego LCR sub-area and Greater Imperial Valley-San Diego (GIV-SD) LCR area. This dispatch pattern is important because resources outside these LCR areas can be helpful in supporting San Diego area loads post-contingency. For instance, the South of San Onofre flow post contingency highly depends on how much generation can be redispatched in the LA Basin area. The CAISO has not provided any rationale as to why the redispatch, for example, of generators at Redondo Beach or Long Beach is inappropriate. • The CAISO should review its practice of setting flows into the CAISO Balancing Authority at historical levels during peak load periods. With the shift of forecast peak load periods into the early evening, it may no longer make sense to set Maximum Import Capability (MIC) at levels which correspond with imports during the time of historical peak loads (which may be in the late afternoon). 	<p>The study manual provides that resources required to meet minimum LCR needs are to be dispatched and their total will give the LCR requirement. To the contrary resources not needed to meet the minimum LCR need are off-line. Therefore the dispatch is driven by the most limiting contingencies and the need to arrive to the minimum LCR need.</p> <p>The dispatch of resources within the ISO BA that are located outside of the San Diego sub-area or San Diego-Imperial Valley area are not governed by the flow on south of San Onofre because this previous WECC path has been officially retired and is no longer used as a constraint to establish flow limit between SCE and SDG&E. The flow on the south of San Onofre is subject to applicable reliability criteria. The generating units in the LA Basin are dispatched based on LCR manual following a number of considerations that include effectiveness, as well as whether the units have already secured multi-year or long-term contracts that are approved by the CPUC or other Local Regulatory Agency for RA purpose to cover the year of the study. It is no different than dispatching the resources in SDG&E system to mitigate identified reliability concerns.</p> <p>The hours used in the MIC calculation do align with later peak hours. The 4 points used to calculate MIC for year 2018 (maximum imports when load is above 90% of peak) are: 9/10/2015 hour 20:00 – in OASIS schedules named OPR_HR 21:00. 9/8/2015 hour 19:00 – in OASIS schedules named OPR_HR 20:00. 9/26/2016 hour 18:00 – in OASIS schedules named OPR_HR 19:00. 6/28/2016 hour 19:00 – in OASIS schedules named OPR_HR 20:00. All OASIS data used was for OPR_INTERVAL 1 (closest to the front of the hour).</p>
4d	<p><u>The CAISO needs to continue to consider a reasonable range of options for reducing LCRs</u></p> <p>As noted in SDG&E's comments last year, the cost of meeting LCRs is directly related to the level of LCRs. Higher LCRs result in higher costs because</p>	<p>The ISO will perform an economic transmission study in the 2018/2019 TPP that will evaluate transmission solutions that could potentially</p>

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	<p>competitive pressures weaken as the level of LCRs approaches the available pool of local dependable capacity. If LCRs can be reduced, competitive pressures are increased and local dependable capacity prices should be lower. While the Local Capacity Technical Study process is not the forum for evaluating the costs and benefits of different options that may reduce LCRs, SDG&E believes the level of LCRs in the GIV-SD LCR area, in the San Diego LCR sub-area, in the Western LA Basin LCR area -- and the trade-offs between LCRs in the different areas -- underscores the importance of analyzing the costs and benefits of different options that may reduce these LCRs. This analysis should continue to take place within the CAISO's annual Transmission Planning Process (TPP).</p> <p>For instance, SDG&E believes the proposed AC-to-DC conversion of the 500 kV North Gila-Imperial Valley-Miguel transmission line in connection with the current effort of upgrading 230 kV El Centro-Imperial Valley line still warrant attention and will deliver more comprehensive LCR and congestion benefits.</p>	<p>reduce LCR requirements. An analysis of the San Diego area will be included in that study.</p>
4e	<p><u>Net Qualified Capacity (NQC) Needs to be Posted Along with the Starting cases</u></p> <p>SDG&E would appreciate if CAISO could post resources' NQC list that were used in the current LCR analysis to make sure that SDG&E study is in line with CAISO's.</p>	<p>First, the ISO is providing the exact starting base case, on the ISO secure website with NQC already included in Pgen column. Second the 2018 NQC list it has been posted since last year on the ISO web page. The list of resources used in the LCR study only gets published with the final report since it is work in progress until such time.</p>

5. Sempra Renewables Submitted by: Randy Nicholson		
No	Comment Submitted	CAISO Response
	<p>Load Forecast – At the stakeholder meeting on April 6th, the CAISO explained that due to time constraints associated with the issuance of the CEC’s load forecast, the CAISO did not have a projected 1-in-10 year peak day load forecast for 2019 and 2023. Instead, the CAISO relied on the CEC’s 1-in-2 year load forecast profile, and then applied a multiplier to derive a projected 1-in-10 peak day load forecast. Using this methodology, the 2023 adjusted managed peak demand, with peak shift, for the San Diego area decreased by 565 MW compared to the previous year’s demand forecast for the 2022 LCR study. This represents a reduction in peak demand of more than 10% from one study year to the next. Given this significant change in the peak demand forecast, and the resulting impact on the LCR, the CAISO should provide additional details and a fuller explanation in its final report as to how the peak demand forecast for the San Diego area was derived.</p>	<p>The ISO uses the peak demand forecast that was adopted by the CEC as part of the 2017 IEPR process. The load forecast that is used for the LCR study is of the Mid Baseline Demand with Low AAEE and AAPV (https://efiling.energy.ca.gov/GetDocument.aspx?tn=222579) for 1-in-10 year heat wave load forecast. The hourly load forecast from the CEC was only used to establish the de-rates of the peak demand of the LA Basin loads to model its simultaneous load at the time of SDG&E peak.</p>
	<p>Solar Sensitivity – In the Final Report for the 2018 LCR Study (May 1, 2017), the CAISO included a sensitivity analysis relating to the unavailability of Imperial Valley solar generation at 7 p.m. for a peak day load. The 2018 Final Report identified the following key observations when comparing the LCR needs of the sensitivity case to the LCR needs based on the then currently established NQC values:</p> <ul style="list-style-type: none"> • <i>“With less solar generating resources being available in the Imperial Valley at 7 p.m., the next effective generating resources are located in the San Diego sub-area. This increases the San Diego sub-area LCR needs to 3,145 MW (an increase of about 750 MW as there are no further resources in the Imperial Valley area that can be dispatched, and the next available resources are located in the San Diego sub-area).”</i> • <i>“The total LCR needs for the overall San Diego – Imperial Valley area increase to 4,142 MW, representing an increase of 101 MW as less effective generating resources in the San Diego sub-area are dispatched due to unavailability of more effective solar generation at 7 p.m. timeframe.”</i> 	<p>The ELCC values provided for the solar resources are intended to address the later peak load hour and the reduced solar output that is available when the managed peak load is the highest. Regarding the peak shift comment from Sempra Renewables, the CEC incorporated the peak shift impact in the recently adopted demand forecast as part of the 2017 IEPR process (see related posting of the demand forecast at http://www.energy.ca.gov/2017_energy/policy/documents/#02212018 under February 21, 2018 heading).</p>

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	<ul style="list-style-type: none"> <li data-bbox="323 269 1087 363">• <i>“The LA Basin LCR needs were increased slightly by about 79 MW, with the same reason for the increase as in the second bullet discussion above.”</i> <p data-bbox="275 402 1108 565">Similarly, the Final Report for the 2022 LCR Study (May 3, 2017), included a sensitivity analysis relating to the unavailability of Imperial Valley solar generation at 7 p.m. for a peak day load. With regard to the issue of available Net Qualifying Capacity at the time of net peak demand, the 2022 Final Report noted as follows:</p> <p data-bbox="323 604 1104 834"><i>“The current Qualifying Capacity (QC) rules of Local Regulatory Agencies (LRAs) – and correspondingly Net Qualifying Capacity rules of the ISO - have not adjusted to changes in real time conditions and more specifically the shift of load to later hours of the day (6 or 7 p.m.). This misalignment between capacity determinations and peak demands on the transmission system may result in critical local resources not being available during the most stressed demand conditions (net peak).”</i></p> <p data-bbox="275 873 1115 1036">On July 10, 2017, the CPUC issued Decision No. 17-06-027, which adopted an Effective Load Carrying Capacity approach to determining the capacity value of wind and solar resources, and made other changes to the Resource Adequacy program. The CAISO’s 2019 and 2023 Draft LCR Study Results reflect the use of NQCs for solar and wind based on the ELCC methodology.</p> <p data-bbox="275 1075 1058 1136">In December 2017, the CAISO issued the Final Manual for the 2019 Local Capacity Area Technical Study.</p> <p data-bbox="323 1175 1104 1370"><i>“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.” (p. 7)</i></p> <p data-bbox="275 1409 1094 1471">The above statements make clear the interdependence between the CPUC’s NQC methodology and the CEC’s peak shift demand forecast, and that these</p>	

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	<p>factors in turn, directly and materially impact the LCR study process and results. Despite the interplay between the SDG&E – IV, LA Basin and SDG&E sub LCR areas, and the CAISO-identified “<i>misalignment between capacity determinations and peak demands on the transmission system may result in critical local resources not being available during the most stressed demand conditions (net peak)</i>” the Final Manual for the 2019 LCR Study states that:</p> <p><u>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.</u> 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. (p. 7 – emphasis added.)</p> <p>Given the potential material impact on LCR requirements, Sempra Renewables questions the decision to limit solar sensitivity assessments to the combined LA Basin and SDG&E sub-LCR areas. In its Final Report on the 2019 and 2023 LCR Study Results, the CAISO should explain more fully the relationship between the NQCs for solar resources using the ELCC methodology, and the “peak shift” methodology for determining the timing of projected peak load, and address how these factors are being incorporated into the solar sensitivity analysis referenced in the Final Manual for the 2019 LCR Study.</p>	
	<p>Available Resources – Etiwanda Units 3 and 4 (total of 640 MW) are included as available resources in the LA Basin area for 2019 and 2023, even though the CAISO has received correspondence from the plant’s owner indicating that these units may be retired by June 1, 2018. While it may be necessary to include these units in the 2019 LCR study, the CAISO should provide an explanation in its final report addressing why these units are being assumed to be available resources in the 2023 LCR study.</p>	<p>Depending on the type of notice received, the ISO has between 60-90 days to do a study and to inform the resource owner if the resource is allowed to retire. The ISO has not finished processing these requests and at this time it is not clear if they will be allowed to retire or not. The same standard has been applied to all resources that have provided retirement notifications but are currently under evaluation to determine whether those can be granted retirement status.</p>
	<p>Effectiveness Factors (EF) – The LCR study process should evolve to not only identify LCR need, but also to identify the value of (i.e., effectiveness) resources within the LCR area so that developers and load serving entities can work together to meet such needs in the future. The retirement of SONGS, and the impending retirement of other once-through cooling generation in the LA Basin and San Diego areas, has increased the electrical interdependency</p>	<p>The ISO provides effectiveness factors for most limiting constraints when it believes it helps the procurement process. See “Effectiveness factors:” after each limiting contingency in the section with details for each local area.</p>

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	<p>between the two areas. This interdependency is highlighted when one considers the EFs of resources in the LA Basin that are being used to lower the LCR need in the San Diego-I.V. area.</p> <p>For example, under the recently adopted ELCC methodology, a 100 MW solar plant located in the San Diego-I.V. area could have an NQC of 40 MW for a given month and a 25% EF. This plant would be capable of reducing 10 MW of N-S flows on the S-Line following the Category B contingency (G-1/ N-1). By comparison, a similar solar resource located in the LA Basin may have an EF of only 10% in meeting the same contingency, and thus it would reduce only 4 MW of N-S flows on the S-Line following the contingency.</p> <p>Similarly, a 100 MW thermal resource in the LA Basin could have an NQC of 100 MW for a given month, but only a 10% EF, and thus it could reduce only 10 MW of N-S flows on the S-Line following the contingency, the same impact as a 100 MW solar resource located in the San Diego-I.V. area.</p> <p>In contrast, a 100 MW battery resource located in the San Diego-I.V. area would have an NQC of 100 MW and a 25% EF. This resource could reduce 25 MW of flow on the S-Line following the contingency.</p> <p>The above examples illustrate that for simple LCR counting purposes, resources can appear deceptively similar from an NQC perspective, while their ability to effectively manage contingency events across increasingly electrically dependent LCR areas can vary widely. To minimize RA costs, the LCR study process should begin evolving to address not only generic capacity needs, but also the effectiveness of resources across electrically dependent LCR areas and sub areas.</p>	