

The ISO received comments on the topics discussed at the April 13, 2017 stakeholder meeting from the following:

- 1. California Public Utilities Commission (CPUC) Staff
- 2. Southern California Edison (SCE)
- 3. San Diego gas and Electric (SDG&E)
- 4. Cogentrix Energy Power Management, LLC
- 5. LS Power Development LLC

Copies of the comments 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.



Stakeholder Comments 2018 and 2022 Local Capacity Technical Study Final Results April 13, 2017

No	Comment Submitted	CAISO Response
1	California Public Utilities Commission	
	Submitted by: Michele Kito and Jaime Gannon	
1a	CAISO has not Explained Why it Introduced these Sensitivities in the Final Draft and not Earlier in the Process CAISO has not explained why it introduced two new sensitivities in its results released on April 6, 2017 and presented on April 13, 2017. CAISO did not mention either of these sensitivities in its draft study plan released in October 2016 or in its final study plan released in December 2016, nor did it report or mention the development of sensitivities in its draft results presented at the March 9, 2017 stakeholder proceeding. Energy Division staff is concerned about the introduction of sensitivities late in the study process (CAISO also introduced an Aliso Canyon sensitivity last year in its draft final results released on April 11, 2016), which does not allow sufficient stakeholder input, consideration, analysis or review.	The need for sensitivity studies may arise during the course of the study process as critical parameters are identified and important or relevant information becomes available to support further assessment, and this was the case in the 2018 LCR study process. During the course of the studies, the ISO observed the criticality of the solar generation production in the Imperial Valley area and therefore performed the sensitivity assessment for the solar generation to address the emerging awareness of the shift in peak grid loading to later hours of the day caused by behind-the-meter generation. Work to obtain the detailed data needed for the sensitivity study was not completed until after the preliminary results meeting. For the sensitivity study regarding the impacts of potential delay of the Sycamore-Penasquitos 230 kV transmission line, the ISO received confirmation from SDG&E of the anticipated delay to June 30, 2016 and after the preliminary draft results were presented. Further, SDG&E's concerns regarding the potential for further delay due to the nature and location of the project were clarified as the process moved forward. Given the peak shift information and prudence of considering the impacts of potential transmission project delay, the ISO considered it was reasonable and prudent for these two scenarios to be evaluated in addition to the base assumptions to provide a more complete picture of the potential impacts to the electric grid for the summer load conditions. The ISO notes that explanatory questions regarding process such as these are encouraged at our stakeholder calls.



1b	CAISO's Two Sensitivities for the San Diego Region are Problematic in	
	that they Rely on Anecdotal Information that Needs Further Review, Consideration, and Analysis	
	In its presentation, CAISO explains its sensitivity as follows: "Sensitivity study with Imperial Valley connected solar generation unavailable at 6 p.m. (based on EMS data for September 26, 2016 high load day in Southern California)" (emphasis added). However, as demonstrated in the tables and figures below, while September 26, 2016 was a high load day for SDG&E, it was not a high load day for SCE, nor was it SDG&E's highest load day or the highest load day for SDG&E and SCE combined.	Please see the above responses. The ISO has observed that the peak load in San Diego has occurred in the September timeframe for a number of years (2010, 2011, 2012, 2014 and 2015). In addition, the high load that was observed for SDG&E in 2016 in September at 7 p.m. was about 99% of its peak load observed for July 22, 2016. The ISO also reviewed the grid-connected solar production data for the 2016 peak load on July 22, 2016, and observed that the solar production dropped to less than 10% of its peak production when the load peaked
	On September 26, 2016, SDG&E's peak occurred in the hour ending at 6 pm, but SCE's peak of 20,324 MW occurred in the hour ending at 4 pm and at a level considerably lower than its 2016 peak (i.e., 20,324 MW on 9/26/16 v. 23,597 MW on 6/20/2016). Moreover, on the combined peak day for SCE and SDG&E, June 20, 2016, while SDG&E peaked in the hour ending at 6 PM, SCE again peaked in the hour ending at 4 pm, driving the overall Southern California peak to the hour ending at 4 pm (i.e., between 3 pm and 4 pm). It should also be noted that these are fairly typical load levels (e.g., SDG&E at 4,200 MW) compared to the 1-in-10 SDG&E level of 4,924 MW that is used in CAISO's 2018 SDG&E LCR studies.	at 7 p.m. The fact that peak load or high load could occur in any of the summer months warrant the need to evaluate potential impacts to the transmission grid given a reasonable range of system conditions that could occur. Further, the highest level of system stress and of reliance on local capacity resources can no longer be assumed to be at the time of gross peak load as demonstrated in the sensitivity. While the ISO has set out the LCR for the San Diego – Imperial Valley area based on the CPUC's qualifying capacity methodology as set out in the ISO's 2018 RA manual, the sensitivity demonstrates the need for further consideration in the future, and the potential need for additional capacity beyond the amounts established by the LCR methodology.
	Energy Division staff is concerned that CAISO has selectively chosen a day late in the summer, when solar production begins to wane, to demonstrate its point, without regard to the overall Southern California peak in 2016, which occurred in June nor taking into consideration that the overall peak in Southern California is driven by SCE and that the SCE system peaks earlier in the day. This is especially important given that the CAISO considers these areas in combination and Energy Division staff raised the issue of coincident peaks in its comments on the draft study manual. Moreover, should CASIO continue to introduce sensitivities, it should do so earlier in the process and, if it is considering this particular peak shift issue, it should also look at solar production during typical peak periods for the combined Southern California region.	Regarding the sensitivity analysis with the Sycamore-Penasquitos 230 kV line delay, please see the responses in 1a above. The ISO receives updates from SDG&E indicating that this project's in-service date is June 30, 2018, which is later than the June 1, 2018 timeframe assumptions for resource and/or transmission additions to be included in the annual LCR assessment study assumptions. In addition, there are other credible risk factors identified by SDG&E that exist that could further delay the completion of this project. These risks include but are not limited to the following: - Delays in receiving approved traffic control permits; - Limited/reduced work hours imposed by the City of San Diego which
	CAISO introduced another sensitivity regarding the potential delay in the Sycamore-Penasquitos 230 kV line from June 1, 2018 to June 30, 2018.	would prolong the current construction timeframe;



	CAISO indicates that, "Currently this project is expected to miss the June 1, 2018 required in-service date" (p. 85). While the CPUC is permitting agency, Energy Division staff were not aware of the change in schedule and will work with SDG&E to understand the potential delay in the in-service date. Nonetheless, it is our understanding that CAISO has a new stakeholder process for new transmission to address this potential one-month delay and, thus, the concerns with this sensitivity could be obviated. In addition, Energy Division staff notes that, as a practical matter, it seems unlikely that San Diego will experience a 1-in-10 peak of 4,924 MW in June and especially given increased penetration of behind-the-meter solar.	 Unforeseen underground obstacles discovered during trenching operations; and Adverse weather conditions. The ISO is considering options to mitigate potential delays to the Sycamore – Penasquitos 230 kV transmission line in a separate process, and this is consistent with the concerns identified in the sensitivity analysis. Regarding the increased penetration of behind-the-meter solar, the ISO notes that once the peak has shifted outside of the solar window from those resources, further increases are unlikely to have additional impacts on the peak loads seen from the grid.
1c	CAISO Should Explain Where its Assumptions Exceed NERC and WECC Reliability Criteria Energy Division staff request that CAISO explain where its assumptions exceed NERC and WECC reliability criteria. For example, in the Santa Clara and Moorpark sub-areas, CAISO refers to the Category C contingency as "Pardee- S. Clara 230 kV line followed by DCTL and Moorpark-S. Clara #1 and #2 230 kV lines," and it appears that this would be an N-1, N-2.	The ISO results follow the consensus agreement reached at the yearly stakeholder meeting dedicated to the LCR Criteria, Methodology and Assumptions, held on October 31, 2016. Further the ISO needs to follow its Tariff; the LCR technical criteria is clearly described in section 40.3.1.1 and 40.3.1.2 and includes N-1 followed by N-2 that results in voltage collapse or dynamic instability. As described in the LCR reports and manuals, the LCR criteria represents a sub-set of the NERC, WECC and ISO planning standards.
	It would be helpful to understand how these contingencies relate to the Category B and Category C contingencies considered and adopted by the Commission in early resource adequacy decisions (and shown by the CAISO LCR studies, see Table 4, Criteria Comparison).	The ISO has not changed the LCR criteria since the first year of the RA program. Discussions and decisions regarding what parts of the NERC, WECC and ISO planning and operating criteria were included in the LCR criteria came from the LCR Study Advisory Group (LSAG) with CPUC representation. Documentation is available under "Local capacity requirements process archive" on this page: http://www.caiso.com/informed/Pages/StakeholderProcesses/LocalCapacityRequirementsProcess.aspx .
	In addition, it would be helpful if the CAISO could delineate which areas are considered dense urban areas for each of the local areas and sub-areas and how this affects the applicable NERC and WECC reliability standards.	High density urban areas must meet higher requirements based on the ISO Planning standards, with no effect on the NERC or WECC standards. A list of these areas along with a link to the 2010 Census



		Urban Area Reference Maps can be found on page 16 of the ISO Grid Planning Standard: <u>http://www.caiso.com/Documents/FinalISOPlanningStandards-</u> <u>April12015_v2.pdf</u> .
1d	CAISO Should Explain its Assumptions Regarding Pumping Load During the stakeholder discussion, it was Energy Division staff's understanding that CAISO had revised upward the pumping loads used in its LCR analysis based on requests from LSEs. Energy Division staff requests that CAISO document 1) the pumping loads that it is using in each local area and/or sub- area, 2) whether the pumping loads have been adjusted upward compared to the CEC forecast and by how much, and, 3) the reasons for this upward adjustment. Energy Division staff is concerned that these adjustments are not transparent, are potentially inconsistent with the IEPR forecast and agreed upon assumptions, and could affect the overall LCR need and, thus, request further discussion and clarification.	During the base case comment period, the ISO has accommodated part of CDWR's request to increase pumping from Edmonston, Oso and Pearblossom facilities in the LCR studies to the same values used in the past four years: 350 MW Edmonston, 19 MW Oso and 53 MW Pearblossom. These pumps are in a unique circumstance since the entire amount is actually used as a "resource" for RA and ISO real-time market (participating load) therefore the increase allows CDWR to use this "resource" to higher values during the RA showings period as well as real-time operations. CDWR strongly believes that the higher values are more representative of actual real-time peak period operation of these pumps (and therefore their availability to be dropped) in part due to inconsistent time of the day or seasonal use and part due to high dependency on hydrological year and other external factors not known at this time for year compliance 2018 or beyond.



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No	Comment Submitted	CAISO Response
2	Southern California Edison (SCE) Submitted by: Juan Miranda	
2a	Impact of Existing Protection Scheme on identified LCR requirement For the Eastern LA Basin Subarea LCR need, the critical category C contingency in 2018 was determined to be the loss of Palo Verde-Colorado 500 kV followed by the loss of Serrano-Valley 500 kV. The limiting component identified was Iron Mountain-Eagle Mountain 230 kV. There is an existing Protection Scheme that trips the Julian Hinds – Mirage 230 kV line when the Iron Mountain-Eagle Mountain 230 kV is thermally overloaded for the loss of the Palo Verde-Colorado River 500 kV line. Was this Protection Scheme applied? If not, how would the LCR need for this subarea change if it was?	The ISO has inquired about the nature of this protection scheme with the Metropolitan Water District (MWD), the owner of the affected transmission line under this overlapping Category C contingency. An MWD representative has informed the ISO that the protection scheme mentioned by SCE is intended to be a safety net protection scheme, and does not have monitoring of the aforementioned contingencies, and does not have full redundancy required for a normal Special Protection System (SPS), or Remedial Action Scheme (RAS). Since this protection scheme is a simple overcurrent relay that acts as a safety net in the event of inadvertent or unplanned loading concern, the ISO does not plan to utilize this scheme as a mitigation in its LCR planning analysis to substitute for the LCR need in the Eastern LA Basin subarea. The use of this safety net has been confirmed verbally in discussion with MWD staff. In addition, the ISO also has determined that the LCR need in the Eastern LA Basin subarea to mitigate a potential post-transient voltage instability concern due to an N-1 of the Serrano – Valley 500 kV line, followed by the simultaneous N-2 of the Red Bluff-Devers 500 kV lines, is approximately the same amount as that needed for the loss of Palo Verde-Colorado 500 kV followed by the loss of Serrano-Valley 500 kV outage. This additional information has been added to the final 2018 LCR report for this subarea.



No	Comment Submitted	CAISO Response
3	San Diego Gas and Electric (SDG&E)	
	Submitted by: Jan Strack and John Jontry	
3a	Consideration of Peak shift impacts on the NQC and LCR requirements	
	for future LCR studies.	
	During the April 13, 2017 stakeholder meeting, the CAISO discussed the	Your comments are noted. The ISO agrees that these are important
	results of a "no-solar" sensitivity study that is documented in the CAISO's April 6, 2017 "2018 Local Capacity Technical Analysis, Draft Report and Study	considerations, and recognizes that they also need to be coordinated with state agencies.
	Results." This sensitivity study represents a first step in recognizing that with	with state agencies.
	large amounts of behind-the-load meter distributed generation, the critical time	
	period for local reliability concerns has shifted from mid-afternoon hours during	
	hot summer weather, to the early evening hours on these days.	
	During the early evening hours, solar generation is essentially zero. This has	
	implications for the generation dispatch pattern used to determine LCRs, as	
	well as for the Net Qualifying Capacity (NQC) of generators that Load Serving	
	Entities (LSEs) use to establish compliance with LCRs.	
	SDG&E believes that the CAISO needs to comprehensively consider how the	
	shift in the critical time period affects all elements of LCR determination and all	
	elements of NQC determination. In particular, if the critical time period moves	
	into the early evening hours, the dispatch pattern of generators that have significant impact on the LCR determination—both within and outside the	
	CAISO Balancing Authority—may be much different than the dispatch pattern	
	during mid-afternoon hours. Generators that may exhibit different dispatch	
	patterns include Qualifying Facilities for which a LSE has dispatch control, wind	
	resources and generators that are typically run only during the hottest periods	
	of the day.	
	Imports into the CAISO Balancing Authority during the early evening hours may	The MIC is calculated as the highest imports when load is at 90% of the
	be at quite different levels than during the middle of the afternoon. The	absolute peak. The 6:00 or 7:00 PM hour is already included in the
	CAISO's existing Maximum Import Capability (MIC) determinations are based	calculation since the load on those hours are higher than 90%.
	on imports during historical peak load periods. Historical peak load periods have been in the afternoon.	



	Additionally, ambient weather conditions typical of the early evening (e.g., cooler temperatures and/or higher wind speeds) may allow the use of higher thermal ratings for certain transmission facilities.	The ISO must operate the system within the register ratings. The PTOs are responsible for establishing register ratings.
	Finally, SDG&E notes that to the extent the NQC of local solar generators is reduced or set to zero, the availability of local gas-fired generation becomes more critical. This may have important consequences for gas-storage facilities since an adequate supply of natural gas is obviously a pre-requisite for local gas-fired generation to be a dependable source of capacity.	The ISO shares the same concern.
	SDG&E is not suggesting that the 2018 LCR results should be modified. Rather, SDG&E believes the CAISO should start thinking about taking the next steps in determining how the shift in peak load hours will affect future LCR and NQC determinations.	Your comments are noted.
3b	CAISO Needs to consider a reasonable range of options for reducing	
	LCRs The cost of meeting LCRs is directly related to the level of LCRs. Higher LCRs result in higher costs because 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.	ISO will address the local capacity deficiencies as well as continue to explore potential economic-driven alternatives to lower LCR needs through its annual Transmission Planning Process (TPP) where practical.
	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 Greater Imperial Valley-San Diego 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 take place within the CAISO's annual Transmission Planning Process (TPP).	
	As suggested in SDG&E's earlier comments, there are a number of options for reducing LCRs with both short- and longer-term lead-times that should be analyzed within the TPP. These include Remedial Action Schemes, operating procedures and upgrades of key transmission facilities. In the latter category,	



	SDG&E believes upgrades of the 230 kV Victorville-Lugo line, the 230 kV El Centro-Imperial Valley line and SDG&E's proposed AC-to-DC conversion of the 500 kV North Gila-Imperial Valley-Miguel transmission line warrant particular attention.	
3c	Supplemental Comments on the Need to Retire Peaking Units at Kearney Substation The four (4) remaining peaking units at Kearney should be removed from service by the end of 2017, so that they may be physically removed and the land used for a relocated, rebuilt, and expanded Kearney 69 kV switchyard, 69/12 kV distribution substation, and electric service center. Several transmission upgrade projects have been approved by the CAISO and have either been completed (TL660 reconductor) or are in progress (TL676 and TL663 reconductors), TL600 loop-in to Mesa Heights substation) that will substantially eliminate the Mission LCR sub-area. The need to rebuild the Kearney Substation is based on the age and condition of the existing equipment, need for expanded distribution capacity, and the need to better utilize the space that the substation and remaining peakers occupy. Kearny Substation fleet. The capacity of the existing substation cannot be expanded to a fourth 69/12 kV distribution bank, which is required to serve a new Kaiser Permanente hospital and to meet projected electric distribution load growth in the Kearny Mesa area. Kearny Substation also has aging infrastructure issues, including failing 69kV and 12kV glass, aging 12kV metalclad switchgear, non-standard bus tie arrangement, six transmission and eight distribution breakers designated for replacement, and four 12kV capacitors which need to be replaced and connected to new 12kV breaker positions.	The ISO concurs with SDG&E implementing the SPS/RAS described by June 1, 2018 and has updated the 2018 Local Capacity Technical Report accordingly.
	An SPS is proposed and will be in service by summer 2018 to mitigate the remaining overloads until the last of these projects is completed by summer 2019. The N-1-1 of TL663 followed by TL 676 will overload TL600 (Kearny-Clairemont Tap). In addition, the contingency of Mission 69kV North Bus outage will overload TL676 above its emergency rating. In the absence of the Kearny generation units, the proposed RAS will prevent thermal overload on TL 676 and an overload on TL 600 during the above contingencies. This automatic	



scheme will check the post-contingency loading on the overloaded lines and mitigate by dropping 12 kV load out of the load pocket. This is done by opening one of the 69/12kV transformers at Mesa Heights substation. The Mesa Heights RAS will have redundant substation hardware-based RAS (RAS A and RAS B), SCADA control points to enable/disable, along with local cutout switches. The proposed SPS has been reviewed and tentatively approved by CAISO operations planning staff.	



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No	Comment Submitted	CAISO Response
4	Cogentrix Energy Power Management	
	Submitted by: Greg Blue	
4a	Adjust to the NQC list to reflect risk of unavailability of generation 2018 Net Qualifying Capacity (NQC) – Cogentrix reiterates its prior comments at the CPUC, the CEC and the CAISO that the assumption that all existing generation will be available in the future to accommodate supply deficiencies is erroneous. For example, there can be no assurance that Cogentrix's two flexible peaking plants in the San Diego area will be available in 2018 absent receiving an adequate contract for its availability in future years. Further, the NQC list includes multiple assets whose availability for 2018 is uncertain based on publicly available information. For example, the 2018 NQC list includes Encina Units 2 through 5 despite the fact that Encina currently does not have authority to operate past its once-through cooling compliance date of December 31, 2017. CAISO staff's response to this supply counting methodology at the April 13 Stakeholder Meeting is that the NQC list represents all physical assets currently connected to the grid and not yet retired, and by implication is not necessarily a list of what is available to be procured by LSEs. Similarly, as addressed in the public filings of Atlantic Power, there are three gas-fired generation assets on Navy or Marine bases within the San Diego LCR totaling 115 MWs. As disclosed by Atlantic Power to the market, the PPAs are subject to early termination early due to loss of steam host and loss of site control at end of February 2018. Atlantic Power has indicated that its steam offtakers do not intend to take steam beyond that date. Further, the Navy is carrying out a public solicitation for the repurposing of the land on which the plants sit to re-purpose the sites beginning as soon as the steam contracts expire, which may result in an early retirement of the plants (see Atlantic Power Q4 FY 2016 Management presentation and prepared remarks). Nevertheless, the PPAs for the projects all expire in December 2019 and the plants are included on the NQC list for 2018. These project	The data used in the LCR tables represents 2017 NQC; the 2018 NQC data will only be available around July or August of this year. The ISO must provide Local Capacity Requirements (LCR) results before procurement occurs; therefore the "NQC list" of available resources merely represents those that are allowed to bid in order to receive a RA contract. No assumption is made about their contractual viability or the ultimate procurement of particular resources to meet the identified LCR needs. While it is correct that the Encina generating units are subject to compliance by the State Water Resources Control Board's (SWRCB) Policy on OTC units by the end of 2017 timeframe, it is also noted that the inter-agency Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS) has approved the Interagency Working Group (IAWG) recommendation to defer Encina Units 2 – 5 compliance until December 31, 2018 while Carlsbad Energy Center is under construction. SACCWIS has made the same recommendation to the SWRCB and the recommendation is currently under consideration. Please refer to the comment above regarding study assumptions and procurement.



	adjusted out of the NQC list used in these studies. Similarly, assets that may be forced to leave the market due to regulatory considerations or a loss of site control should be excluded from the NQC list as well. The CAISO, therefore, should take the necessary step of performing sensitivities to adjust for units that have moderate or substantial uncertainty of availability on the surface, or have otherwise notified the CAISO of such risks, for 2018 and beyond. Cogentrix cautions against including supply that faces considerable risk of unavailability with only a few months remaining until the annual supply plan deadline. Even with the inclusion of all resources in the NQC supply tally, the SD-IV local area is one minor adjustment or correction away from demonstrating an LCR capacity shortfall in 2018.	Your comments are noted.
4b	Aliso Canyon Gas Storage Constraint Cogentrix supports the continued efforts to determine the effects of the latest decisions surrounding the Aliso Canyon gas storage facility. As the report notes, more study is necessary to determine the "meaning and extent" of tubing flow only operation. Cogentrix encourages the CAISO to be transparent and timely to the market with updates regarding Aliso Canyon, and in particular how changes in the understanding of reliability will impact the monthly requirements in 2018.	Your comments are noted. Please note that the CPUC has issued an Order Instituting Investigation regarding the Aliso Canyon gas storage constraint. The ISO will participate in that forum and provide necessary support to the CPUC. The CPUC forum is a stakeholder process that is open to the public.
4c	Utilize Peak shift to inform LSE LCR procurement decisions Imperial Valley Solar Sensitivity Study – The 2018 report presents a sensitivity around Imperial Valley solar generation being unavailable following the identified G-1/N-1 contingency. The 2018 analysis indicates that under this sensitivity, the San Diego sub-area requirement increases about 750 MW as there are no further resources available in the Imperial Valley that can be dispatched, and the next available resources are located in the San Diego sub- area. The report states, however, that the sensitivity study was conducted for risk assessment purposes and was not intended to set the local capacity requirements. Cogentrix strongly supports the effort to explore the Imperial Valley Solar Sensitivity and requests that the CAISO provide more information on how it intends to address the considerable reliability contingency highlighted in this sensitivity. Considering that sudden dislocations in solar generation are one of	Your comments are noted.



	the greatest reliability concerns that the CAISO faces, Cogentrix supports the inclusion of a solar sensitivity when setting the San Diego-Imperial Valley LCR in 2018 and beyond.	
4d	Transmission Delay Sensitivities Similar to the Solar Sensitivity, Cogentrix strongly supports the inclusion of analysis of risks beyond the minimum contingencies. Cogentrix believes that if there is a substantial risk of delays that would impact either peak demand months, or other periods of potential constraints such as peak net ramping requirement months, it could give rise to the need to include a transmission sensitivity or adjust the base LCR in the technical analysis.	Your comments are noted.
4e	Updated 2017 LCR requirement and corresponding impact on the LSE procurement	
	In the 2018 Local Capacity Technical Analysis Draft Report and Study Results, the CAISO states, "in the 2017 LCR report, the San Diego-Imperial Valley study and the LA Basin-San Diego overall study had inconsistent assumptions regarding LA Basin resources, resulting in lower LCR value reported for the San Diego-Imperial Valley LCR area (3,570 MW). This value should have been 4,635 MW based on the lower LA Basin generation dispatch associated with the Aliso Canyon gas storage constraint scenario used for the 2017 LCR study."	
	This new information indicates that the LCR for San Diego in 2017 should have been 1,065 MW higher, which would have had a material impact on LSE procurement requirements. This material error went unannounced to the market until this year. The corrected figures would have created a scenario in which the CAISO, LSEs and generators were operating under different assumptions. Generators were operating under misleading assumptions when bidding 2017 Resource Adequacy product, and LSEs were under the assumption that their procurement obligations were correct but in fact it was artificially low.	The ISO, LSEs and generators all operated under the same assumptions until the end of the procurement process (October 31, 2016). The ISO identified the misalignment error at about the same time the validation process of LSE procurement was done. The ISO has informed all market participants that the procurement validation concluded that no additional resources are required in order to meet the LCR requirements in the greater LA Basin/San Diego/Imperial Valley area, through a market notice. A link to the report is provided here:
	When Cogentrix asked as to whether the 2017 monthly requirements would be revised upward to meet the corrected Local Capacity Requirement in the April 13 Stakeholder Meeting, CAISO staff responded that the LSEs in Southern	http://www.caiso.com/Documents/EvaluationReport_LoadServingEntitie sCompliance_2017Local_SystemResourceAdequacyRequirements.pdf.



	California had collectively procured enough to meet the reliability requirements. Without supporting evidence, Cogentrix is skeptical of this response and requests supporting documentation. Such a scenario would employ an over-procurement relative to the incorrect original LCR requirements by nearly 30% in terms of volume. Cogentrix has meet with all of the IOUs, most of the CCAs and many of the Munis in the state on multiple occasions; without fail they state that they are not procuring excess RA above CPUC requirements, making a 30% over-procurement over published requirements highly unlikely. Frankly, it is much more plausible that LSEs were asked to procure more RA before the 2017 process concluded than to believe that they over-procured to such an extent, suggesting a potential asymmetrical distribution of information. For these reasons Cogentrix seeks more detailed information and transparency on the corrected 2017 monthly requirements in the final report and a demonstration of adequate procurement by LSEs relative to the corrected figures.	The assumptions made by Cogentrix in these comments are erroneous and the speculation is correspondingly incorrect. In making these assumptions, Cogentrix failed to take into account that resource adequacy capacity is procured for local, system and flexible resource adequacy needs and that in validating the effectiveness of procured resources to meet local capacity needs, the ISO must use all procured resources as dictated by Tariff sections 43.2.1 and 43.2.2. The ISO is not aware of any over-procurement of system capacity. However, taking into account all the resources procured for one reason or the other, the local area needs were met. To reiterate, during the validation process the ISO uses all RA resources regardless of the reason they were purchased by LSEs since they all have an obligation to bid in the ISO markets.
4f	2022 LTCA Draft Report and Study Results 2022 Net Qualifying Capacity (NQC) – Cogentrix reiterates its concerns related to the 2018 Draft LCTA for the 2022 LCTA. The NQC list shows the two Cogentrix peaker plants as being available in 2022, without any contracts in 2018 and beyond. Without a contract for 2018 it is probable that these plants will not be available in 2022 and should not be included on the NQC list. In addition, the Navy and Marine base-located assets mentioned above are also on the 2022 NQC list. The Navy's intentions to repurpose the land are clear and the ability of the plants to operate beyond February 2018, much less through 2022, is in doubt.	Please refer to the comment in item 4a above.
	Imperial Valley Solar Sensitivity – As mentioned above Cogentrix strongly supports incorporating this sensitivity into the base case for 2018, and also supports including in the long-term studies going forward.	Your comments are noted.
	Transmission Delay Sensitivities – As mentioned above, Cogentrix notes that there are potential delays in transmission projects that could give rise to the need to include sensitivities or adjust the LCR based on project delays.	Your comments are noted.



No	Comment Submitted	CAISO Response
5	LS Power Development LLC	
	Submitted by: Sandeep Arora	
5a	Submitted by: Sandeep Arora Utilize Peak shift to inform LSE LCR procurement decisions. LS Power's comments are limited to the LA Basin-San Diego-Imperial Valley area combined LCR requirements. At the Apr 13th presentation, CAISO staff presented results of LCR Study for 2018 and 2022 cases. The studies were done using the baseline assumption for peak load, which is around 3pm. In addition to the baseline study, CAISO also added a Sensitivity study to evaluate the potential impact to the LCR requirements for the LA Basin-San Diego-Imperial Valley area at 6pm, which is roughly the time when Imperial Valley solar generation becomes unavailable. Given the most limiting constraint is thermal overload of a 230 kV line from EI Centro to Imperial Valley and Imperial Valley generation is the most effective, CAISO staff saw the need for conducting this study to evaluate the impact of this on overall LCR requirements. CAISO's Sensitivity Study for 2018 showed the need for an additional 860 MW Local Capacity Requirement in San Diego/IV area (110 MW additional at Imperial Valley, plus an additional 750 MW in San Diego) around this time. The Sensitivity Study for 2022 shows significantly worse results and notes the overall deficiency in the San Diego/Imperial Valley area. The Sensitivity Study conducted by CAISO was helpful in bringing to the forefront the issue of Peak Shifting from the solar additions. We believe this Peak Shifting scenario should not just be a Sensitivity Scenario for information only, but LCR requirements and procurement obligations should be equally based on this evaluation of the need during the evening peak, given the increased importance of net load between 6-10 pm in reliability planning. The reliability issues presented by this scenario are real and hence these should be addressed. We understand that this may require further fine tuning of the CAISO study model, including re-dispatch and load adjustments for other areas outside the study area to reflect accurate representation of evening peak c	Your comments are noted.