

The ISO received comments on the topics discussed at the October 31, 2022 stakeholder call from the following:

1. California Community Choice Association (CalCCA)
2. Middle River Power (MRP)
3. Pacific Gas and Electric (PG&E)
4. Vistra Corp.
5. California Public Utilities Commission (CPUC)

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.

No	Comment Submitted	CAISO Response
1	California Community Choice Association (CalCCA) Submitted by: Shawn-Dai Linderman	
1a	<p>Provide a summary of your organization’s comments on the 2024 Local Capacity Requirements Study Criteria, Methodology, and Assumptions:</p> <p>The California Community Choice Association (CalCCA) appreciates the opportunity to comment on the 2024 Local Capacity Requirement study criteria, methodology, and assumptions. CalCCA’s comments focus on considerations that must be made within the Transmission Planning Process (TPP) and Integrated Resource Planning process with respect to how local capacity areas are studied to ensure reliable operations in those areas under a zero-carbon grid.</p> <p>The California Independent System Operator (CAISO), in coordination with the California Public Utilities Commission (Commission), must begin explicitly studying the ability to reliably serve load in local areas and disadvantaged communities with reduced reliance on fossil fuel resources. Many local areas currently rely on fossil fuel resources to maintain reliability and meet local resource adequacy requirements. Each year, the CAISO enters into reliability must-run contracts with local resources looking to retire because they must be retained for local reliability. The ability to retire fossil fuel resources in local areas will depend on either (1) eliminating transmission constraints that limit the number of resources capable of serving load in the local area, or (2) bringing online enough effective carbon-free resources inside of the local area to replace the existing fossil fuel resources. The Commission and the CAISO must begin studying the feasibility and cost-effectiveness of transmission alternatives and new clean resource alternatives in local areas. In its November 10, 2022 reply comments to the Administrative Law Judge’s October 7, 2022 Ruling on the Electricity Resource Portfolios for the 2023-2024 Transmission Planning Process, CalCCA requested that the next portfolios transmitted from the Commission to the CAISO for study in the TPP should contemplate the retirement of fossil fuel resources in the local areas.¹ CalCCA reiterates this request here. Studying reduced reliance on fossil fuel resources in local areas</p>	<p>Thank you for your comments.</p> <p>The CAISO will continue to model, for each future year, the appropriate resources as provided by the portfolio.</p> <p>The current base portfolio does not include any significant gas retirements in the next 10-years.</p> <p>The previous 10-year long-term LCR studies contain gas-retirement analysis and transmission alternatives to eliminate/reduce reliance on such resources.</p>

¹ California Community Choice Association’s Reply Comments on Administrative Law Judge’s Ruling Seeking Comments on Electricity Resource Portfolios For 2023-2024 Transmission Planning Process, Rulemaking 20-05-003 (Nov.10, 2022), at 3.



No	Comment Submitted	CAISO Response
	now will result in forward planning that ensures an orderly and reliable transition from reliance on fossil fuels in local areas at least cost.	
1b	<p>Please provide your organization's comments on the 2024 Local Capacity Requirements Study Criteria, Methodology, and Assumptions and October 31 stakeholder call discussion:</p> <p>CalCCA has no additional comments at this time.</p>	



No	Comment Submitted	CAISO Response
2	Middle River Power (MRP) Submitted by: Brian Theaker	
2a	<p>Provide a summary of your organization’s comments on the 2024 Local Capacity Requirements Study Criteria, Methodology, and Assumptions: Middle River Power (MRP) appreciates the opportunity to comment on the 2024 Local Capacity Draft Study Manual. MRP is generally supportive of the CAISO’s LCR methodology. MRP, however, recommends a change to how LCR values are determined that we believe should be discussed so as to provide correct procurement signals that will minimize the likelihood of CAISO backstop procurement. MRP also requests the CAISO identify which local areas for which the CAISO is using a commercial definition of the local capacity area boundaries.</p>	<p>Thank you for your comments.</p> <p>All local areas boundaries are using the commercial definition.</p>
2b	<p>Please provide your organization’s comments on the 2024 Local Capacity Requirements Study Criteria, Methodology, and Assumptions and October 31 stakeholder call discussion: MRP understands that CAISO proposes to study resources’ generation levels at the time of peak demand for each local area, e.g. if peak demand occurs at HE 20, then output from solar resources would most likely be zero at the time of peak demand. This method has been utilized for the past several years. MRP believes this is reasonable because it reflects the reality of available generation during times of peak demand. However, it appears that this method does not result in consistent LCR procurement obligations because the solar resources’ capacity value is not zero for purposes of LCR counting. When LSEs show local solar resources to meet their LCR obligations at capacity amounts that differ from those used in the CAISO’s LCR study process, this could create situations in which LSEs do not procure the correct portfolio of resources to meet the LCR, which could result in them leaning on the CAISO’s backstop procurement authority to meet LCR requirements. MRP suggests that the CAISO effectively gross-up the LCR to incorporate the difference between the August NQC value of local resources and the capacity values used in the CAISO’s LCR analysis. This will provide LSEs with the correct procurement signals for maintaining local reliability. MRP believes this is similar to the method now in which the CAISO studies the LCR and assumes the largest Local generator is out of service (G-1) but still allows LSEs to procure and show that resource because the LCR is increased to account for</p>	<p>For numerous reasons (including, but not limited to: must offer obligation, resource substitution, deliverability etc.) the Resource Adequacy (RA) counting (NQC) needs to be the same for system and local. Local Regulatory Agencies (LRA) establish the QC counting rules and at times differs from one LRA to another. Assigning a zero MW value to solar resources may be true at peak, for certain local areas, however CAISO needs to maintain reliability 24 hours a day and these solar resources are valuable in maintaining local reliability at other times during the day.</p> <p>The MRP proposal would result in an artificial increase in local need to account for “resources not fully/or not available at peak”. In many instances it is unknown at the time of the studies if some of these resources will even end up under an RA contract or be shown to the CAISO.</p> <p>This “collective risk” has been introduced quite a few years back when solar become one of the major sources of renewable power across</p>

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	<p>that largest generator. MRP understands that CAISO cannot limit what type of resources can be shown to meet LCR, nor can the CAISO limit the megawatt values that qualify to be shown by LSEs for the LCR obligations. This is why MRP requests the CAISO gross-up the LCR for such differences.</p> <p>MRP also understands that the CAISO is continuing, for some local areas, with its existing methodology of defining local capacity resources based on commercial or contractual arrangements in addition to technical definitions. This would mean that certain local area resources may not be effective in resolving local area contingencies for those local areas but would still be allowed to be shown towards meeting LCR in those areas. While MRP understands the intent of this policy is to help with contracting, it's unclear whether such local area definitions and the resulting LCR obligations provide the correct procurement signals for LSEs. MRP requests the CAISO provide information as to which local capacity areas use commercial or contractual boundaries and the list of resources associated with such commercial or contractual boundaries to help market participants understand the extent of this issue. While MRP understands that this is an existing methodology and definition, there are not a lot of details on the contractual definition versus the technical definitions of local areas.</p>	<p>California, yet in practice it has not become a significant source of additional local CPM or of any local CPM. Across time, the "collective risk" has stayed about the same, since solar ELCC values have decreased over time while more and more solar gets installed. Due to these facts, at this time, the ISO does not agree that fictitiously increasing the peak need and the corresponding LSE procurement targets is preferred over status quo (more exact peak need plus the resulting "collective risk").</p> <p>Generally, all local resources inside the commercial definition of a local area respond to and are available to push back against the majority of the constraints coming into that local area vs. resources that are located outside those same local areas. The CAISO has changed commercial definition of certain local area boundaries from time to time and in rare cases, mainly due to new transmission project or new resources connecting at the boundary of long-established local areas.</p> <p>All local areas boundaries are using the commercial definition.</p>

No	Comment Submitted	CAISO Response
3	Pacific Gas and Electric (PG&E) Submitted by: Igor Grinberg	
3a	<p>Provide a summary of your organization’s comments on the 2024 Local Capacity Requirements Study Criteria, Methodology, and Assumptions:</p> <p>PG&E acknowledges the tremendous efforts by the CAISO staff to develop the Draft Study Manual for the 2024 Local Capacity Technical (LCT) Study. PG&E offers the following comments below to better understand the procurement needed to meet the minimum capacity requirements.</p> <p>a. PG&E Requests the CAISO Perform the 10-Year Local Capacity Requirements (LCR) Analysis on an Annual Basis</p> <p>PG&E recommends the CAISO conduct the 10-year LCR study, including the LCR reduction studies, on an annual basis as opposed to the current bi-annual publishing. The 10-year LCR Study allows market participants to understand the 10-year outlook on the need in the local capacity areas and helps guide long-term procurement of new generation and/or transmission solutions within Local Areas. Since the Central Procurement Entities are performing procurement on annual basis, they need the 10-year LCR study annually so that they can have accurate information for procurement decisions. PG&E also recommends the CAISO provide the second-order constraints as this information will be necessary for the CPEs to conduct long-term procurement.</p> <p>For the CAISO’s LCR reduction studies, PG&E recommends prioritization of Local and Sub Local Areas where there are tight supply conditions. Based on the studies performed in the 2021-2022 transmission planning cycle, several reliability concerns were identified for the PG&E Greater Bay Area. Therefore, PG&E recommends starting the analysis for the Greater Bay Area.</p> <p>b. PG&E Requests the CAISO Include Details in the Study Manual of the Assumptions Underlying the Change to Respecting the 4-Hour Thermal Limit on Emergency Ratings for Battery Storage</p> <p>PG&E requests the CAISO include details of study assumptions and methodologies that are used to assess the 4-hour thermal limit under emergency ratings for battery storage. For the upcoming cycle, PG&E suggests an explanation of the assumptions be included in the study manual, such as why the timing of the battery charging does affect the consideration of 4-hour thermal limit.</p>	<p>Thank you for your comments.</p> <p>Based on the alignment of the CAISO Transmission Planning Process (TPP) with the CEC Integrated Energy Policy Report (IEPR) demand forecast and the CPUC Integrated Resource Plan (IRP), the Long-Term LCR assessment is to be evaluated every two years.</p> <p>Central Procurement Entities have only a three year requirement for procurement of local resources. LCR studies for year one and five will continue to be performed every year and if needed the CPEs can use the 10-year out for guidance (regardless how often is produced). The yearly changes in the 10-year out base cases do not warrant an every year study unless the CPEs have a ten year out procurement requirement.</p> <p>As discussed before, the second-order constraints change (more often than not significantly) depending on how the first-order constraint gets mitigated and that is why it is not very useful to provide.</p> <p>The CAISO agrees that Greater Bay Area should be a priority for LCR reduction.</p> <p>The potential change, if implemented, will impact both the LCR results and the battery storage (max MW, MWh and 1-for-1 replacement with 4 hour). The language in the current LCR manual already accounts for the proposed change.</p> <p>The 4-hour thermal limit is an “equipment rating” issue for some but not all transmission equipment and it is not dependent on the timing of the battery charging or discharging.</p>



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3b	Please provide your organization's comments on the 2024 Local Capacity Requirements Study Criteria, Methodology, and Assumptions and October 31 stakeholder call discussion: See above.	



No	Comment Submitted	CAISO Response
4	Vistra Corp Submitted by: Cathleen Colbert	
4a	<p>Provide a summary of your organization’s comments on the 2024 Local Capacity Requirements Study Criteria, Methodology, and Assumptions:</p> <p>Vistra appreciates the CAISO affording stakeholders the opportunity to submit feedback and questions on the CAISO’s 2024 Local Capacity Area Technical Study² and discussed on the October 31, 2022 stakeholder call³. Vistra recognizes the key role the Local Capacity Area Technical Study (“LCT Study”) plays in the forward planning processes for sufficient Resource Adequacy (“RA”) to meet local reliability needs. The LCT study informs the Central Procurement Entities (“CPE”) and SDG&E on the amount of RA required in various local areas and sub-areas to meet local requirements in the event of contingency event(s).</p> <p>Vistra provides feedback on the 2024 LCT Study in three parts. We respectfully request the:</p> <ul style="list-style-type: none"> • Study objective and accompanying methodology changes to allow the LCT Study to keep pace with the changing RA fleet and RA program by: <ul style="list-style-type: none"> o Specifying requirements in terms of capacity and energy o Only reducing the local requirement in areas with resource deficiency for the binding year⁴ and require CPE to cure the resource deficiency in forward years • Methods better support development of necessary generation to support Oakland local reliability without the existing jet-fueled Reliability Must Run (“RMR”) units • CAISO provide additional context on the methods used in this study in response to Vistra questions provided below <p>See below for a detailed explanation.</p>	<p>Thank you for your feedback, see responses below in relation to your detailed explanation.</p>

² 2024 Local Capacity Area Technical Study, California ISO, October 19, 2022, <http://www.caiso.com/InitiativeDocuments/2024LocalCapacityRequirementsDraftStudyManual.pdf>.

³ 2024 ISO LCR Study Criteria, Methodology, and Assumptions, California ISO, October 31, 2022, <http://www.caiso.com/InitiativeDocuments/Presentation-2024-Local-Capacity-Technical-Study-Criteria-Methodology-and-Assumptions.pdf>.

⁴ The 2024 RA Year is the binding year used for compliance determined in the LCT Study produced and approved in 2023, and 2025 RA Year is the binding year for the LCT Study produced and approved in 2024 etc.

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	<p>specify in its methods whether the energy requirement is (1) non-continuous hours requirement or (2) continuous hours requirement⁶.</p> <p>For example, in the 2023 LCT Study CAISO identified a local need for Oakland sub-area of 35 MW. However, there is also an energy requirement of 176 MWh based on Vistra’s review of the studies. This means to meet the need there needs to be resource(s) that provide either 35MW with at least a ~5 hour continuous output or 44MW with at least a ~4 hour continuous output. Vistra requests CAISO specify the requirements with both capacity and energy requirements for all areas going forward to address the changing RA fleet various capabilities. In the case of our Oakland example, Vistra’s requested change would update the 2024 Oakland LCR Sub-area Requirement table should include the existing LCR (MW) column (e.g. 35 MW) and a new LCR (MWh) column (e.g. 175 MWh).</p> <p>Only reduce local reliability requirements in areas with resources deficiencies for the binding RA year and allow CPE to cure deficiency in forward years:</p> <p>California RA framework has evolved to require local RA for three-year forward years in CPUC Decision 19-02-002⁷ issued on March 4, 2019. CPUC further revised its program to create a Central Procurement Entity to accomplish the three-year forward procurement in the Pacific Gas & Electric (“PG&E”) and Southern California Edison (“SCE”) transmission access areas in CPUC Decision 20-06-002⁸ issued on June 17, 2020.</p> <p>In CPUC Decision 20-12-006⁹ issued on December 4, 2020, the CPUC acknowledges that new preferred resources and new storage resources are eligible to be shown into the CPE to support meeting local reliability needs identified through this LCT Study, although it is most likely that these new</p>	<p>The CAISO is concerned that listing a specific energy requirement in MWh could be misunderstood as a change in policy, since currently energy (MWhs) are not enforced at the LSE level.</p> <p>All CAISO LCR reports account for known resources that are to be operational up to and including June 1 of the study year. The requirement already include such resources.</p> <p>The deficiency part is calculated to give stakeholder a view as to where new future resources may be located, however it is not advisable that the deficiency part be included in the actual requirement until such future new resources are on their path of becoming operational themselves.</p> <p>Secondary many of these “deficiencies” are actually better resolved by transmission upgrades rather than new resources.</p> <p>CAISO does not have authority or back stop authority for long-term local procurement, please address these comments in LRAs (like the CPUC) proceedings. Data related to the quantity of the “deficiency” is already available in the CAISO LCR reports.</p>

⁶ For example, in the 2023 LCT Study CAISO identified a local need for Oakland sub-area of 35 MW. However, there is also an energy requirement of 176 MWh based on Vistra’s review of the studies. This means to meet the need there needs to be resource(s) that provide either 35MW with at least a ~5 hour continuous output or 44MW with at least a ~4 hour continuous output. Vistra requests CAISO specify the requirements with both MW (35 MW) and energy (176 MWh) for all areas going forward to address the changing RA fleet various capabilities.

⁷ CPUC D. 19-02-002, Ordering Paragraph 3-5, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M270/K469/270469481.PDF>.

⁸ CPUC D.20-06-002, Ordering Paragraph 2, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M340/K671/340671902.PDF>.

⁹ CPUC D.20-12-006, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M353/K540/353540952.PDF>.



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	<p>resources are shown for the two-year forward or three-year forward¹⁰ periods based on our experience.</p> <p>In CPUC Decision 22-03-034¹¹, the CPUC went further to facilitate new resources be procured to meet multi-year forward local RA needs by affirmatively deciding no restrictions to term length should be imposed in the CPE allowing the CPE to award local RA to new resource offers into the CPE solicitation. If the CPE cannot fulfill its obligations determined by the LCT Study and approved by the CPUC for CPE obligation, D.22-03-034 provided for the CPE to attempt to cure any procurement shortfalls outside the annual all-source solicitation process and can do so by entering agreements with new resources for contracts that are five years or longer subject to Tier III Advice Letters¹².</p> <p>Vistra strongly believes that the three-year forward local RA requirements that are established through the LCT Study must be revised to require new resources be procured either bilaterally or through annual all-source CPE solicitations to cure area(s) with resource shortfalls for the forward-year requirements. This change is needed to better align the LCR requirements to respect that the local RA program has evolved to require procurement of local RA on a three-year forward basis where new resources are able to be procured to meet those needs.</p> <p>Vistra proposes the CAISO revise its methodology as follows for the 2024 LCT Study that will produce 2024 LCR requirements for the binding RA year 2024 and estimated LCR requirements for the 2025 and 2026 areas to be filed with the CPUC for the forward local RA procurement obligations:</p> <ul style="list-style-type: none"> • Binding year 2024 LCR requirements should be reduced to recognize that binding year requirements will be met by existing or under construction resources only, 	

¹⁰ CPUC addresses the firmness required for the forward years for self-shown resources originally contemplated in Ordering Paragraph 7, “A load-serving entity’s (LSE) self-shown commitment must be firm for Years 1 and 2. An LSE may replace its self-shown local resources for Year 3 with other local resources located in the same local capacity area and at least equal to the capacity of the local resources being replaced in the subsequent year’s Resource Adequacy showing.”

¹¹ CPUC D. 22-03-034, Page 24 and Ordering Paragraph 10, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M460/K580/460580209.PDF>.

¹² Id at Ordering Paragraph 12.

No	Comment Submitted	CAISO Response								
	<ul style="list-style-type: none"> Estimated 2025 and 2026 LCR requirements should not be reduced for resource deficiency and the multi-year local RA requirements should be met by new resources if there is a resource deficiency¹³ at the time of the study. Vistra illustrates our requested change using the 2023 LCT Study for Stockton local area, where the proposal should be adopted consistently throughout to apply to any area. In the Final 2023 LCT Study, the Stockton area had a 2023 Net Qualifying Capacity of 579 MW¹⁴, 24 MW in Lockeford¹⁵ and 555 MW in Tesla-Bellota¹⁶ respectively. The Stockton sub-areas had a 2023 Requirement of 27 MW¹⁷ and 965 MW¹⁸ where the sub-areas have 3 MW deficiency in Lockeford and 410 MW deficiency in Tesla-Bellota. In today's methods the CAISO reduces the LCT Study requirements from the combined 992 MW¹⁹ that is required by the combined deficiency of 413 MW to arrive to the requirements in the summary table of 579 MW²⁰ for the Stockton local capacity area. The 2023-2025 local requirements adopted by the CPUC Decision 22-06-050²¹ reduced the LCR requirement for Stockton for 2023-2025 to the 579 MW after reducing the 995 MW requirement by the resource deficiency. Under our proposal and in the best interest of reliability, we illustrate the recommended approach for Stockton assuming the same NQC and requirement results: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Local Area Name</th> <th style="text-align: center;">2024</th> <th style="text-align: center;">2025</th> <th style="text-align: center;">2026</th> </tr> </thead> <tbody> <tr> <td>Stockton</td> <td style="text-align: center;">579*</td> <td style="text-align: center;">992**</td> <td style="text-align: center;">992**</td> </tr> </tbody> </table> <p>*CAISO note: Details about magnitude of deficiencies can be found in the applicable section [of the LCR Report]. Resource deficient areas and sub-area implies that in order to comply with the criteria, at summer peak, load may be shed immediately after the first contingency. **Resource deficient areas and sub-area in forward years implies that new resources are required to meet the forward local reliability needs.</p>	Local Area Name	2024	2025	2026	Stockton	579*	992**	992**	<p>The Tesla-Bellota is a perfect example of a sub-area requirement that is unlikely to be met by new resources alone. Installing 400+ MW of new resources in a constrained 115 kV transmission system is bound to trigger major transmission upgrades in order to make such resources deliverable to the aggregate of load and be able to count for RA. Once the triggered transmission upgrades are in place they will most likely reduce the need for internal generation. It is much more likely that the reduction in deficiency be mitigated by a new transmission project.</p> <p>The CAISO has already approved such a transmission project (Vierra Loop-in) however for various reasons PG&E has delayed the in-service date.</p>
Local Area Name	2024	2025	2026							
Stockton	579*	992**	992**							

¹³ In the Final 2023 Local Capacity Technical Study, the CAISO identified four local areas, within which are 10 sub-areas, with resource deficiencies in the PG&E area.

¹⁴ Final 2023 LCT Study at Page 57.

¹⁵ Id at Page 58.

¹⁶ Id at Page 62.

¹⁷ Id at Page 60.

¹⁸ Id at Page 64.

¹⁹ Sum of the LCR requirements for the Stockton local capacity area provided for the Lockeford and Tesla-Bellota sub-areas on Page 60 and Page 64.

²⁰ Id at Page 2-3 for the 2023-2025 Local Capacity Needs and Estimated Local Capacity Needs.

²¹ CPUC D.22-06-050, Page 10, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M488/K540/488540633.PDF>.

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	<p>Vistra strongly believes this change should be made for the three-year forward requirement and defers to CAISO for the two-year forward requirement if it believes it is prudent to implement these method changes in phases. We look forward to further discussing with CAISO and stakeholders how to appropriately transition the LCR requirements in this manner.</p> <p>Methods better support development of necessary generation to support Oakland local reliability without the existing jet-fueled Reliability Must Run (“RMR”) units</p> <p>Vistra continues to request the CPUC and CAISO Staff more accurately represent the Oakland sub-area assumptions in its 2024 LCT Study. We believe it should be the goal of the CAISO to produce forward local RA requirements in the Oakland sub-area that assumes for 2024-2026:</p> <ul style="list-style-type: none"> • Continue to model the approved transmission Oakland Clean Energy Initiative project, which include the 115kV Bus Upgrade & Bank 3 115 kV Switches, which has a planned in-service date of Q4 2023²². • 49 MW of municipal generation cannot be used to meet the local need in its LCT Study and explicitly state this in the report to remove it from the NQC calculated for the area²³, • 0 MW of market resources due to assuming the jet-fueled Oakland Power Plant Units 1 and 3 are retired²⁴, and • 0 MW of battery resources assumed since there is no commercial arrangement currently to support developing battery storage in Oakland for 2024. <p>We continue to disagree with the CAISO results for Oakland not identifying a local deficiency in the modeled scenario that assumes the jet-fuel units are retired and in light of the municipal generation not being available to address the need. Further, Vistra strongly disagrees that in the generation assumptions that the batter assumption should be anything other than 0 MW. There is no</p>	<p>The total NQC for each area and sub-area represents resources modeled in the base cases (not the resources dispatched or available to be dispatched) directly by the CAISO markets.</p> <p>Oakland resources will not be allowed to retire (and therefore must be available and included in the NQC calculation) until suitable resource replacement is operational.</p> <p>A “deficiency” means resources are not projected to be available in the year of study. The CAISO does not plan to allow a “deficiency” to arise in the Oakland sub-area. Either the existing Oakland resources have to be included in the NQC calculation or the new suitable replacement.</p>

²² Transmission Development Forum, PG&E Update, October 28, 2022, slide 5, <http://www.caiso.com/Documents/PGEPresentation-TransmissionDevelopmentForum-Oct282022.pdf>.

²³ Since the CAISO does not believe it can use the municipal generation to manage the local area need it is misleading to include generation in the Aug NQC or At Peak values provided that could come from generators in the area. The 49 MW is generation located in the area but not generation that can be relied on, this criteria should be included when developing the NQC numbers to only include those that could support the local need.

²⁴ In practice, the CAISO retirement process will not approve the retirement of the Oakland Power Plant Units 1 and 3 until the local need can be met by new resources in the sub-area, but to identify a need for new resources to cure the shortfall the LCT Study must identify it in its LCR requirements. This is a practice that the CAISO should use to help plan for allowing RMR units to be transitioned off and replaced by RA resources.



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	<p>commercial arrangement in place at this time to support the development of batteries at Oakland Station C. CAISO studies implying that there are planned resources under an agreement disrupts commercial efforts.</p> <p>Vistra provides the following update on the battery storage development efforts in the Oakland local sub-area. Vistra is committed to its efforts to retire and replace the jet-fuel Reliability Must Run units as soon as a commercial opportunity arises to support these efforts.</p> <ul style="list-style-type: none"> • Oakland Power Plant achieved commercial operations in 1978²⁵ and was first designated as a RMR Unit in 1998. The Oakland Power Plant is a 110 MW liquid fossil-fired power plant located in Oakland, California owned and operated by Vistra. The capacity of Units 1 and 3 of the Oakland Power Plant is fully committed as a Reliability Must-Run (RMR) Unit under a Legacy Local RMR Contract with the CAISO. • Oakland Station C GT Unit 2 was released from RMR designation and retired in 2021, is no longer operational, and has been decommissioned to support future development efforts. However, Vistra cannot complete the future development until a commercial arrangement is secured to finance this effort. • CAISO's LCT Study has incorrectly reflected preferred battery resources in the generation assumption in the past years, we believe because a project called Oakland Energy Storage that was associated with the LARS agreement was shown in the 2020 LSE IRP plans. However, this project was withdrawn and is no longer an active project. • Vistra's active battery development efforts at Oakland Substation C point of interconnection include two phases first under an executed repowering agreement (up to 55 MW) and an independent study project with an executed Interconnection Agreement (up to 55 MW CAISO queue project Q1830). Neither of these projects have commercial arrangements to support their development at this time, so should not be represented as Level 1 (existing or under-construction) or Level 2 generation (regulatory approval but not yet under construction)²⁶. <p>While there are possibilities that a commercial arrangement might be feasible to support development of the battery asset to provide generation for the 2025</p>	<p>Thank you for the update.</p>

²⁵ California ISO 2017-2018 Transmission Planning Process Unified Planning Assumptions and Study Plan, March 31, 2017 at page A-29.

²⁶ 2022-2023 Final Study Transmission Planning Process Unified Planning Assumptions and Study Plan, California ISO, June 30, 2022, Section 2.7.1, <http://www.caiso.com/InitiativeDocuments/FinalStudyPlan-2022-2023TransmissionPlanningProcess.pdf>.



No	Comment Submitted	CAISO Response																																								
	<p>or 2026 requirements, we do not believe it is common or best practice to include in the generation assumption an assumption of planned resources that are not under contract for the forward years. Instead, Vistra believes the appropriate result for the LCT Study is to identify a deficiency in the area to be clear on the LCR requirement in MW and MWh that must come from new resources in the modeled scenario assuming the jet-fueled Oakland Power Plant is fully retired. We illustrate</p> <p>Vistra's recommendation assumes the same values from the 2023 LCT Study for illustrative purposes below:</p> <p>Oakland LCR Sub-area Load and non-RMR Resources Available to Support Local Needs</p> <table border="1" data-bbox="275 639 1073 1057"> <thead> <tr> <th colspan="2">Load (MW)</th> <th>Generation (MW)</th> <th>Aug NQC</th> <th>At Peak</th> </tr> </thead> <tbody> <tr> <td>Gross Load</td> <td>194</td> <td>Market</td> <td>0</td> <td>0</td> </tr> <tr> <td>AAEE</td> <td>-1</td> <td>Muni</td> <td><u>0</u>²⁷</td> <td><u>0</u></td> </tr> <tr> <td>Behind the Meter DG</td> <td>-1</td> <td>QF</td> <td>0</td> <td>0</td> </tr> <tr> <td>Net Load</td> <td>192</td> <td>Battery</td> <td><u>0</u>²⁸</td> <td><u>0</u></td> </tr> <tr> <td>Transmission Losses</td> <td>0</td> <td>Existing 20-minute DR</td> <td>0</td> <td>0</td> </tr> <tr> <td>Pumps</td> <td>0</td> <td>Mothballed</td> <td>0</td> <td>0</td> </tr> <tr> <td>Load + Losses + Pumps</td> <td>192</td> <td>Total</td> <td><u>0</u>²⁹</td> <td><u>0</u></td> </tr> </tbody> </table> <p>Oakland LCR Sub-area Requirement</p>	Load (MW)		Generation (MW)	Aug NQC	At Peak	Gross Load	194	Market	0	0	AAEE	-1	Muni	<u>0</u> ²⁷	<u>0</u>	Behind the Meter DG	-1	QF	0	0	Net Load	192	Battery	<u>0</u> ²⁸	<u>0</u>	Transmission Losses	0	Existing 20-minute DR	0	0	Pumps	0	Mothballed	0	0	Load + Losses + Pumps	192	Total	<u>0</u> ²⁹	<u>0</u>	<p>See response above.</p>
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²⁷ Our understanding is that the 49 MW of municipal generation cannot be used to meet the local need, consequently they should not be included in the available NQC to meet the local need.

²⁸ There are no existing, under construction, or regulatory approvals for batteries currently so 0 MW is the correct assumption.

²⁹ The correct total Aug NQC and At Peak NQC available to support the local reliability requirements in this area from non-RMR units is 0 MW. This is the correct assumption for the LCT Study.

No	Comment Submitted						CAISO Response
	Year	Limit	Category	Limiting Facility	Contingency	LCR (MW) (Deficiency) ³⁰	LCR (MWh) (Deficiency) ³¹
	2024	First Limit	P2	D-L #1 115 kV cable	C-X #2 & #3 115 kV cables	35 (-35)	~176 (~-176)
	2025	First Limit	P2	D-L #1 115 kV cable	C-X #2 & #3 115 kV cables	35 (-35)	~176 (~-176)
	2026	First Limit	P2	D-L #1 115 kV cable	C-X #2 & #3 115 kV cables	35 (-35)	~176 (~-176)
<p>Request CAISO provide additional context on the methods used in this study in response to Vistra questions provided below</p> <p>Vistra appreciates the opportunity to ask targeted questions to better understand the methods being used in the LCT Study.</p> <ul style="list-style-type: none"> • Please confirm whether any modeling assumptions are needed to reflect a high electrification scenario for the forward years (2025-2028) in the studies or if the CEC forecasts with high electrification are being relied on to capture these expected changes? • Please confirm what the assumed contribution from wind is in the the LCT Study, for example confirm whether the CAISO is using the generation deliverability assumptions for solar and wind or some other assumption? • Please confirm what the different generation assumptions are for any off-shore wind versus on-shore wind, and any regional wind differences for on-shore wind? 							
						<p>No modeling assumptions changes are needed. In the LCR studies the CAISO is using the CEC provided bases (main) load forecast. The CEC will decide what scenario that forecast includes.</p> <p>The LCR criteria, methodology and assumptions are fully described in the LCR Manual. Resource dispatch is based on their actually availability at the time of the local area peak up to their NQC values. There are no difference in generation assumption based on the resource location – unless the resources NQC is different per rules established by the Local Regulatory Agencies (like the CPUC).</p>	

³⁰ As proposed above, the binding 2024 RA Year would have the MW and MWh requirements adjusted based on the resource deficiencies since there are 0 MW to support the need in the binding year. So 2024 would have 0 MW / 0 MWh LCR requirements and 2025 – 2026 would have 35 MW / ~176 MWh LCR requirements for new resource to meet the procurement requirement in the CPE and then be existing to meet the binding requirement for 2025.

³¹ Id.



No	Comment Submitted	CAISO Response
	<ul style="list-style-type: none"> • For areas like Humboldt that are winter peaking, please confirm if the LCT Study determines the LCR using the winter peaking scenario and then identifies whether there is resource deficiency using the 'At Peak' values? • Please explain why the CAISO is proposing an 85% battery storage round-trip efficiency³² instead of a higher value? • Please confirm that the CAISO is only modeling the round-trip efficiency on the charging side for batteries and assumes 100% discharge efficiency? In operations, the round-trip efficiency is fully accounted for on the charging side and the discharge capability is at 100%. <p>We appreciate the CAISO's efforts to educate on your methods.</p>	<p>All LCR requirements are established at peak. Humboldt area is winter peaking area. The resource dispatch methodology is the same as all other areas.</p> <p>The CAISO is using the 85% battery efficiency based on observed average industry practice.</p> <p>For batteries the CAISO is modeling the round-trip efficiency on the charging side and assumes 100% discharge capability.</p>

³² 2024 LCT Study at Page 12.

No	Comment Submitted	CAISO Response
5	California Public Utilities Commission (CPUC) Submitted by: Alexander Cole	
5a	<p>Provide a summary of your organization’s comments on the 2024 Local Capacity Requirements Study Criteria, Methodology, and Assumptions:</p> <p>CAISO staff has indicated that the CAISO is considering changes to the emergency rating used in evaluating Local Capacity Requirements (LCRs). While previous LCR studies have used a 4-hour emergency rating, it is our understanding that the current study will consider emergencies extending beyond 4-hours for at least some local capacity areas and subareas. We further understand that considering emergencies that extend beyond 4-hours is likely to result in increased LCRs.</p> <p>While we understand CAISO’s need to meet NERC standards and fully support CAISO considering extraordinary situations that may impact reliability, we are concerned that the CPUC and parties to both the CAISO and CPUC’s proceedings have not had an opportunity to fully vet changes that will result in added requirements and understand the trade-offs between added reliability and additional costs before these are adopted by the CPUC. Our concern that parties have an opportunity to fully vet this proposed change in the LCR study process is aligned with the concern expressed by the CPUC in its June 2020 decision adopting LCRs that parties have an opportunity to evaluate “newly adopted CAISO reliability criteria in relation to NERC and WECC mandatory reliability standards”³³ and have “an opportunity to weigh in on the associated impacts of adopting the new reliability criteria, especially with regards to the added reliability and potential costs to ratepayers.”³⁴</p> <p>To provide stakeholders the information they will need to participate in an informed discussion of these changes and their impacts on LCRs, we request that CAISO run additional studies for instances in which an emergency-rating greater than 4-hours is being considered and publish study results using both the longer emergency rating and the 4-hour emergency rating. Knowledge of the specific reliability benefits and additional reliability costs that results from an extended emergency rating will give parties and the Commission the information needed to make a more fully informed decision on what LCRs to adopt.</p>	<p>The CAISO is not changing the emergency rating used in the LCR evaluation. The duration of the emergency rating (length of time is available) is defined in the CAISO transmission register and it is not defined in the base cases. During previous LCR studies CAISO has assumed that the emergency rating in the base case will fully cover the entire duration of the local need.</p> <p>It has become very apparent, by inspecting the load/charging graphs, that for certain areas and sub-area (not all) the actual duration of the local need is higher than the maximum duration of the emergency rating in the transmission register. In this case, there is a chance that the local need will be higher after the expiration of the duration of the emergency rating because all that is left for reliable operation of the local area is the normal rating and generally the normal rating is lower than the emergency rating.</p> <p>In order to be in compliance with current NERC standards, the CAISO is proposing to start enforcing the duration of the emergency rating in the LCR studies in order to assure that local reliability is maintained after the expiration of the emergency rating.</p> <p>This change is not a “new reliability criteria” and it must be included in order to correctly meet the current standards (reliability criteria).</p> <p>This change will potentially impact the local need in areas and sub-areas driven by a thermal overload on an equipment with rating of 4-hours or less as long as the local needs exceeds 4-hour during the peak day.</p> <p>The CAISO will specify the local areas and sub-areas and the MW need driven by both ratings where applicable.</p>

³³ D.20-06-031, p. 15.

³⁴ D.20-06-031, p. 15. (Italics added for emphasis)



No	Comment Submitted	CAISO Response
5b	Please provide your organization's comments on the 2024 Local Capacity Requirements Study Criteria, Methodology, and Assumptions and October 31 stakeholder call discussion: See above.	