



Neil Raffan  
[neil.raffan@cpuc.ca.gov](mailto:neil.raffan@cpuc.ca.gov)  
Energy Division  
California Public Utilities Commission  
and  
Parties to R.16-02-007

**VIA E-mail**

October 29, 2019

Dear IRP Modeling Group,

California Community Choice Association (CalCCA) submits these informal comments in response to the California Public Utilities Commission (CPUC) Energy Division's (ED) request, dated October 22, 2019 for informal comments on the CPUC staff-proposed methodology for 2019 IRP Resource-to-Busbar mapping. For questions, comments, and communications, please contact Irene Moosen at [irene@cal-cca.org](mailto:irene@cal-cca.org).

**I. INTRODUCTION AND SUMMARY**

CalCCA welcomes the opportunity to engage and help the Commission develop a more robust process for resource-to-busbar mapping (“busbar mapping”) that is expected to refine the geographically coarse portfolios produced in the CPUC’s Integrated Resource Plan (IRP) proceeding, into plausible network modeling locations for electrical analysis in the California Independent System Operator’s (CAISO) annual Transmission Planning Process (TPP). In that spirit, we offer the following recommendations to improve the process that involves meaningful stakeholder participation.

**II. TRANSMISSION METHODOLOGIES SHOULD INCORPORATE CAISO’S MODIFIED TRANSMISSION CONSTRAINT METHODOLOGY**

Energy Division should update its treatment of transmission constraints to reflect CAISO’s most recent deliverability methodology. In its recent review of deliverability assessment methodologies, CAISO has proposed new study scenarios that would align load levels with intermittent generation output.<sup>1</sup> The CAISO-proposed new study approach recognizes that, with a diverse grid, the peak reliability need is offset by the generation profiles under certain renewable conditions and as a result significantly more of the resources are deliverable. Thus, this implementation of the revised methodology would result in accommodating more full capacity deliverability status (FCDS) resources in a given transmission area than under the existing methodology without triggering the need for additional transmission upgrades. The CAISO has found that several upgrades identified using the current methodology would not be needed under the new methodology.<sup>2</sup>

---

<sup>1</sup> See <http://www.caiso.com/Documents/DraftFinalProposal-GenerationDeliverabilityAssessment.pdf>

<sup>2</sup> CAISO Generation Deliverability Assessment Methodology Draft Final Proposal Stakeholder Call, October 4, 2019, p.29 (See <http://www.caiso.com/Documents/Presentation-GenerationDeliverabilityAssessmentDraftFinalProposal.pdf>)

Implementing this proposed methodology should be relatively simple to implement, because the CAISO would simply provide updated values to the CPUC, allowing easy implementation inside of RESOLVE. Applying this new methodology in this IRP cycle is appropriate, because the CAISO seems to be targeting implementation beginning January 2020.<sup>3</sup> Therefore, **CalCCA recommends that the CPUC should use CAISO’s transmission inputs estimates based upon the revised deliverability assessment methodology.** In doing so, some renewable buildout areas are likely to see significant changes in the deliverable numbers.

### III. RESPONSES TO THE CPUC’S QUESTIONS FOR STAKEHOLDERS

Below CalCCA provides a response to only one question included in the busbar mapping methodology document and reserves the right to address the remaining questions in its formal comments on draft mapping results to be attached to the Ruling on Proposed Reference System Portfolio and informal comments on the draft mapping of TPP Sensitivity Case(s).

- i. If storage was to be added to this methodology for 2019 IRP portfolios, how would it need to be revised, noting that current IRP modeling does not explicitly assume any locational information about storage? Would mapping some portion of selected storage for 2019 IRP portfolios (for example, focused on specific areas with high commercial interest in storage as indicated by interconnection queues) be better than mapping none? If so, provide details of how this would be performed.*

There are several storage resources that Community Choice Aggregators (CCAs) have contracted and are in the process of contracting. These resources are not part of the “baseline” storage resources (1,449MW) modeled in RESOLVE. At a minimum, the size and locations of CCA-contracted and planned storage resources should be considered for the resource-to-busbar mapping purposes. CalCCA believes that the remaining “new build” storage capacity selected under the 2019 IRP portfolios need to be mapped based upon two screens as follows.

The first screen is the ability to interconnect the storage resource with no additional or minimal transmission interconnection and network upgrade costs. In the majority of the cases, this would mean mapping storage at or near existing generating resources with adequate residual transmission interconnection capability. This is consistent with current contracting which is focused primarily on pairing storage with renewable projects. As proposed under the busbar mapping methodology proposal<sup>4</sup> for all resources, storage busbar allocation in a given area should abide by the estimated transmission capability in each zone and sub-zone, triggering only those upgrades which are determined to be cost-effective during the formation of the IRP portfolios.

The second screen should take into account the level of commercial interest reflected in the CAISO generation interconnection queue. Currently, there is more than 39GW of battery storage capacity in the generation interconnection queue spread all over the CAISO-controlled grid. Several project attributes of this queued generation should be used in determining the location and size for battery storage resource mapping. These attributes should include the current on-line date, point of interconnection, project milestones, such as interconnection agreement status.

---

<sup>3</sup> *Ibid.* See p. 53. The CAISO plans to seek Board approval on the proposed revised Deliverability Assessment Methodology in November 2019. *Ibid.* See p. 53.

<sup>4</sup> CPUC Staff Proposal: Methodology for 2019 IRP Resource-to-Busbar Mapping, CPUC Energy Division, October 18, 2019, p. 11.

The ability of storage to reduce the reliance on existing gas-fired resources in the local areas and sub-areas needs to be a priority while mapping the storage resources. The CAISO conducted a comprehensive economic assessment of local capacity areas, also known as the *LCR Reduction Study*, as part of its 2018-2019 Transmission Plan.<sup>5</sup> It not only identified the potential transmission upgrades that would economically lower gas-fired generation capacity requirements in local capacity areas or sub-areas, but also explored and assessed alternatives, such as, conventional transmission and preferred resources including storage, to reduce or eliminate the need for gas-fired generation. The 2018-2019 TPP studied approximately half of the existing local areas and sub-areas, whereas as part of the 2019-2020 TPP, the CAISO plans to study the remaining half.<sup>6</sup> For example, in the 2018-2019 TPP, the LCR reduction study found one of the potential LCR reduction options for the overall *San Diego-Imperial Valley Area and San Diego* subarea was to install a 200 MW battery energy storage system in the western LA Basin.<sup>7</sup> Upon applying the above-mentioned two screens, 200MW of battery storage should be mapped at an appropriate busbar within the western LA Basin LCR area. Similar information for the remaining areas studied in the 2018-2019 TPP and 2019-2020 TPP<sup>8</sup> could be used to map storage resources.

Another important consideration to map storage resources is to site them, to the extent possible, at the same location as the existing or new renewable resources while ensuring that the total of the qualifying capacities of the renewable resource and battery does not exceed the capacity at the point of interconnection.<sup>9</sup> CalCCA notes that nearly 60% of storage capacity currently in the queue is hybrid, i.e., coupled with either solar or wind resources. Therefore, it is highly likely that such storage mapping would meet the second screen, i.e., commercial viability.

The resource mapping process described above and diagrammatically depicted in Figure 1 below would lead to a mix of standalone (or hybrid) storage resources in the local areas/sub-areas and hybrid storage mapped at the existing and new solar and wind projects, which we believe would also comply with the near- and long-term needs for cost-effectively obtaining additional resource adequacy capacity.

---

<sup>5</sup> Board-Approved CAISO 2018-2019 Transmission Plan, March 29, 2019.

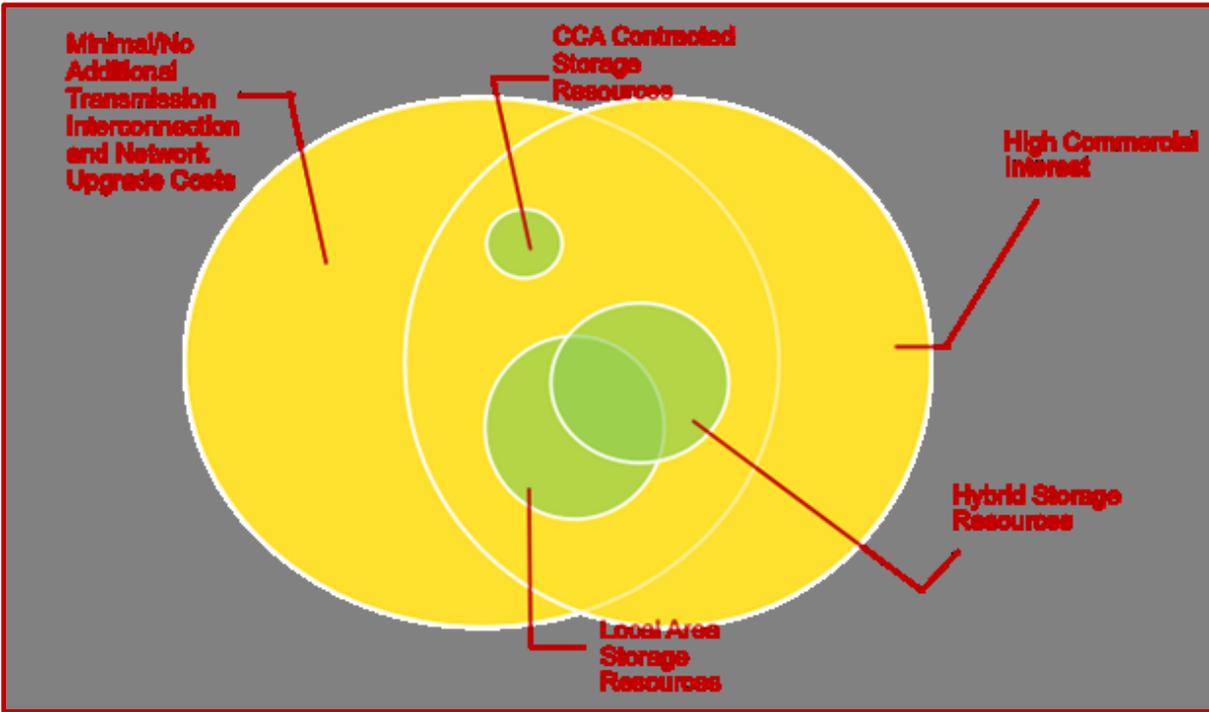
<sup>6</sup> “Economic Assessment of Local Capacity Areas Extension of 2018-2019 Transmission Plan,” CAISO 2019-2020 TPP Stakeholder Meeting, September 25, 2019.

<sup>7</sup> <http://www.caiso.com/Documents/Presentation-2018-2019TransmissionPlanningProcessMeeting-Nov16-2018.pdf>, See Page 18 (page 199 of PDF) of the presentation, titled, “Reducing LCR Need Study for Eastern LA Basin and San Diego-Imperial Valley Areas,” by David Le (CAISO) made at the 2018-2019 Transmission Planning Process Stakeholder Meeting, November 16, 2018.

<sup>8</sup> Preliminary findings of the LCR Reduction Studies are expected to be available by mid to end of November 2019. That would be in time for the current busbar to resource mapping exercise.

<sup>9</sup> For example, the CAISO allows the interconnecting projects to add energy storage to their interconnection request or operating Generating Facility. See “Opportunities for Adding Storage at Existing or New Generation Sites,” CAISO Stakeholder Call, October 10, 2019.

**Figure 1: Diagrammatic Representation of CalCCA's Storage to Busbar Mapping Approach**



CalCCA appreciates the opportunity to provide comments at this stage and looks forward to participating in the future.

Sincerely,

Irene K. Moosen  
Director, Regulatory Affairs  
**CALIFORNIA COMMUNITY CHOICE ASSOCIATION**  
One Concord Center  
2300 Clayton Road  
Suite 1150  
Concord, CA 94521  
Email: [Regulatory@cal-cca.org](mailto:Regulatory@cal-cca.org)