



Submit comment on Issue paper and straw proposal

Initiative: Interconnection process enhancements 2023

1. Provide your organization's comments on the proposed handling of Cluster 15 interconnection requests following the closure of the interconnection request submission window, as described in Section 2.

CESA appreciates the opportunity to submit comments on the 2023 Interconnection Process Enhancements (IPE) Issue Paper and Straw Proposal. With the large volume of projects remaining and proceeding to Phase II studies among the Queue Cluster (QC) 14 applications and the additional large volume of QC 15 applications expected in the April application submission window, CESA understands the difficult decision that the California Independent System Operator (CAISO or ISO) had to make regarding QC 15 applications. With the market notice on March 15, 2023, the ISO has made the decision to *not* delay the QC 15 window schedule and proceed with accepting QC 15 interconnection requests (IRs) as originally scheduled, yet not move forward with any further QC 15 application validation and Phase I study initiation.

Given the circumstances, the prioritization and focus on completing QC 14 Phase II studies is appropriate since those projects are likely aiming to provide capacity to meet identified mid-term reliability (MTR) and summer emergency reliability needs. As a result of the less-than-usual attrition rate of projects among QC 14 projects moving to Phase II studies, the ISO system will likely have sufficient capacity among the prospective projects for the near future, so CESA generally agrees that it is reasonable to complete the study processes of projects at hand rather than add to the problem and slow down the process for all. Especially given the limited transmission plan deliverability (TPD) available on the ISO system at this time, aiming to not further extend/delay the schedule for QC 14 Phase II study completion should be the priority goal.

However, CESA expects that the developer community will be divided on the ISO's decision to proceed with accepting QC 15 interconnection requests during the normal April 3 through April 17 open window. On the one hand, CESA believes that it is important to have regularly-occurring cluster windows since interconnection customers (ICs) have invested significant time and resources into preparing interconnection applications (*e.g.*, conducting due diligence, acquiring site control), which poses opportunity costs to developers who focused on developing projects in California with the expectation that the QC 15 window opening as originally scheduled. While accepting applications without advancing the QC 15 study process for a year or more would lock up study deposits and capital for a longer period of time than expected, many developers likely expected to do so to some degree given the recent track record of delayed and protracted cluster studies, not only in California but in many other ISOs/RTOs. Considering the CAISO has already signaled to the market the near-term expectation of superclusters and delays, absolute delay of the QC 15 acceptance window could create the unintended impact of even further pent-up demand and IRs, with the next window (QC 16) likely not expected to open for an even longer period of time, creating a "get in now or never get in for a long time" environment.

On the other hand, the same uncertainty and opportunity cost consideration factors into many developers (particularly smaller developers with more limited capital) holding the view that the CAISO should delay the normal QC 15 application acceptance window altogether, perhaps on the order of a few months (e.g., Summer 2023). Rather than having the CAISO sit on study deposits and capital that could be deployed elsewhere, an outright delay could also allow the Track 2 process to play out and provide greater certainty to developers on whether to enter QC 15, at what strategic locations, and with what configurations (e.g., fuel type). Especially if further guidance on locations or areas with TPD availability or priority zones are identified as part of the Track 2 process, the current range of QC 15 IRs may be inefficiently sited or designed. To this end, there may be some merit to delaying the QC 15 application submission window by a few months to afford some time to have line of sight into the Track 2 proposals and the details therein. If a delay on the submission window is not on the table, then CESA recommends several modifications and clarifications in the near term for adoption as Track 1 proposals.

Importantly, the CAISO should establish a window for QC 15 application withdrawals and study deposit refunds once the Track 2 stakeholder process and schedule is adopted. Depending on the nature of the Track 2 proposals, or even whether any of the major Track 2 reforms are adopted, the CAISO could be providing materially new information that was not available to the QC 15 ICs, leading to immediately known infeasibility or inefficiency of certain IRs and thereby only serving to waste time and resources for ICs, the CAISO, and participating transmission owners (PTOs) alike in the study process. With minimal time and resources taken to accept IRs in the April 3 through April 17 QC 15 window and the deferral of any scoping meetings, it should present minor administrative burden to process withdrawals and refunds in this proposed withdrawal window. For similar reasons (*i.e.*, new information, preferences, criteria), this window should not only allow for withdrawals and refunds but also should affirm and clarify existing rules for modifications to existing QC 15 IRs that have already been accepted. In allowing for modifications, the CAISO should clarify the range of eligible modifications, such as fuel type (e.g., retrofitting storage) and certain types of point of interconnection (POI) changes (*i.e.*, allow changes to POI within a substation but not allow a change in “areas”).

As such, a withdrawal/modification window should be established if major Track 2 proposals are adopted, potentially with a schedule known in advance (e.g., within 6 months of ISO Board approval of Track 2 proposals, or with a pre-determined window, such as February 2024).

2. Provide your organization's comments on the Other Issues for Consideration, as described in Section 2.

The CAISO suggests that a separate study track could be established for offshore wind, out-of-state (OOS) wind, or other long lead-time (LLT) resources since it does not want to “negatively affect federal and state processes for specific resource development.” CESA is concerned with this suggestion since any technology-specific special treatment in the cluster study and generator deliverability process would be discriminatory in violation of Federal Energy Regulatory Commission (FERC) principles. With near- and mid-term reliability challenges, where many “routine” resources such as solar and storage are critically needed more urgently, CESA believes that pulling already-strained resources to these LLT projects would be inadvisable. Furthermore, such considerations need to be coordinated with the proposals raised in the CAISO’s Transmission Plan Enhancements (TPE) Initiative, which raised similar questions around retaining policy-driven transmission capacity for LLT resources but has yet to have issued a Final Proposal addressing the matter. Along these lines, the CAISO must also address the outdated nature of the IRP portfolios submitted to the Transmission Planning Process (TPP), where many of the same areas where, for example, offshore wind is mapped would also be where significant storage and other non-wind resources are seeking to interconnect. By putting offshore wind resources on a separate track, the CAISO would be favoring and allowing such projects

to jump the queue over other non-wind resources that would otherwise be entering the queue at the same time. CESA addresses the potential issues created by misalignment of the generator interconnection queue with the IRP portfolios in subsequent sections.

At the same time, CESA believes that it is still worthwhile to have these discussions in the 2023 IPE Initiative. It would be premature to be adopted in Track 1, especially in the absence of a more specific proposal and how it would align with the TPE proposals and IRP portfolios, but it could be subject to further discussion in Track 2. In other words, a separate study track for LLT resources should *not* be adopted at this time in Track 1. As the CAISO tees up this issue for Track 2 of this initiative, CESA also urges the CAISO to broaden the consideration of LLT resources to not just offshore and OOS wind resources but also to long-duration energy storage (LDES) resources. Several LDES projects could also fall in this category of consideration, and LDES technologies should also be included in any discussion of LLT proposals in order to maintain technology neutrality and without violating broader non-discriminatory principles.

3. Provide your organization's comments on the proposed Interconnection Process reform to only accept or process Interconnection Requests where the transmission system has available or planned capacity identified in the ISO transmission plans, as described in Section 3.1.

CESA has many questions on the proposal at this time to only accept or process IRs in these "priority zones" (Element 1) where TPD is currently available or planned for several reasons.

First and foremost, CESA does not believe that such a proposal would pass open access rules where IRs can just simply not be accepted and processed. ICs should still be able to request study at any particular location, and denial of this pass would likely not be accepted by FERC. The only way such a proposal could be workable and consistent with open-access rules would be to establish a slower or generic process for IRs where they fall out of these priority zones, but any further consideration of such a structure would be more thoroughly and carefully developed in Track 2.

Yet, instead of this priority zone proposal, the CAISO should continue its efforts to improve data transparency to provide more dynamic and updated information on planned and available TPD, which is still lacking and is therefore contributing to the large volume of IRs. Whereas the 2021 IPE proposals established making competitor information publicly available, such as those around TPD allocations by project or queue status and milestone data of different projects, the information available to developers is still incomplete without improved information on planned and available TPD heading into cluster submission windows. Transmission capability estimates are made available by the CAISO but they are higher level and static snapshots of this information.

Second, CESA has concerns with establishing these priority zones when there is a significant mismatch in the timing of interconnection data used in the Integrated Resource Plan (IRP) portfolio busbar mapping process, which are then used in the TPP to study and approve policy-driven transmission upgrades. With the California Public Utilities Commission (CPUC) staff methodology prioritizing Phase II studies over Phase I projects in mapping storage projects along the commercial interest criteria, CESA has major questions as to how the establishment of priority zones would potentially forestall the acceptance and proceeding of the cluster study process where developers have shown commercial interest, informed by not only by potential TPD availability but also by strategic cost-effective project development (*e.g.*, land costs, nodal/congestion pricing). See, for example, below the major shift in project development location for standalone energy storage, by county and by QC window. This information is based on the active CAISO queue as of March 2023 for standalone energy storage IRs.

County	MW of Standalone ES				% MW of Standalone ES for County		
	C12 & Earlier	C13	C14	Grand Total	C12 & Earlier	C13	C14
BUTTE			400	400	0%	0%	100%
CALAVERAS			100	100	0%	0%	100%
MADERA			425	425	0%	0%	100%
MARIN			300	300	0%	0%	100%
MERCED			550	550	0%	0%	100%
SAN MATEO			356	356	0%	0%	100%
SANTA CRUZ			200	200	0%	0%	100%
STANISLAUS			400	400	0%	0%	100%
TEHAMA			250	250	0%	0%	100%
TULARE	10		400	410	2%	0%	98%
SUTTER	11		98	109	10%	0%	90%
SOLANO	300		2,100	2,400	13%	0%	88%
SAN BERNARDINO COUNTY	220	300	3,300	3,820	6%	8%	86%
CONTRA COSTA	200	220	2,350	2,770	7%	8%	85%
IMPERIAL	125		600	725	17%	0%	83%
SAN JOAQUIN	276	101	1,610	1,987	14%	5%	81%
LOS ANGELES COUNTY	1,200	250	5,801	7,251	17%	3%	80%
SONOMA COUNTY	200	100	970	1,270	16%	8%	76%
ALAMEDA	473		1,352	1,825	26%	0%	74%
FRESNO	364		775	1,139	32%	0%	68%
VENTURA	500	400	1,465	2,365	21%	17%	62%
ORANGE	200	250	700	1,150	17%	22%	61%
KERN		1,050	1,523	2,573	0%	41%	59%
TBD	350		450	800	44%	0%	56%
SANTA CLARA	748		895	1,643	46%	0%	54%
CLARK		250	250	500	0%	50%	50%
SAN DIEGO COUNTY	1,395	1,231	2,505	5,131	27%	24%	49%
RIVERSIDE	2,080	1,400	2,500	5,980	35%	23%	42%
SAN LUIS OBISPO	100	1,200	400	1,700	6%	71%	24%
MONTEREY	1,683		120	1,803	93%	0%	7%
PLACER		101		101	0%	100%	0%
SAN FRANCISCO	250			250	100%	0%	0%
SHASTA		300		300	0%	100%	0%
SONORA	500			500	100%	0%	0%

As illustrated above, standalone energy storage project development locations have shifted in QC 14, where the use of or greater weight to QC 14 data would highlight the need for planned transmission capacity in different locations (*i.e.*, Northern California). By only establishing priority zones where existing or planned TPD is available based on outdated data (*i.e.*, QC 13 Phase II data) or with a prioritization on this older data (see Page 21 of [Methodology for Resource-to-Busbar Mapping & Assumptions for The Annual TPP](#)), it could create unreasonable barriers to project deployment where commercial interest has been clearly indicated. After all, the busbar mapping methodology continues to prioritize the commercial interest criteria for a reason, even though the CPUC expressed intent language to balance the various criteria in future methodology updates in the most recent CPUC Decision, [D.23-02-040](#) (see Page 66 and Conclusion of Law 21). By only accepting and advancing IRs in the priority zones that work counter to the commercial interests based on the most up-to-date queue data, the CAISO would undercut the very intent of the busbar mapping methodology. Significantly, this raises the issue of addressing the timing of the IRP busbar mapping, which must be aligned to the most up-to-date queue data when adopted and transmitted to the CAISO for its TPP study process and be aligned to inform developers prior to cluster launch.

Third, the CAISO must be cognizant of the unintended impact of identifying these priority zones, which could only create a “gold rush” to these locations, raising land and development costs for all pursuing projects in these zones. Like with any proposal that increases the cost of entry to the queue, those

higher costs translate to higher PPA prices, which are borne by ratepayers. Any Track 2 proposal, not just this one, should aim to mitigate such risks in appropriate and reasonable ways.

Fourth, in developing the Element 1 proposal, the CAISO should better define “available transmission” and how availability is determined (e.g., do earlier queued projects that have not achieved COD get included in studies to determine available transmission?).

In summary, the above concerns must be addressed with modifications to the proposal and the alignment of cross-agency processes. These topics should be discussed in the Track 2 proposal development and stakeholder meeting process.

4. Provide your organization’s comments on the proposed Interconnection Process reform to limit the number of interconnection request in a study area based on the transmission capacity being planned for that area, as described in Section 3.2.

While similar to the Element 1 proposal in aiming to limit or focus the cluster study process to areas where transmission capacity is planned, CESA interprets the Element 2 proposal as an effort to further limit the queue cluster via auctions or screening criteria. Overall, CESA has many questions on the Element 2 proposal and the various “sub-elements” or related variants.

First, the use of auctions has some potential to efficiently identify projects to study, but this is a pretty big reform that requires much more discussion. Since such approaches are not used for queue management in other regions to our knowledge, the literature on auctions should be examined and discussed further, perhaps with experts and academics presenting potential proposals on how they could be applied to interconnection queues. In theory, CESA sees an auction as a potential means to allocate limited existing or planned TPD in ways that would align economic incentives to pursue interconnection studies and to not just hold TPD allocations but also to sell them. However, auctions would represent significant reforms that warrant deeper examination in Track 2 and may need to await a FERC Final Rule in RM22-14, which did not contemplate an auction-type structure. It may also need to be developed with an eye toward not necessarily just favoring the most well-resourced developers, putting smaller or less-capitalized developers at a disadvantage regardless of the quality of the project(s).

Second, the screening criteria approach could present some near-term solutions and incremental fixes, though it should not be coupled with limiting the IRs to these priority zones. Regardless of whether an IR falls within a priority zone, the CAISO could consider certain reasonable commercial readiness criteria to manage the queue, such as CEQA permitting approved or in process – all steps that reasonably fall within the bounds of prioritizing more commercially viable projects without establishing commercial viability criteria that are not aligned with the realities of project development milestones and timelines (e.g., PPA or shortlisting prior to Phase I or Phase II studies, battery purchase and procurement prior to Phase II).

Third, CESA views the use of generic studies as having some potential. It is unclear what form this would take and how helpful it could be to inform project development and procurement decisions, but the CAISO should keep this approach on the table and work with stakeholders with proposal development and refinement.

Finally, and importantly, CESA sees the potential of the use of either auctions, screening criteria, or generic studies in concept, without necessarily mirroring the Element 1 proposal by only applying these approaches to limited priority zones.

5. Provide your organization's comments on the proposed Interconnection Process reform to require projects to have a PPA or be shortlisted to proceed to phase II studies, as described in Section 3.3.

CESA opposes the use of a power purchase agreement (PPA) or shortlisting (Element 3) as a requirement to proceed to Phase II studies. This proposal, or some semblance of it, has been raised in the CAISO's 2021 IPE Initiative and FERC's Notice of Proposed Rulemaking (NOPR) in RM22-14. By as explained then and reiterated here, these requirements represent an impossible standard in California since LSEs are unlikely or would never execute a binding term sheet or PPA, or possibly even shortlist, for a project with just Phase I study results and within the short window before interconnection financial security (IFS) deposits must be made prior to entering into the Phase II study process. Recognizing that Phase I study results are still indicative and not final, CESA sees a very low likelihood of LSEs shortlisting or contracting for projects without more definitive information on TPD availability and/or upgrade costs. Finally, the CAISO should not bias against the merchant generator development path, which could support projects coming online yet would be precluded from further study through this PPA or shortlisting requirement.

Should CAISO decide to proceed with prioritizing projects that have offtake agreements, CAISO should also prioritize projects that possess offtake agreements, either through a broker or directly established with a counterparty. Doing so will have similar effects on increasing the viability of projects requesting interconnection without discriminating against the nature of the offtake.

6. Provide your organization's comments on the proposed Interconnection Process reform to only open a new Interconnection Request window when warranted, as described in Section 3.4.

CESA opposes the Element 4 proposal to establish ad hoc cluster window openings when warranted given the importance of regularly-occurring clusters. As discussed above, developers have opportunity costs (*i.e.*, project development activities related to site control, due diligence, technology acquisition, assessment of transmission capability estimates, etc.) on whether to focus on CAISO versus other markets, which cannot be planned for without line of sight into when windows will open. While CESA sees the importance of regular annual cluster windows, we would be amenable to regular two-year windows if the CAISO can adhere to those timelines and not make ad hoc decisions on cluster study timelines. Firm certainty of window openings and study timelines may be more important to developers in weighing opportunity costs and planning sites and projects rather than having arbitrary, open-ended, and ad hoc shifts/changes in cluster window openings and interconnection study timelines.

7. Please provide your organization's comments on alternative elements to those described in Section 3. Any alternatives provided must align with the principles described in the IPE 2023 Issue Paper & Straw Proposal and the discussion at the beginning of Section 3.

CESA recommends that the CAISO also consider modifications to the TPD allocation priority groups and process. Even though they were recently modified as part of the 2021 IPE Initiative, there may be yet more incremental changes that could support the goals identified at the start of Section 3 of the Issue Paper and Straw Proposal.

First, CESA recommends that the CAISO consider the development of a "conditional TPD" product that would help facilitate the type of PPA and shortlisting that would advance certain projects forward that address LSE procurement requirements. Notwithstanding the questions and potential

modifications on the generator deliverability methodology, which is being teed up in a separate stakeholder initiative, a conditional TPD allocation would facilitate LSE contracting and would ensure that many developers do not abandon project development due the lack of TPD allocation. With conditional TPD in excess of actual TPD, this new category of projects would merely serve to facilitate transactions, and the actual TPD allocations would still adhere to what is physically available on the grid based on power flow studies. The conditional TPD allocation will be conditioned on the project entering into a PPA within a reasonable period of time, perhaps even after a Phase I study (Element 3 proposal) and accounting for LSE procurement schedules and durations. If projects fail to enter into a PPA after the allowed time period, then the conditional TPD allocation would be lost.

Second, CESA also recommends that the CAISO signal a potential pathway for projects to demonstrate commercial viability by actually pursuing and achieving commercial operations, even in the absence of a PPA or shortlisting. Other than a PPA, it should be self-evident that the ultimate sign of viability would be to have the project actually come online. Some developers have expressed an appetite to pursue such a project development path if there was a clearer line of sight to TPD allocations. One way such projects could be better signaled to pursue this path would be to consolidate Allocation Group B (PPA shortlisting) with Allocation Group C (commercial operations) into one allocation group, placing both on the same level playing field. Related to this, as indicated in our reply to question 4, CAISO could also increase commercial viability by requiring interconnection customers to demonstrate they have incurred material project costs to proceed past a certain point of the study process. Doing so will have the effect of raising the effective cost of interconnection requests, similar to auctions or other mechanisms, without imposing significant and unpredictable costs on interconnection customers.

Third, CESA stresses the importance of advancing the separate initiative focused on generator deliverability methodology revisions, which could play an important role in leveraging the existing TPD available in ways that ensure a safe and reliable system grid but also recognizes the unique characteristics of energy storage resources (*e.g.*, energy limited), along with their interplay with the rest of the grid mix (*e.g.*, complementary nature with solar and other renewables). While not the focus of the 2023 IPE Initiative, it is important to move that other process forward, which has not seen any next steps since the issuance of the Update Paper in December 2022.

8. Provide any additional comments on the IPE 2023 March 13, 2023 stakeholder call discussion.

Beyond our comments to specific proposals in the IPE Issue Paper and Straw Proposal, CESA generally sees potential in some of the Track 2 proposal concepts but finds it hard to comment in detail on them until further fleshed out. Given the nature of the potential reforms, CESA recommends that Track 2 involve regular working groups and/or workshops to further develop details, have subject matter experts (SMEs) speak to alternative mechanisms, and offer parties a platform to present proposals. The use of such regular meetings and discussions is the only means by which the CAISO can expeditiously address the “supercluster” issue. Despite the large undertaking of developing and implementing such substantial reforms, CESA points to the Extended Day-Ahead Market (EDAM) Initiative as an example where the CAISO was able to achieve daunting and significant objectives within one year using frequent and regular working groups. Similar processes should be used in Track 2 of the 2023 IPE Initiative.

As the CAISO embarks on the Track 2 process, the CAISO must consider the question of applicability. Depending on the nature of the Track 2 proposals, CESA believes that a strong and reasonable case could be made that the reforms may need to apply to projects starting with QC 16 applications. For example, if the CAISO proceeds with establishing priority zones or screening criteria to QC 15 IRs

despite applicants being unaware of them, it could be discriminatory and retroactive. It takes time to re-scope accepted IRs and/or to submit new IRs (in the case where new entry is allowed). In other words, it should not be a foregone conclusion that Track 2 reforms will apply to QC 15 projects, which would be placed on hold in accordance with the CAISO's current Track 1 proposal. Since allowing new entry into QC 15 projects would not be equitable to existing QC 15 projects with capital held up despite new reforms and/or additional information provided in Track 2, CESA believes that applying the Track 2 reforms to QC 16 would be a clean and more elegant solution to these complex questions. Furthermore, CESA raises this question because QC 15 will be the first full cluster process where the 2021 IPE proposals will apply, and pushing the applicability of Track 2 reforms to QC 16 applications could better align with the pending issuance of a FERC Final Rule, which will tell CAISO what to do. On the latter point, the exact timing of a Final Rule is unknown, but FERC seems to be prioritizing the Generator Interconnection NOPR (RM22-14) over the Transmission NOPR (RM21-17). In light of the FERC rulemaking, as well as legislation on the table to transition CAISO into a regional transmission operator, there is a real risk that the Track 2 reforms are premature and could be for naught.

In addition to these process recommendations and applicability considerations, CESA also urges the CAISO to clarify and refine the key goals in developing the Track 2 proposals. Some of this was elaborated in Section 3 of the Issue Paper and Straw Proposal, which was interpreted as the CAISO setting a goal to reduce the number of applications, but CESA believes that these outlined principles warrant modification. In our view, the goal should not be to reduce the number of applications.

Rather, CESA believes that the focus should be on ensuring high-quality and viable applications, regardless of the number, as well as solutions to more quickly and efficiently process a high number of applications. To meet the state's and nation's decarbonization targets and reliability requirements, we must align on the fact that we are in a new world where there will be a large volume of new projects and infrastructure buildout, versus an old world where interconnection queues could only handle a handful of traditional generators. To this end, Track 2 should also continue the conversation on efforts to improve data transparency further and to consider approaches to streamline and expedite the processing of high volumes of IRs. In the short term, the CAISO could look to best practices of other ISOs/RTOs on how they are processing high volume of applications (e.g., automated IR validation, pre-study or feasibility study prior to Phase I, leveraging outside consultants and engineers such as those from the project developer to complete certain study steps).