



2021 Interconnection Process Enhancements (IPE)

Issue Paper and Straw Proposal – Stakeholder
Workshop

December 13, 2021

CAISO Policy Initiative Stakeholder Process



Agenda

Time	Topic
10:00 – 10:05	Welcome and stakeholder process
10:05 – 10:20	Introduction/Background
10:20 – 11:20	Moving resources through the interconnection queue more efficiently and potentially more quickly
11:20 – 12:20	Managing the overheated queue
12:20 – 1:00	Lunch Break
1:00 – 2:00	Other residual issues
2:00 – 3:00	Other stakeholder suggested issues
3:00 – 3:15	Next Steps

INTRODUCTION/BACKGROUND

The 2021 IPE will address a number of issues related to enhancing the Generator Interconnection and Deliverability Allocation Procedures (GIDAP)

- Meeting the challenges facing timely, effective, reliable and economic resource and transmission development requires enhancements and improved coordination across all fronts
 - Progress on each front must be considered in the context of improvements occurring in other parallel paths as well
- Accelerated pace of resource procurement and development needed over next 5 and 10 years may not align with current interconnection processes
- Current issues the ISO is aware of and need to be enhanced or adjusted since IPE 2018

Given current supply conditions and unprecedented procurement orders for the next 5 years, a phased approach is needed

- Enhancements to incrementally improve the efficacy of the existing processes, which inform (but do not drive) procurement activities
- Particular focus on current queue overload compounded by Cluster 14
- Broader process reform considerations focusing on aligning the procurement processes with the interconnection process to achieve:
 - Greater efficiencies
 - Use of valuable planning and engineering expertise
 - Reduce uncertainty in development processes

MOVING RESOURCES THROUGH THE INTERCONNECTION QUEUE MORE EFFICIENTLY AND POTENTIALLY MORE QUICKLY

Removing downsizing window and simplifying downsizing request requirements

- Proposing to simplify the downsizing process by removing:
 - The downsizing application window,
 - The unique downsizing deposit, and
 - The downsizing agreement (Appendix HH), among other simplifications
- The downsizing process will be modified to allow downsizing requests to be submitted at any time and be processed through an MMA-like process
- If the project has network upgrades, the impact will be determined during the reassessment study process
- Modifications will enable interconnection customers to right-size their projects more easily and with less administrative burden for all parties

Issue will be addressed in scope of Phase 1: Near-Term Enhancements

Should Transmission Plan Deliverability (TPD) Allocation process revisions be considered?

- Proposing to revise the TPD allocation by:
 - Eliminating allocation group 3
 - Simplifying the allocation groups by combining various groups as follows
 - Group 1: Any active IR demonstrating it has an executed PPA requiring FCDS or the interconnection customer is a LSE serving its own load.
 - Group 2: Any active IR demonstrating it is currently shortlisted for PPA or actively negotiating a PPA.
 - Group 3: Any EO project that has achieved commercial operation
- Will consider making adjustments to the scoring weights within Section 6.2.9.4 of the GIDAP BPM
- Further clarify the requirement related to a PPA requiring deliverability
 - a PPA must be with an offtaker to fulfill its own RA obligation
- Eliminate all TPD retention criteria except that those projects that received an allocation in group to two
 - Will relieve the administrative burden for both customers and the ISO

Issue will be addressed in scope of Phase 1: Near-Term Enhancements

How can the interconnection process and procurement activity align with transmission system capabilities and renewable generation portfolios developed for planning purposes?

- Seeking further stakeholder input on incorporating, through the transmission planning process:
 1. The concept of not only developing transmission capacity for planning purposes associated with achieving specific resource development; and,
 2. As a further step, withholding that capacity specifically for the policy-driven processes for which it was planned rather than relying on it for any and all interconnection requests received through the request windows

Issue will be addressed in scope of Phase 2: Long-Term Enhancements

Should a solicitation model be considered for some key locations and constraints not addressed in portfolio development, where commercial interest is the primary driver?

- Seeking further stakeholder input on a solicitation model to:
 1. Seek clarity in an overheated area as to which projects should be carried forward into the interconnection process which could be focused solely on transmission capacity or could be conducted in conjunction with load serving entity procurement processes
 2. Test and confirm interest in an area in which transmission capacity may be expanded in the planning process via mechanisms like the LCRIF, with commitments from the resources helping support the transmission development

Issue will be addressed in scope of Phase 2: Long-Term Enhancements

Should an accelerated process for “Ready” projects be considered?

- Challenges to define “readiness” criteria that would be acceptable to the earlier-queued projects being leapfrogged
 - Not recommending a proposals for long-term access to be based on this approach at this time
- Recommending a framework for urgent reliability-driven interconnection service for interim interconnection
 - Proposing an emergency process to the extent a potential capacity shortfall is determined by the ISO
 - Requires a proclamation from the governor and a state agency would need to determine the generator(s) required to meet the shortfall

Issue will be addressed in scope of Phase 2: Long-Term Enhancements

Items to be removed from the initiative scope based on lack of stakeholder support

- Streamline interconnection studies
- Should a one-time framework be adopted to allow resources such as storage to be added to existing sites on an expedited basis, despite potential impacts on earlier-queued projects, to meet pressing reliability needs?
- Should there be incentives for load serving entities to procure generation projects at locations where transmission capacity has been built/approved based on the California Public Utilities Commission (CPUC) portfolios?
- How can the interconnection process and incoming applications better align with procurement interest?

MANAGING THE OVERHEATED QUEUE

Should higher fees, deposits, or other criteria be required for submitting an IR?

- Proposing to increase the study deposit from \$150K to \$250K per interconnection request
- Proposing to further increase the study deposit for a parent company/entity that submits more than two interconnection requests in a cluster window
 - The first two projects submitted by a parent company/entity the study deposit would be \$250K per request
 - For projects 3-5 the study deposit increases to \$500K per request
 - For more than 5 projects, the study deposit increases to \$1M per request
- Proposing to increase the site exclusivity deposit requirements to \$250k for small generators (20 MW or less) and \$500k for generators >20 MW
- Proposing if a project withdraws after the interconnection request is deemed complete, 50% of the in-lieu site exclusivity deposit becomes nonrefundable

Issue will be addressed in scope of Phase 2: Long-Term Enhancements

Should site exclusivity be required to progress into the Phase II study process?

- Site exclusivity will be required to move into the Phase II study process
 - Applies to Cluster 14 and future clusters
- Will help mitigate the overheated queue and allow studies to focus on committed projects
- Proposal provides more flexibility than other ISO/RTOs in obtaining a final site

Issue will be addressed in scope of Phase 1: Near-Term Enhancements

Items to be removed from the initiative scope based on lack of stakeholder support

- Would different requirements for different technologies to advance in the interconnection process be appropriate? Between location-specific resources versus more location-flexible?
- Should equipment requirements be introduced?
- Should interconnection application requirements differ for resources that are location constrained, versus resources like standalone batteries that can be located elsewhere on the grid?

OTHER RESIDUAL ISSUES

Should the ISO re-consider an alternative cost allocation treatment for network upgrades to local (< 200 KV) systems where the associated generation benefits more than, or other than, the customers within the service area of the PTO owning the facilities?

- Proposing to cap the percentage of interconnection-related network upgrade costs within each PTO's local transmission revenue requirement
- Will use a cost limiting model similar to the one used for funding location constrained resource interconnection facilities
- Any costs for low voltage network upgrades greater than a 15% threshold will be financed by interconnection customers without cash reimbursement
- Will protect local ratepayers from the impact of interconnection-related network upgrades
- Proposal would apply to all transmission owners equally, avoiding the cost shifts among ratepayers that would result from relying on the regional TAC

Issue will be addressed in scope of Phase 2: Long-Term Enhancements

Policy for ISO as an Affected System – how is the base case determined and how are the required upgrades paid for?

- Proposing the base case assumptions for the study to be based on previously queued projects as of the affected system study agreement execution date
- Will use the existing policy for RNU reimbursement for RNUs resulting from an affected system study
- Under FERC Order No. 2003, the ISO must provide some form of remuneration for the financing of network upgrades
 - Either in the form of cash reimbursement or transmission rights (Merchant Transmission CRRs for the ISO)

Issue will be addressed in scope of Phase 2: Long-Term Enhancements

Expanded errors and omissions process to provide criteria and options when changes to network upgrade requirements occur after Financial Security (IFS) postings have been made

- Topic combines 2 items from Preliminary Issue Paper:
 1. Process for changes to network upgrade requirements after the second IFS posting
 2. Withdrawal option for projects impacted by new costs and/or delayed in-service date (ISD) after initial posting
- Proposing that any cost responsibility increases associated with an error /omission discovered after a project makes its second IFS posting should be the responsibility of the party that made the error or omission
- When an error/omission is discovered after a project has made its first or second IFS posting that increases the aggregate of all costs for the project to interconnect:
 - Proposing the project would be given the option to accept and move forward with the changes or withdraw and receive a full refund for its IFS and a refund of any unused study deposit
- Proposing a cost increase threshold of five (5) percent and a minimum of a 12 month delay in the earliest achievable ISD

Issue will be addressed in scope of Phase 1: Near-Term Enhancements

Clarify definition of Reliability Network Upgrade (RNU)

- Proposing to clarify the existing policy that a RAS is always considered an RNU
 - Regardless of the study that identified the need for the RNU
 - All RNUs will continue to be included in the RNU cost calculation for RNU costs that are eligible for cash reimbursements
 - A RAS may be required for a project to synchronize to the grid and a limited operations study is needed to determination if the project can synchronize prior to the RAS being in service

Issue will be addressed in scope of Phase 1: Near-Term Enhancements

Transferring Participating Transmission Owner (PTO) Wholesale Distribution Access Tariff (WDAT) Projects into ISO Queue

- Proposing to develop tariff language for accepting interconnection request transfers from the PTO's WDAT queue to the ISO queue
- Will work with PTO's to develop specific criteria necessary to ensure that the transfer occurs within an appropriate window of time
- PTO's could revise their WDATs to include reciprocal language about receiving IRs initially submitted to the ISO

Issue will be addressed in scope of Phase 1: Near-Term Enhancements

Changing Sites and POIs during IR Validation

- Proposing the timing of the process for changing POIs remain consistent with current ISO practice
 - The interconnection customer must confirm its POI within five business days of the project's scoping meeting
 - Any change in POI will be limited to within the same transmission study area as the POI originally requested in its IR
 - Project site changes will only be permitted in conjunction with a permissible change in POI

Issue will be addressed in scope of Phase 1: Near-Term Enhancements

While the tariff currently allows a project to achieve its COD within seven (7) years if a project cannot prove that it is actually moving forward to permitting and construction, should the ISO have the ability to terminate the GIA earlier than the seven year period?

- Seeking further stakeholder input on:
 1. Should projects that are energy-only be allowed to stay in the queue forever?
 2. If a project does not reply to queries for information (Section 5.7 of the GIA), should there be a time limit as to when the project must reply before a default of the GIA is declared?
 - Should the ISO invoke the default clause if the project does not reply to inquiries?
 3. If a project needs a MMA but the interconnection custom will not initiate the process, how long should the ISO wait before invoking the default clause?
 4. If the project is not moving to permitting, procurement, and construction of the interconnection facilities or generating facility, should the ISO do anything other than requiring the project to meet the GIA milestones?

Should parked projects be allowed to submit MMAs while parked?

- New issue raised to see if there was an opportunity to reduce workload for the ISO and PTO planners, engineers, and project management staff
- A project parks when the allocated TPD is less than requested or the project does not desire to accept the amount allocated
 - Project can go into parking for up to two years thereby waiting for two additional cycles of TPD allocation before the project either withdraws or moves forward
- Proposing to not allow projects to submit a MMA while the project is parked

Issue will be addressed in scope of Phase 1: Near-Term Enhancements

OTHER STAKEHOLDER SUGGESTED PROPOSALS

SCE Proposals

1. Re-examine and remove ambiguity of errors and omissions in the Study reports before the initial and second IFS postings have been made
 - Proposing to address this in the expanded errors and omissions issue in Phase 1: Near-Term Enhancements (Other Issues section of the paper)
2. Adding due dates for curing deficiencies in Appendix B, to avoid delays in starting Phase II studies
 - Proposing to add a deadline for validation of Appendix B's
 - Will be addressed in Phase 1: Near-Term Enhancements
3. Seek to have the IR Validation process and “deemed complete” prior to holding Scoping Meetings
 - ISO does not agree this process needs to be changed in this initiative
 - Proposal would be going back to the validation timeline prior to C12
4. Making it explicit that when ICs agree to share a gen tie-line, PTO interconnection facilities, and any related IRNUs at a substation across clusters, the shared IRNUs are not subject to GIDAP Section 14.2.2
 - Seeking further stakeholder input in Phase 1: Near-Term Enhancements

Gridwell Proposal

- Proposal to include an issue focused on improved data transparency and increasing ability for interconnection customers to obtain data in a usable format for analysis
- ISO agrees additional data should be made available
 - Currently working with PTOs to develop transmission reports to outline state of major upgrades to customers
- Proposing to work with stakeholders to further define the data that can be become public, accessible, and usable
 - Will rename issue as Transmission Grid Data Transparency

Issue will be addressed in scope of Phase 1: Near-Term Enhancements

LSA/SEIA Proposals (1 of 3)

1. Delays caused by PTOs
 - The ISO is not in a position to allow generating units to synchronize to the grid when reliability network upgrades are not completed
 - The ISO agrees the IC should not be harmed by taking away a project's deliverability if the PTO is delaying the COD of the project
 - Will rename this issue as Modification to Commercial Viability Criteria and address in Phase 1: Near-Term Enhancements
2. Better differentiation within clusters
 - This issue requires additional stakeholder feedback
 - Proposing to address this issue in the scope of the Transmission Grid Data Transparency topic in Phase 1: Near-Term Enhancements
3. Interim Deliverability Status (IDS) transparency
 - The ISO cannot determine the amount of IDS available in the future
 - Proposal will not be included in scope for 2021 IPE
4. Network Upgrade re-stack
 - Seeking further stakeholder input in Phase 1: Near-Term Enhancements

LSA/SEIA Proposals (2 of 3)

5. Expanding Deliverability Transfer Opportunities

- Proposing to revise the tariff to allow deliverability transfers to be expanded thereby allowing projects at the same substation and same voltage level
 - Will be addressed in Phase 1: Near-Term Enhancements

6. Reassessment accommodation for TPD acquisition or retention

7. Improve TPD allocation process for Energy-Only projects

8. Energy-Only project qualification for new TPD allocations

- Proposing to address issues 6-8 in the scope of the TPD Allocation process revisions topic in Phase 1: Near-Term Enhancements

9. Option B reform

- ISO does not agree the GIDAP Option B process should be reformed
- The TPP is the best process for considering adding new area deliverability network upgrades to the system
- Proposal will not be included in scope for 2021 IPE

LSA/SEIA Proposals (3 of 3)

10. Battery Augmentation

- The technical characteristics of batteries will change over time and the ISO already has the MMA process to approve changes to batteries
- The ISO cannot jeopardize the reliability of the grid with a blanket approval of equipment
- Proposal will not be included in scope for 2021 IPE

11. Affected System study options

- Only the Affected System knows the reliability issues, electrical characteristics, protection setting, etc. of their system
- Until the Affected System identifies the reliability issue on their system, the ISO cannot determine potential solutions on the ISO's system to mitigate the reliability issue
- The ISO does not have the technical capability of determining the reliability requirements of an Affected Systems
- Proposal will not be included in scope for 2021 IPE

Other Stakeholder Suggested Proposals (1 of 4)

- CESA: Consider reporting transmission upgrade project status
 - Proposing to address this issue in the scope of the Transmission Grid Data Transparency topic in Phase 1: Near-Term Enhancements
- CalWEA: Streamline process to allow generators to interconnect until the triggered GRNUs are actually needed
 - Proposing to address this issue in Modification to Commercial Viability Criteria topic in Phase 1: Near-Term Enhancements
- CalWEA: An interconnecting generator should only be assigned the cost for the facilities it uses to interconnect
 - ISO supports ongoing conversations on this topic, however this process is not under ISO control
 - Proposal will not be included in scope for 2021 IPE
- CalWEA: The ISP electrical independence test should be re-examined and recommend a flow impact consideration for projects with impacts
 - Seeking stakeholder input on why existing tariff section Appendix DD Section 4.2.1.1(ii) is not just and reasonable
 - Seeking stakeholder input on specific proposals for revisions to the ISP electrical independence test criteria
 - These issues will be addressed in Phase 2: Long-Term Enhancements

Other Stakeholder Suggested Proposals (2 of 4)

- PG&E: Concern on timely construction of shared network upgrades that have cross cluster dependencies may result in queued project's ISDs being jeopardized by a delay in financial security postings
 - PTO can require negotiation of the GIA timeline of the third posting
 - Proposing this issue can be resolved without further tariff changes and proposal will not be included in scope for 2021 IPE
- REV Renewables: When a developer issues a notice to proceed to the PTO, requesting the PTO/ISO should start planning for all upgrades that are required for a project to attain FCDS, including the upgrades that get triggered by a group of projects
 - ISO agrees with this concern and seeks further stakeholder input and will be addressed in Phase 1: Near-Term Enhancements
- SDG&E: Charging Study (Phase I) – Recommend the ISO provide more guidance on how charging should be performed and include tariff language as to how upgrades can be assessed and allocated
 - ISO does not agree the study criteria guidance belongs in the tariff
 - Charging studies can be discussed in the development of the cluster study plan
 - Proposal will not be included in scope for 2021 IPE

Other Stakeholder Suggested Proposals (3 of 4)

- SDG&E: Gen-Tie Sharing (Phase I) – Recommend there be a requirement that IC's obtain approval as part of their IR and existing generator(s) should be notified of future IR's that impact their project(s) or gen-tie configuration
 - Proposing that any IR that proposes to utilize and third party owned gen-tie must provide documentation as part of their IR that demonstrates that the gen-tie owned has agreed to the project proposed in the IR using its gen-tie
 - This issue will be addressed in Phase 2: Long-Term Enhancements
- SDG&E: Stranded Cost Responsibility for IRNU Switchyards (Phase I) – Recommend a mechanism for IRNU reallocations with associated cost responsibility and cost exposure assigned to later queued project(s)
 - Proposing to address this issue in conjunction with SCE's proposed issue #4 in Phase 1: Near-Term Enhancements
- SDG&E: RIMS Document Management (Phase I or Phase II) - After IR validation, the ISO should be consistent in using RIMS for all documents, details, etc. related to the project
 - Seeking stakeholder input on adding functionality to upload MMA documents to RIMS
 - This issue will be addressed in Phase 1: Near-Term Enhancements

Other Stakeholder Suggested Proposals (4 of 4)

- SDG&E: IR Validation Form (Phase I) – Requesting multiple items within the spreadsheet and Word document to be updated
 - Currently the ISO reviews and updates the Appendix 1 - Interconnection Request form and the Attachment A to Appendix 1 Generating Facility Data spreadsheet prior to each cluster window
 - Proposal will not be included in scope for 2021 IPE

Summary of topics to be included for Phase 1: Near-Term Enhancements (1 of 2)

- Removing downsizing window and simplifying downsizing request requirements
- Should Transmission Plan Deliverability (TPD) Allocation process revisions be considered?
- Should site exclusivity be required to progress into the Phase II study process?
- Expanded errors and omissions process to provide criteria and options when changes to network upgrade requirements occur after Financial Security (IFS) postings have been made
- Clarify definition of Reliability Network Upgrade (RNU)
- Transferring Participating Transmission Owner (TO) Wholesale Distribution Access Tariff (WDAT) Projects into ISO Queue
- Changing Sites and POIs during IR Validation
- Should parked projects be allowed to submit MMAs while parked?

Summary of topics to be included for Phase 1: Near-Term Enhancements (2 of 2)

- Adding due dates for curing deficiencies in Appendix B, to avoid delays in starting Phase II studies
- Making it explicit that when ICs agree to share a gen tie-line, PTO Interconnection Facilities, and any related IRNUs at the substation across clusters, the shared IRNUs are not subject to GIDAP Section 14.2.2
- Transmission Grid Data Transparency
- Modification to Commercial Viability Criteria
- Network Upgrade re-stack
- Expanding Deliverability Transfer Opportunities
- When a developer issues a notice to proceed to the PTO, the PTO/ISO should start planning for all upgrades that are required for a project to attain FCDS, including the upgrades that get triggered by a group of projects
- RIMS Document Management

Summary of topics to be included for Phase 2: Long-Term Enhancements (1 of 2)

- How can the interconnection process and procurement activity align with transmission system capabilities and renewable generation portfolios developed for planning purposes?
- Should a solicitation model be considered for some key locations and constraints not addressed in portfolio development, where commercial interest is the primary driver?
- Should an accelerated process for “Ready” projects be considered?
- Should higher fees, deposits, or other criteria be required for submitting an IR?
- Should the ISO re-consider an alternative cost allocation treatment for network upgrades to local (< 200 KV) systems where the associated generation benefits more than, or other than, the customers within the service area of the PTO owning the facilities?

Summary of topics to be included for Phase 2: Long-Term Enhancements (2 of 2)

- Policy for ISO as an Affected System – how is the base case determined and how are the required upgrades paid for?
- While the tariff currently allows a project to achieve its COD within seven (7) years if a project cannot prove that it is actually moving forward to permitting and construction, should the ISO have the ability to terminate the GIA earlier than the seven year period?
- Re-examine the ISP electrical independence test
- Gen-Tie Sharing –Should there be a requirement that IC's obtain approval as part of their IR and existing generator(s) should be notified of future IR's that impact their project(s) or gen-tie configuration?

NEXT STEPS

Proposed Initiative Schedule

Date	Event
09/30/21	Publish preliminary issue paper
10/08/21	Stakeholder suggestions due
10/19/21	Stakeholder workshop on preliminary issue paper
10/28/21	Stakeholder comments due on preliminary issue paper and workshop
12/06/21	Publish issue paper/straw proposal
12/13/21	Stakeholder conference call on issue paper/straw proposal
01/03/22	Stakeholder comments due on issue paper/straw proposal
01/25/22	Publish revised straw proposal
02/01/22	Stakeholder conference call on revised straw proposal
02/15/22	Stakeholder comments due on revised straw proposal
Phase 1	
03/10/22	Publish draft final proposal
03/17/22	Stakeholder conference call on draft final proposal
03/31/22	Stakeholder comments due on draft final proposal
04/11/22	Publish draft tariff language
04/21/22	Publish final proposal
04/25/22	Stakeholder comments due on draft tariff language
04/28/22	Stakeholder conference call on final proposal
05/12/22	Stakeholder comments due on final proposal
May 2022	Board of Governors Meeting
Phase 2	
06/07/22	Publish draft final proposal
06/14/22	Stakeholder conference call on draft final proposal
06/28/22	Stakeholder comments due on draft final proposal
07/26/22	Publish draft tariff language and final proposal
08/09/22	Stakeholder comments due on draft tariff language
08/16/22	Stakeholder conference call on final proposal
08/30/22	Stakeholder comments due on final proposal
November 2022	Board of Governors Meeting

**Dates are tentative and subject to change.*

Next Steps

- Please submit comments on the preliminary issue paper and meeting discussion using the commenting tool linked on the initiative webpage
 - Comments are due by end of day January 3, 2022
- Visit initiative webpage for more information: [California ISO - Interconnection process enhancements 2021 \(caiso.com\)](https://www.caiso.com/interconnection-process-enhancements-2021)
- If you have any questions, please contact isostakeholderaffairs@caiso.com