



California ISO

# Deliverability Assessment Methodology Revisions Final Proposal

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Stakeholder Call

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# Housekeeping reminders

- This call is being recorded for informational and convenience purposes only. Any related transcriptions should not be reprinted without ISO's permission.
- Meeting is structured to stimulate dialogue and engage different perspectives.
- Please keep comments professional and respectful.
- Please try and be brief and refrain from repeating what has already been said so that we can manage the time efficiently.

## Instructions for raising your hand to ask a question

- If you are connected to audio through your computer or used the “call me” option, select the raise hand icon  located on the bottom toolbar. **Note:** #2 only works if you dialed into the meeting.
  - Please remember to state your name and affiliation before making your comment.
- If you need technical assistance during the meeting, please send a chat to the Event Producer.
- You may also send your question via chat to all panelists.

# CAISO Policy Initiative Stakeholder Process



*This represents the typical process, and often stages of the process run in parallel.*

We are here

# Agenda

- Overview of the deliverability stakeholder process
- Final Proposal
- Schedule

# ISO Deliverability Background

- Developed in 2005, accepted by FERC and CPUC, and began use in 2006, with considerable guidance from PJM's model and recognizing MISO uses a similar approach
- A comprehensive review was conducted in 2019 and 2020 in response to the changing resource fleet and peak shift
- Other adjustments have been made since:
  - Aligned with a relaxation of a WECC standard, adjusted the dispatch levels for storage.
- Requests for another review were initiated through the ISO policy catalog, raising a number of new concerns not expressed in the earlier review
- The ISO produced an update paper in December 2022, indicating a target of March 31 for an issue paper – subsequently released on May 31.

# Overview of the Deliverability Study Methodology Review Initiative

- The ISO posted a December 12, 2022 Update Paper to initiate a review of the methodology to ensure that the deliverability requirements strike the appropriate balance between reliability and cost containment to ensure that the reliability requirements are not unduly burdensome.
- Four more papers were issued and four stakeholder calls were held addressing stakeholder comments
- An Issue Paper was posted on May 31, 2023
- Straw Proposal was posted on August 22, 2023, which proposed several revisions to the deliverability study methodology.
- Draft Final Proposal Paper was posted on November 13, 2023
- Final Proposal Paper was posted on January 4, 2024

The ISO is also addressing a number of the concepts explored in this initiative in the Interconnection Process Enhancements (IPE) initiative and the Resource Adequacy (RA) modeling and program design initiative.

# FINAL PROPOSAL

## Summary of Final Proposal

**Study of High System Need and Secondary System Need:** Remove the “secondary system need” study from interconnection process deliverability studies, and monitor in planning studies

**Dispatch levels:** Retain current dispatch assumptions based on current exceedance methodologies, and revisit exceedance methodology values as CPUC “slice of day” methodology and related exceedance based approach evolves.

**Simultaneous dispatch:** Raise the 5% distribution factor threshold for 500 kV line overload constraints to 10%, which decreases the pool of generators that must wait for the identified transmission upgrades intended to mitigate the constrained path.

**Study of n-2 contingencies on double circuit towers:** Provide deliverability while a resource is waiting for the related n-2 deliverability upgrades to be completed if the contingency is not considered always credible in the operations horizon and does not risk cascading outages.

**ADNU/LDNU guidelines:** Revise the guidelines for identifying Area Deliverability Constraints (ADCs) so there is a potential for more constraints to be identified as Local Deliverability Constraints, enabling them to be addressed through the generation interconnection process.

# Overview

1. Study of High System Need (HSN) and Secondary System Need (SSN)
2. Dispatch levels
3. DFAX threshold of 5% and 10%
4. The study of n-2 contingencies
5. ADNU/LDNU guidelines
6. Delayed deliverability upgrades

# Study of High System Need (HSN) and Secondary System Need (SSN)

Currently two study scenarios:

- highest system need (HSN) scenario
  - The load, generation dispatch, and imports correspond to when the system RA need is the highest during the year
- secondary system need (SSN)
  - under higher gross load conditions when solar is dropping off

## Proposal on the SSN study

- The ISO proposes to remove the SSN study from generation interconnection deliverability studies.
- The ISO proposes continuing to perform the SSN study in the TPP as a screening tool for further analysis.
- This change will be implemented starting with the 2024 TPD allocation study and in all generation interconnection process and NQC deliverability studies going forward.

## Dispatch Levels

- The ISO notes that the CPUC is developing exceedance values as part of its slice-of-day implementation.
- The ISO will continue to monitor development of NQC values, and evaluate the need for further updates to its deliverability methodology.
- The ISO is not proposing any changes to dispatch levels and believes that its methodology for determining dispatch levels in the deliverability studies is reasonable.

## DFAX threshold of 5% and 10%

- In response to stakeholder comments on the Straw Proposal, the ISO proposes to raise the current 5% DFAX threshold for 500 kV line overload constraints to 10%.
- This is expected to be a more practical threshold for including the generators that have a significant impact on the 500 kV line overload constraint and exclude generators that have an insignificant impact on the high capacity and low impedance 500 kV constraint.
- This change will be implemented starting with the 2024 TPD allocation study and in all deliverability studies going forward.

# Proposal on the study of n-2 contingencies

- If an n-2 contingency results in an overloaded facility, but not cascading outages, then upgrades would be required but would not delay generation projects from becoming deliverable.
  - Generation projects would be eligible for FCDS during the development period of the transmission upgrades necessary to mitigate the n-2 contingency, assuming that no other constraints are binding.
- If a cascading outage risk is identified or if the n-2 contingency is considered always credible in the operations horizon, then the mitigation for that contingency would be required before the assigned or later generation projects behind that constraint could obtain FCDS.

# Proposal on the study of n-2 contingencies

- The ISO plans to evaluate the risk of cascading outages prior to the implementation of network upgrades needed to mitigate n-2 contingencies in the 2024 reassessment.
- This would be an expanded scope for the 2024 reassessment study, and the results would be included in 2024 reassessment study report.
- Going forward this evaluation would be part of the TPP and interconnection study reliability assessments which already have a stability assessment within the scope of those studies and is needed along with a powerflow analysis to comprehensively evaluate cascading outage risk.
- In these studies, the reliability base case will first be tested against all contingencies that are always run in the ISO market (e.g. n-1) and overloads will be mitigated by reducing generation output behind the constraint. The adjusted case will be analyzed in the cascading analysis.

# Proposal on the ADNU/LDNU guidelines

- The ISO proposes to change ADC-C4 as follows:

The mitigation would cost more than \$20M \$60,000/MW for the total delivery network upgrade cost to be assigned to the projects in that Cluster and adjusted with the RNU reimbursement limit described in section 14.3.2(1) of GIDAP, Appendix DD.

- The ADNU/LDNU guidelines determine which upgrades can be classified as LDNU's and therefore funded by the interconnection customer.
- This activity only occurs in the Cluster study process and not in the TPD Allocation study process.
- Therefore, the ISO plans to implement this change starting with the Cluster 15 studies.

# Delayed deliverability upgrades

- The ISO is exploring the issue of reliability and delivery network upgrades delayed beyond their originally identified in-service date in the interconnection process enhancements (IPE) initiative, and will coordinate with other policy venues and industry efforts to address concerns with the pace of resource and transmission development.

# Initiative Schedule

Date	Milestone
January 4, 2024	Final proposal posting
January 11, 2024	Stakeholder call on final proposal
January 25, 2024	Comments due on draft final proposal
2024/2025	Implementation

- None of the changes proposed in the final proposal require Board of Governor approval, as most of the proposed changes to the deliverability methodology are ISO management functions and will be documented in an updated methodology document.
- The ISO anticipates needing limited changes to the GIDAP Business Practice Manual and the On-Peak Deliverability Assessment Methodology document posted on the ISO Website.

## Additional information

- Written comments are due by end of day **January 25, 2024**. Please submit your comments using the comment template available on the initiative webpage:  
<https://stakeholdercenter.caiso.com/StakeholderInitiatives/Generator-deliverability-methodology-review>
- Visit initiative webpage for more information:  
<https://stakeholdercenter.caiso.com/StakeholderInitiatives/transmission-planning-process-phase-3-revise-competitive-solicitation-project-proposal-fee>
- If you have any questions, please contact [isostakeholderaffairs@caiso.com](mailto:isostakeholderaffairs@caiso.com)