

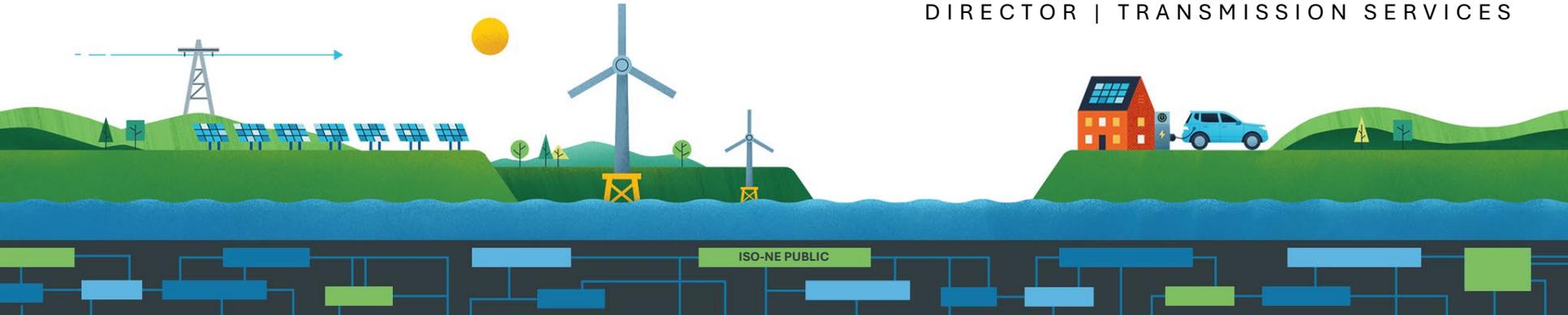
Evaluation of Surplus Interconnection Service Rules



Background on Existing Rules and Potential Use Cases

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Evaluation of Surplus Interconnection Service Rules

Background on Existing Rules and Potential Use Cases

- The ISO is kicking off stakeholder discussions to identify the objectives, issues, and scenarios driving stakeholders' inquiries around existing Surplus Interconnection Service rules and future possibilities regarding the access and use of assigned Interconnection Service
 - This item to evaluate Surplus Interconnection Service rules is listed in the [2026 Annual Work Plan \(AWP\)](#)
- As noted in the 2026 AWP, the ISO will conduct a gap analysis of the use cases against the existing interconnection rules to determine the need for and scope of potential solutions, which the ISO will then discuss with stakeholders along with the associated timing for any stakeholder and regulatory processes, as well as an implementation schedule for proposed solutions
- Today's presentation provides background on Surplus Interconnection Service, compares it to other Interconnection Service options, and seeks to better understand stakeholder interests on the topic

SURPLUS INTERCONNECTION SERVICE



What is Surplus Interconnection Service?

- FERC introduced Surplus Interconnection Service in Order Nos. 845/845-A, which required transmission providers to create a process for Interconnection Customers (ICs) to take advantage of Unused Capability through the use of Surplus Interconnection Service at existing Points of Interconnection (POIs)
- The [ISO complied with Order No. 845/845-A by creating a process in the Large Generator Interconnection Procedures](#) (*i.e.*, Schedule 22 of the Open Access Transmission Tariff (OATT)) where:
 - An Original Interconnection Customer (OIC) with an existing, already interconnected, Large Generating Facility* can utilize or transfer Surplus Interconnection Service at its existing POI
 - The OIC has priority use of its assigned Interconnection Service, but may choose to allow another party (*e.g.*, an affiliate or third party) to take Surplus Interconnection Service for the Unused Capability
 - Unused Capability was defined as the amount of Interconnection Service that is no longer being used by the OIC

*Note that Surplus Interconnection Service was extended to Small Generating Facilities (*i.e.*, in Schedule 23 of the OATT) through the region's Order No. 2023 compliance proposal, as was the availability for Surplus Interconnection Service beginning as of Interconnection Agreement execution for Network Resource Interconnection Service.

What is Surplus Interconnection Service?

(cont'd)

- A customer seeking Surplus Interconnection Service is required to submit a request for Surplus Interconnection Service, which includes indication of consent by the OIC
- No Queue Position is required for a Surplus Interconnection Service request (*i.e.*, Surplus Interconnection Service requests are not included in Cluster Studies), provided the proposed change is not one that would require:
 - Its own Interconnection Request (IR) (*i.e.*, because the requested change is a Material Modification), or
 - Network Upgrades to accommodate the request
- Surplus Interconnection Service arrangements are documented in an Interconnection Agreement entered into among the ISO as System Operator, the Interconnecting Transmission Owner (ITO), the OIC, and the Surplus Interconnection Customer (SIC)

What is Surplus Interconnection Service? (cont'd)

- Significant study may be required for a Surplus Interconnection Service request
 - Thermal analysis is not required for MW injections since the level of Interconnection Service at the existing POI is not increased
 - Thermal analysis would be needed to evaluate Battery Energy Storage System (BESS) charging if a Surplus Interconnection Service request involves the addition of a BESS to a facility that was not previously studied for charging
 - Short circuit, voltage, stability and electromagnetic transient (EMT) analyses need to be considered since different resource types have different performance characteristics, even if the level of Interconnection Service at the POI is not increased
- The Tariff does not specify a timeline for processing Surplus Interconnection Service requests

Assigned NRIS/CNRIS vs. Surplus Interconnection Service

- Surplus Interconnection Service does not result in the direct assignment of Network Resource (NR) or Capacity Network Resource (CNR) Interconnection Service to the resource seeking to make use of Unused Capability
 - Resources seeking Surplus Interconnection Service make use of Unused Capability allocated by the OIC based on the NR or CNR Interconnection Service assigned to the OIC's Generating Facility(ies), but the NR or CNR Interconnection Service remains assigned to the OIC's Generating Facility(ies)
 - An SIC's service is therefore subordinate to that of the OIC
 - The total output of the OIC's Generating Facility plus the SIC's Generating Facility behind the same POI at any time must be limited to the maximum total amount of Interconnection Service assigned to the OIC's Generating Facility as established in its Interconnection Agreement
 - A limiting device may be required

Assigned NRIS/CNRIS vs. Surplus Interconnection Service (cont'd)

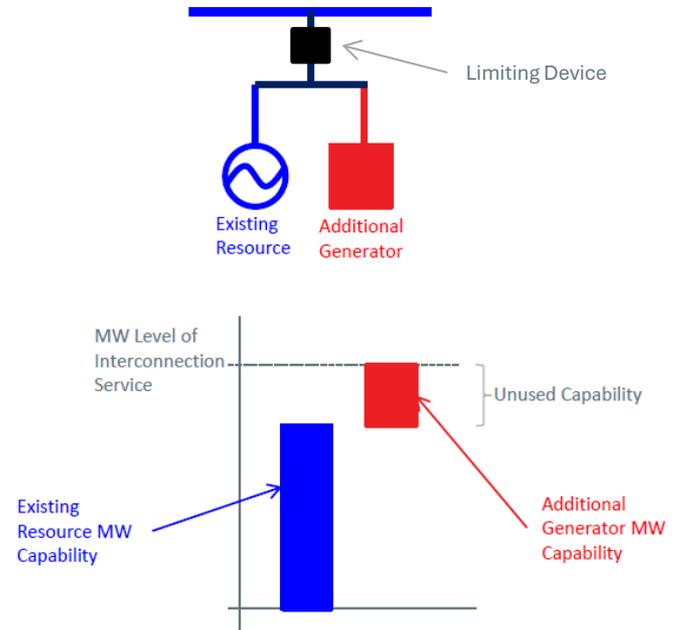
- As stated in the Tariff, Surplus Interconnection Service cannot be used to replace or repower an existing Generating Facility
 - When the OIC's Generating Facility retires/deactivates, the SIC's Generating Facility must go through the process to establish its own NR/CNR Interconnection Service (e.g., participate in a Cluster Study), and must consider other resources that are also seeking such Interconnection Service
 - Pursuant to FERC Order No. 845, there is a one-year grace period from the retirement of the OIC's Generating Facility for the SIC to establish its own Interconnection Service, during which the SIC's Generating Facility can continue to operate
 - The SIC's Generating Facility would not be able to operate beyond this one-year grace period if it does not establish its own Interconnection Service

A Closer Look at Unused Capability

- In the ISO Interconnection Procedures, Unused Capability is defined as:
 - (i) in the case of NR Interconnection Service at a Generating Facility with an executed Interconnection Agreement, the MW quantity as determined by the Original Interconnection Customer (as defined in Section 3.3 of the LGIP), not to exceed the Generating Facility's NR Interconnection Service as specified in its Interconnection Agreement; and
 - (ii) in the case of CNR Interconnection Service at an existing, commercial Generating Facility, for Summer, the Summer CNR Capability as specified in its Interconnection Agreement minus the latest Summer Qualified Capacity, and for Winter, the Winter CNR Capability as specified in its Interconnection Agreement minus the latest Winter Qualified Capacity.

A Closer Look at Unused Capacity (cont'd)

- For capacity, Unused Capacity is the difference between a Summer/Winter Qualified Capacity value and the Summer/Winter CNR Capability assigned to the OIC's Generating Facility
 - This more limited definition of Unused Capacity for capacity (when compared to energy) acknowledges that a resource seeking to provide capacity must be able to provide its available capacity when needed
 - Remember, the CNR Interconnection Service is assigned to the OIC's Generating Facility, and not the SIC's Generating Facility



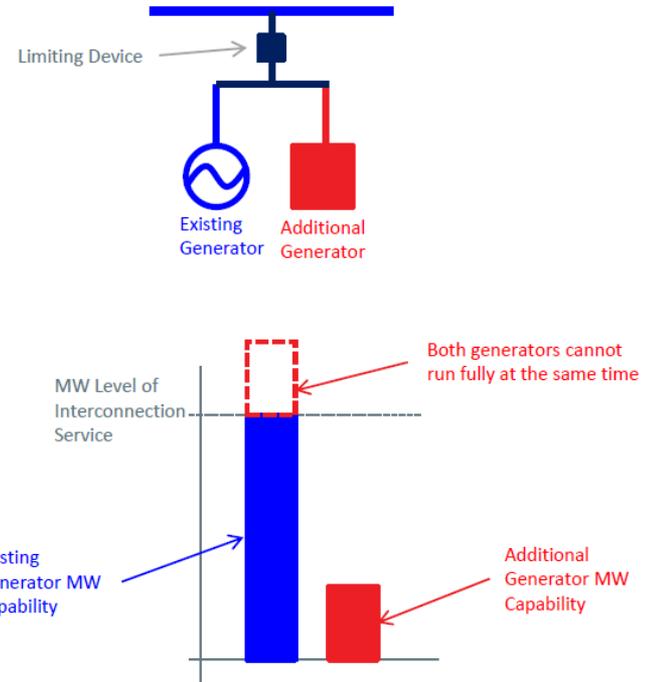
OTHER INTERCONNECTION SERVICE OPTIONS THAT MIGHT NOT INCREASE INTERCONNECTION SERVICE AT AN EXISTING POI

Co-Location and Repowering



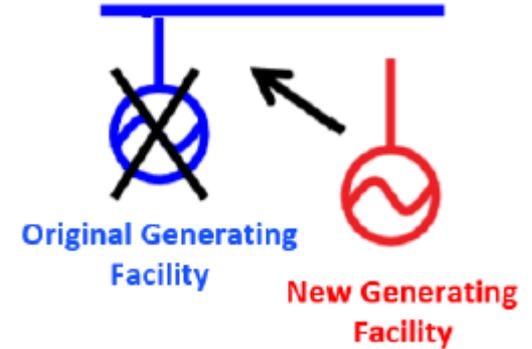
Co-Location

- An additional Generating Facility is interconnected behind an existing POI, which can be done without increasing the overall Interconnection Service associated with the existing POI
 - The established NR/CNR Interconnection Service is directly assigned/shared between the co-located Generating Facilities behind the same POI
 - Such a request would result in a Material Modification to the original Generating Facility, which would require submission of an IR during a Cluster Request Window (*i.e.*, require participation in a Cluster Study)
 - A limiting device may be required to ensure that the established Interconnection Service associated with the existing POI is respected
 - Retirement/deactivation of one Generating Facility behind the shared POI does not result in an automatic reduction of the Interconnection Service assigned to the other co-located Generating Facilities



Repowering

- The original Generating Facility is replaced by a new Generating Facility, which can be done without increasing the overall Interconnection Service associated with the existing POI
 - The established NR/CNR Interconnection Service assigned to the original Generating Facility is assigned to a new Generating Facility behind the same POI
 - Such a request would result in a Material Modification to the original Generating Facility, which would require submission of an IR during a Cluster Request Window (*i.e.*, require participation in a Cluster Study)
 - Additional details on repowering can be found in the [March 2025 Repowering Memo](#)



Surplus Interconnection Service vs. Co-Location vs. Repowering

	Surplus Interconnection Service	Co-Location	Repowering
Requires Participation in a Cluster Study?	No	Yes	Yes
Can Complete Request if Network Upgrades Required?	No	Yes, responsible for any assigned upgrade costs, could face penalties if IR withdrawn	Yes, responsible for any assigned upgrade costs, could face penalties if IR withdrawn
Thermal Analysis for MW Injection Not Required, but Short Circuit, Voltage, Stability and EMT Analyses May Be Needed?*	Yes	Yes, assuming established Interconnection Service is not increased	Yes, assuming established Interconnection Service is not increased
Tariff Deadlines for Completing Interconnection Studies?	No	Yes	Yes
Subordinate to Another Resource's Assigned Interconnection Service?	Yes	No	No

*Thermal analysis would be needed to evaluate BESS charging if a request involves the addition of a BESS to a facility that was not previously studied for charging.

INTERCONNECTION SERVICE ANALOGY

The story of season tickets for the Amp Soccer Club



Assigned Season Ticket for the Amp Soccer Club

- The Amp Soccer Club is very popular; many people request season tickets
- David is the “keeper” of season ticket assignments for the Amp Soccer Club
- The season ticket request process has a sign-up list, and those requesting season tickets must make deposits and commitments when signing-up



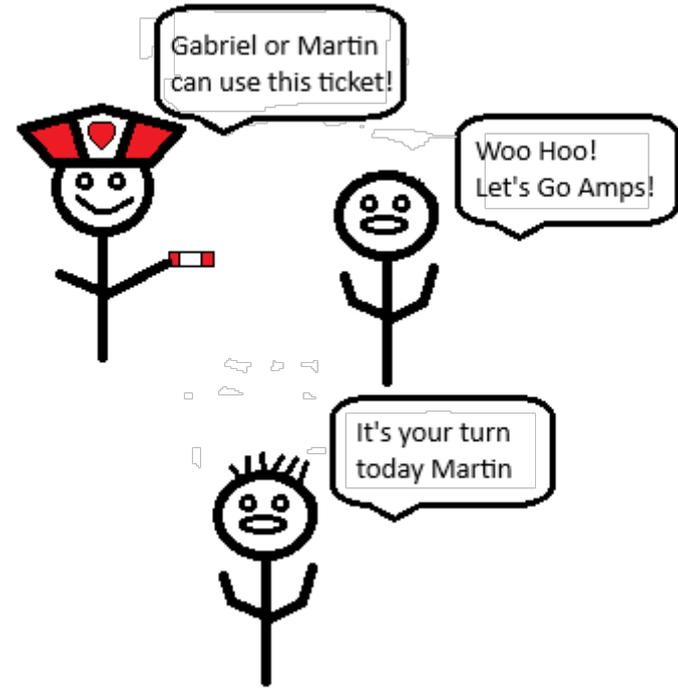
Assigned Season Ticket for the Amp Soccer Club (cont'd)

- Gabriel, who is a big Amp Soccer Club fan (also known as a “Gener”), requests a season ticket shortly after moving to town, and makes all required commitments and deposits
- Once it’s his turn, Gabriel accepts the assignment of a season ticket by agreeing to the terms of service and providing the necessary payment
- Now on game days Gabriel can pick up his assigned season ticket
- Analogous to establishing Interconnection Service



Assigned Season Ticket for the Amp Soccer Club (cont'd)

- Gabriel's brother, Martin, who is also a Gener, moves to town
- Gabriel and Martin complete the process so that Gabriel's season ticket can be assigned to him or Martin
- Gabriel and Martin now have access to the season ticket, and arrange amongst themselves who will use the ticket for each game
- Analogous to co-location of resources without increasing the level of Interconnection Service



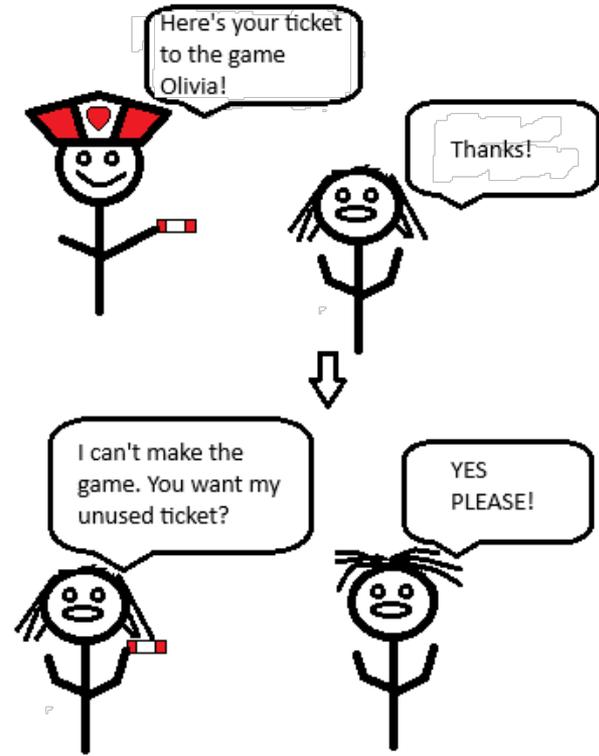
Assigned Season Ticket for the Amp Soccer Club (cont'd)

- After a few years, Gabriel and Martin move away, and no longer can make use of the season ticket, but at this same time their sister Olivia (also a Gener) moves to town
- Gabriel, Martin, and Olivia complete the process (with commitments, deposits, and payments) to assign the season ticket to Olivia
- Analogous to “repowering” without increasing the level of Interconnection Service



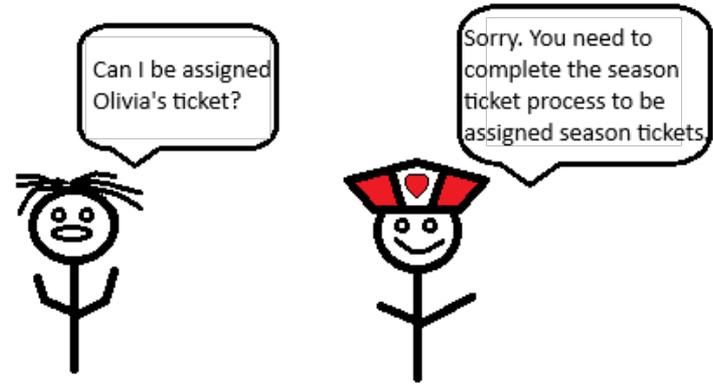
Assigned Season Ticket for the Amp Soccer Club (cont'd)

- Olivia can't attend each game, in which case her assigned ticket becomes unused for those games she does not attend
- In such cases, Olivia hands her unused ticket to her friend Ben
 - Ben's access to Olivia's unused game tickets doesn't change the fact that the Amp Soccer Club assigns the season ticket to Olivia
- Analogous to Surplus Interconnection Service



Assigned Season Ticket for the Amp Soccer Club (cont'd)

- Eventually, Olivia also moves away, and so she terminates her season ticket assignment
- Ben no longer has access to Olivia's unused game tickets
- For assignment of a season ticket, Ben must get in the queue and complete the process like other Geners
- Analogous to impacts on a Surplus Interconnection Service arrangement upon retirement/deactivation of the Generating Facilities associated with the OIC



In Summary...

- The season ticket was assigned by the club (e.g., David) for use by those that completed the season ticket request process (e.g., Gabriel, Martin, and Olivia)
- Those that went through the process to be formally assigned the season ticket had equal access to the season ticket
- Others could use the assigned season ticket if it was unused (e.g., Ben), but use of the unused season ticket did not change the club's assignment of the season ticket holder(s)
- Those that want the same rights to season ticket access as other season ticket holders need to complete the same process as other season ticket holders (including getting in the queue and making all required deposits, commitments and payments)

WHAT THE ISO HAS HEARD SO FAR

Thoughts to help guide stakeholder feedback



What the ISO Has Heard So Far

- Surplus Interconnection Service, Co-Location, and Repowering each represent different methods of allowing different entities to use and/or transfer already assigned Interconnection Service
 - Each is associated with different Tariff requirements, and each is intended to achieve different goals
- Inquiries from stakeholders related to Surplus Interconnection Service have often been focused on the ability to quickly bring online new generation behind existing POIs where existing Generating Facilities already have assigned Interconnection Service
 - The ability to process a Surplus Interconnection Service request outside of a Cluster Study, and to terminate a Surplus Interconnection Service request without significant penalty if Network Upgrades are needed, are seen as desirable

What the ISO Has Heard So Far (cont'd)

- Surplus Interconnection Service has rarely been pursued to date because, as created by FERC, it does not result in a full “sharing” of Interconnection Service, like a co-location arrangement would, or the ability to fully transfer Interconnection Service through a repowering
 - The ability to avoid a Cluster Study and responsibility for Network Upgrades results in:
 1. Surplus Interconnection Service being subordinate to the OIC’s Interconnection Service according to the Unused Capability definition, and
 2. An inability of Surplus Interconnection Service to survive the retirement of the OIC Generating Facilities beyond the one-year grace period
 - Modifying Surplus Interconnection Service to result in the full “sharing” or transfer of Interconnection Service would not be possible since such a modification would alter the very essence of Surplus Interconnection Service (*i.e.*, making use of Unused Capability)
 - Note that FERC did not modify the underlying intent of Surplus Interconnection Service as part of Order No. 2023

What the ISO Has Heard So Far (cont'd)

- It is the ISO's understanding that one of the desired outcomes stakeholders are looking for is a Surplus Interconnection Service-like process (*i.e.*, a process outside of Cluster Studies that can be terminated if Network Upgrades are identified), but with the same outcomes as co-location/repowering in terms of access to Interconnection Service
 - Regardless of which approach is used, significant study work will often be required if the performance characteristics of the new Generating Facilities are materially different from the existing Generating Facilities
 - Any such process would also need to address the speculation concerns described in detail in Order No. 2023 to ensure “First Ready, First Served” outcomes
 - Any requested increase in Interconnection Service or the need for Network Upgrades could have an impact on ongoing Cluster Studies, and therefore would need an IR that would participate in a Cluster Study

What the ISO Has Heard So Far (cont'd)

	Surplus Interconnection Service	Co-Location	Repowering
Requires Participation in a Cluster Study?	No	Yes	Yes
Can Complete Request if Network Upgrades Required?	No	Yes, responsible for any assigned upgrade costs, could face penalties if IR withdrawn	Yes, responsible for any assigned upgrade costs, could face penalties if IR withdrawn
Thermal Analysis for MW Injection Not Required, but Short Circuit, Voltage, Stability and EMT Analyses May Be Needed?*	Yes	Yes, assuming established Interconnection Service is not increased	Yes, assuming established Interconnection Service is not increased
Tariff Deadlines for Completing Interconnection Studies?	No	Yes	Yes
Subordinate to Another Resource's Assigned Interconnection Service?	Yes	No	No

*Thermal analysis would be needed to evaluate BESS charging if a request involves the addition of a BESS to a facility that was not previously studied for charging.

Stakeholder Feedback Welcome

- The ISO welcomes any feedback on what process/Interconnection Service outcomes stakeholders are ultimately looking for related to this review and discussion of Surplus Interconnection Service, and any use cases they can provide
 - Feedback can be provided by February 6, 2026 though email to jmacura@iso-ne.com
 - The ISO plans to summarize and respond to this feedback at the February TC meeting

NEXT STEPS



Next Steps

- This presentation kicks off stakeholder discussion to identify the objectives, issues, and scenarios driving stakeholders' inquiries around existing Surplus Interconnection Service rules and future possibilities regarding the access and use of assigned Interconnection Service
- Stakeholders are encouraged to provide any thoughts or feedback as discussed in this presentation by February 6, 2026 through email to jmacura@iso-ne.com
 - The ISO plans to consolidate the feedback received, and follow up on concepts and feedback as needed, at the February TC meeting
- ISO will then conduct a gap analysis of the received feedback and use cases against the existing interconnection rules to determine the need for and scope of potential solutions, which the ISO will then discuss with stakeholders along with the associated timing for any stakeholder and regulatory processes, as well as an implementation schedule for proposed solutions
 - These discussions are expected to start in Q2 or Q3 or 2026

Stakeholder Schedule

Stakeholder Committee and Date	Scheduled Project Milestone
Transmission Committee January 21, 2026	Discussion on Surplus Interconnection Service
Transmission Committee February 24, 2026	Follow up on presented concepts and stakeholder feedback
Transmission Committee Q2/Q3 2026	Begin discussion of gap analysis and possible solutions

Note: The stakeholder schedule is preliminary and may change based on discussions and stakeholder feedback

Questions



About the Presenter

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