



TEXAS RE

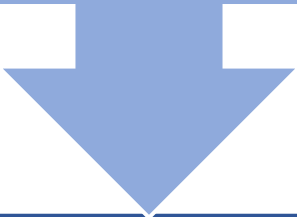
Facility Interconnection Requirements

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Identified as a risk element in the 2026
CMEP IP



Opportunity for

Better communication of consistent
interconnection requirements

Improvement on the adequacy of
performance and modeling requirements



Purpose

- To avoid adverse impacts on the reliability of the Bulk Electric System, Transmission Owners and applicable Generator Owners must document and make Facility interconnection requirements available so that entities seeking to interconnect will have the necessary information.

Functional Entities

- Transmission Owner
- Applicable Generator Owners
 - Generator Owners with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third-party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.

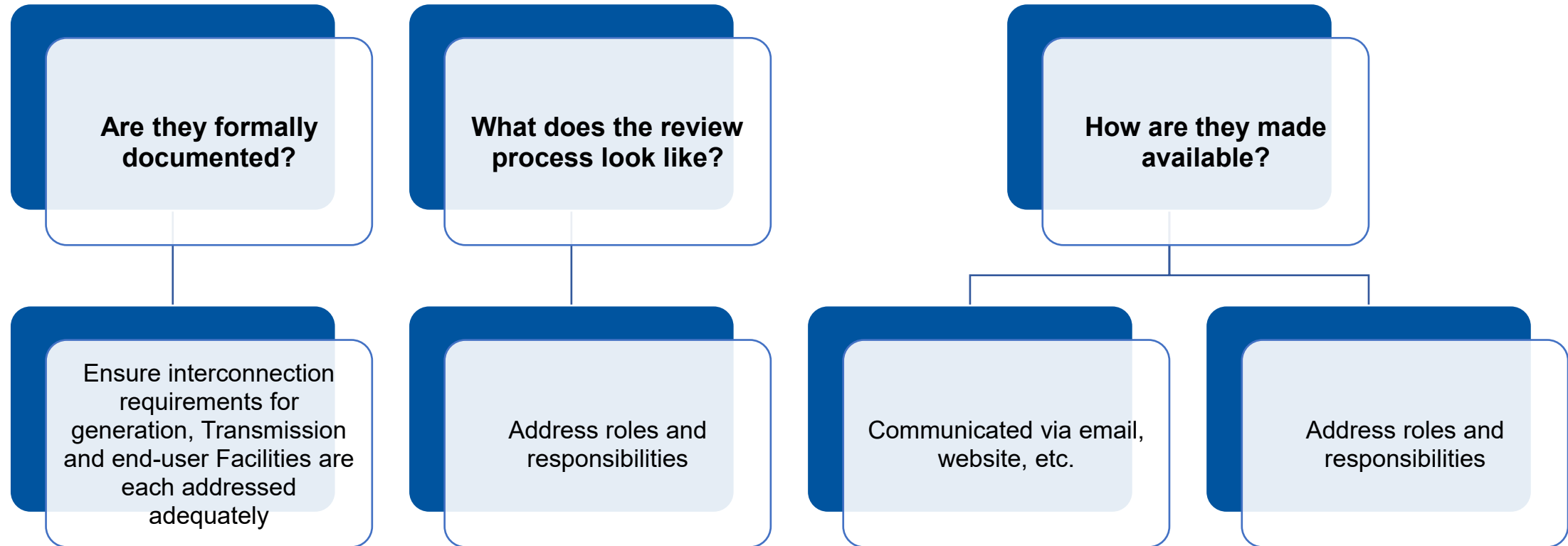
- ❑ R1 and R2 require documenting Facility interconnection requirements and making them available upon request.



- ❑ R3 and R4 require those Facility interconnection requirements to address specific procedural requirements.



Facility Interconnection Requirements





Purpose

- To study the impact of interconnecting new or changed Facilities on the Bulk Electric System

Functional Entities

- Planning Coordinator
- Transmission Planner
- Transmission Owner
- Distribution Provider
- Generator Owner
- Applicable Generator Owners
 - Generator Owner with a fully executed Agreement to conduct a study on the reliability impact of interconnecting a third-party Facility to the Generator Owner's existing Facility that is used to interconnect to the Transmission system.



Why are interconnection studies important?

Why?

Assess the potential impact the power generator(s) has on the Bulk Power System (BPS).

What?

Confirm accuracy of models submitted to ensure proper mitigation measures are implemented.

Who?

Collaborate and adhere to applicable NERC Reliability Standards, regional and Transmission Owner planning criteria, and Facility interconnection requirements.



Steady-
state

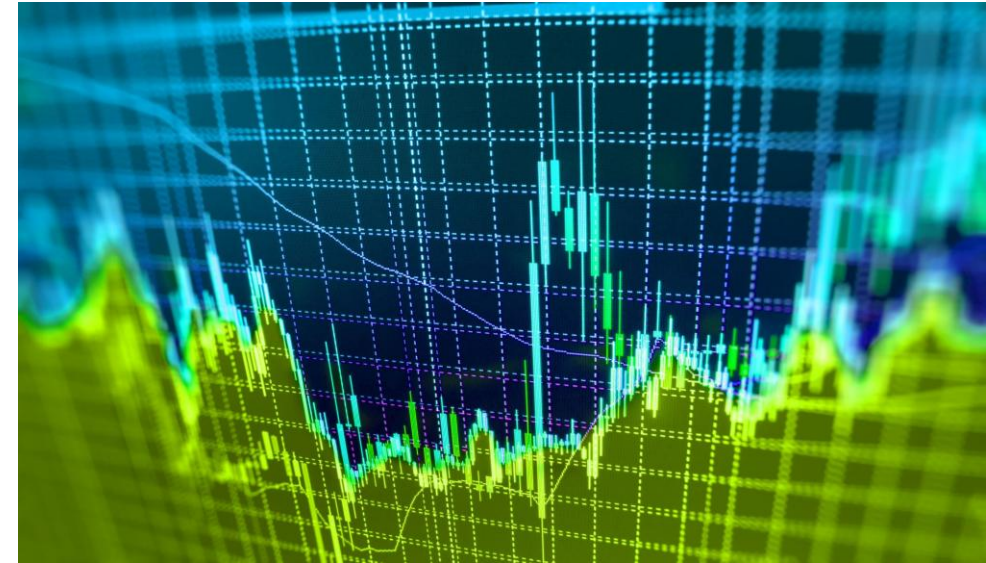
Short
circuit

Dynamics
(Stability)

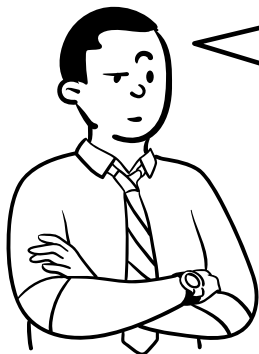
Modeling



- ❑ Specify and communicate model submissions requirements
- ❑ Implement internal controls designed to verify the accuracy of models submitted
- ❑ Document Facility interconnection requirements that address specific performance criteria for inverter-based resources (IBRs)
- ❑ Identify and study IBR-specific risks to ensure proper mitigation measures are developed to lessen risks.
- ❑ Identify appropriate cadence for periodic reviews of Facility interconnection requirements.



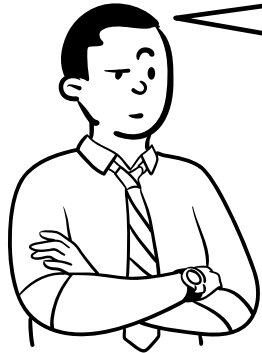




Question: Does Texas RE view simulation-based training as needing to cover each unique IROL mechanism individually? Does this expectation extend to addressing the associated mitigation strategy for each mechanism as well?

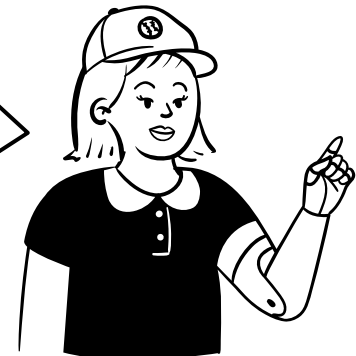
Response: The intent of PER-005-2 Requirement R4 is to ensure that personnel are adequately trained to recognize and respond to the reliability conditions within their area of responsibility. Operators should demonstrate a thorough understanding of applicable IROLs, including the ability to identify IROL conditions, monitor associated facilities, assess related risks, apply operating action guidelines, respond to contingency events that could result in an IROL exceedance, and implement appropriate mitigation strategies. The objective is to verify that operators can effectively recognize, evaluate, and mitigate conditions associated with their IROL responsibilities to maintain system reliability.





Question- Is training on general IROL mitigation concepts sufficient when individual IROL conditions cannot reasonably be replicated in available training tools?

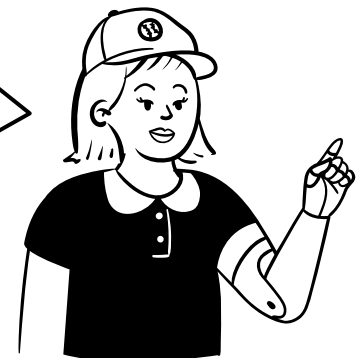
Response- If a specific IROL condition cannot reasonably be modeled in the available training environment, entities should be able to demonstrate that operators are still being trained on the nature of the specific IROLs and associated reliability risks, the contingency conditions that could lead to IROL exceedance, applicable operating plans and procedures, required operating actions, expected operator decision making steps and communications with ERCOT and neighboring TOPs/TOs and mitigation measures. The important aspect is that the applicable entities can demonstrate competency in responding to system conditions based on the emergency operations training they received using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES.





Question- How would Texas RE view compliance with R4 for an IROL based on dynamic load ride-through characteristics that cannot be directly simulated in traditional operator training environments?

Response- If an entity has an IROL that depends on dynamic load behavior that cannot be directly simulated in traditional operator training environments, the entity should use alternative methods to ensure that the personnel are trained on the conditions that could lead to the IROL exceedances, expected system behavior, applicable operating plans and procedures, required operating actions, expected operator decision making steps, and communications with ERCOT and neighboring TOPs/TOs and mitigation measures. Additionally, ERO lessons learned event reviews, engineering studies, planning assessments, actual system events, and tabletop exercises could all be valuable tools for communicating the reliability risks associated with dynamic load ride-through characteristics.



Questions?