



Review of Existing Load Interconnection Requirements

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Background

- Requests to interconnect large loads both as standalone facilities and co-located with existing or planned generation have increased
- Many of these requests have accelerated timelines compared to historic large load additions
- As a result of these accelerated timelines, many of these large loads have not yet been incorporated into ERCOT's existing planning models and processes
- ERCOT must ensure that loads are interconnected reliably and that applicable requirements in NERC Reliability Standards are met

Applicable NERC Reliability Standards

- NERC Reliability Standards FAC-001, Facility Interconnection Requirements, and FAC-002, Facility Interconnection Studies, apply to the interconnection of “electricity end-user Facilities” (i.e., Loads)
- Both standards apply to both interconnections to TSPs’ systems and the interconnection of third-party facilities to existing generation facilities interconnected to the transmission system
- Resource Entities that agree to interconnect third-party loads should be aware that they may have obligations relative to FAC-001 and FAC-002

FAC-002, Facility Interconnection Studies

R1. Each Transmission Planner and each Planning Coordinator shall study the reliability impact of: (i) interconnecting new generation, transmission, or electricity end-user Facilities and (ii) materially modifying existing interconnections of generation, transmission, or electricity end-user Facilities. The following shall be studied:
[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

- 1.1.** The reliability impact of the new interconnection, or materially modified existing interconnection, on affected system(s);
- 1.2.** Adherence to applicable NERC Reliability Standards; regional and Transmission Owner planning criteria; and Facility interconnection requirements;
- 1.3.** Steady-state, short-circuit, and dynamics studies, as necessary, to evaluate system performance under both normal and contingency conditions; and
- 1.4.** Study assumptions, system performance, alternatives considered, and coordinated recommendations. While these studies may be performed independently, the results shall be evaluated and coordinated by the entities involved.

Both ERCOT and TSPs must be involved in studies

ERCOT considers adding large loads to be “materially modifying”

FAC-002, Facility Interconnection Studies

- R2.** Each Generator Owner seeking to interconnect new generation Facilities, or to materially modify existing interconnections of generation Facilities, shall coordinate and cooperate on studies with its Transmission Planner or Planning Coordinator, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.
- R5.** Each applicable Generator Owner shall coordinate and cooperate with its Transmission Planner or Planning Coordinator on studies regarding requested interconnections to its Facilities, including but not limited to the provision of data as described in R1, Parts 1.1-1.4.

Resource Entities adding large behind-the-meter loads to their facilities must coordinate with their interconnecting TSP and ERCOT on appropriate interconnection studies

Key Takeaways

- Appropriate studies must be coordinated with ERCOT for large load interconnection requests to proceed
- ERCOT must, at a minimum, review TSP studies for large load additions that have not yet been studied via ERCOT's existing planning processes (i.e., included in the RTP or an RPG review)
 - Similar to FIS review and the Transmission Interconnection Study process described in Planning Guide Section 3.1.9
- Resource Entities adding large behind-the-meter loads to their facilities must coordinate with their interconnecting TSP and ERCOT on appropriate interconnection studies
 - Similar to FIS
- Studies should be submitted with sufficient time for ERCOT review before NOMCRs and/or RIOO updates can be accepted/processed
- Other operational studies or processes (e.g., GTCs/GTLs, Real-time tools, VSAT, etc.) may need to be reviewed/updated prior to interconnection

Follow-up

- Contact John.Bernecker@ercot.com to:
 - Ask any questions
 - Schedule discussion on a particular project
 - Submit existing interconnection studies for ERCOT review