

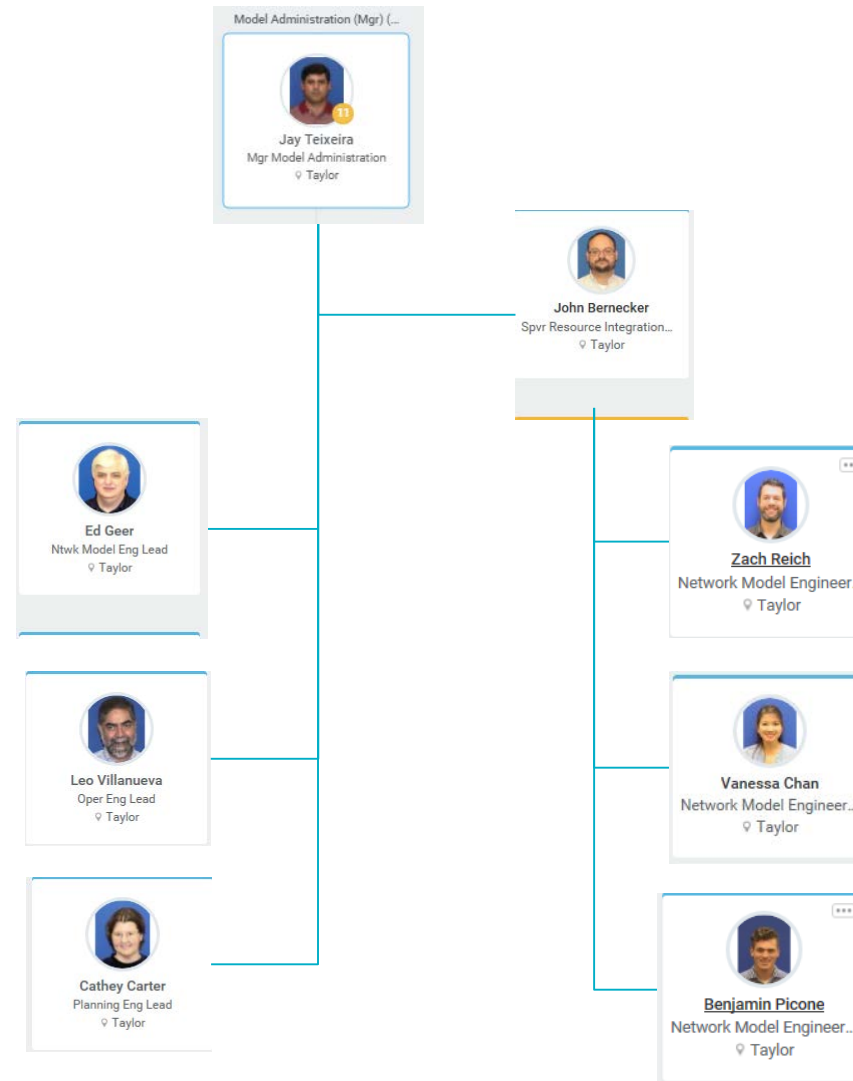


Resource Integration Workshop
Optional Session

ERCOT
Jay Teixeira

December 18, 2017

New Resource Integration Department



Quarterly Stability Assessment (QSA)

Planning Guide 5.9

- Next Deadline for QSA to generate during the summer.



All-Inclusive Generation Resource Initial Synchronization Date	Last Day for an IE to meet prerequisites as listed in paragraph (4) below	Completion of Quarterly Stability Assessment
Upcoming January, February, March	Prior August 1	End of October
Upcoming April, May, June	Prior November 1	End of January
Upcoming July, August, September	Prior February 1	End of April
Upcoming October, November, December	Prior May 1	End of July

- If a GINR is not included in QSA, its Initial Synchronization date will be automatically delayed to the next quarter
- QSA workshop on January 9, 2018 Met Room 168 @ 9:30

INR Cancellation Process

- Current Process
 - ERCOT sets COD back 1 year when it determines current COD is unlikely given current status and notifies IE
 - Occasionally, IE gets caught up and COD can move back toward original COD
 - IE gives ERCOT new COD date further in the future
 - IE notifies ERCOT to cancel the request
 - If there is no response from an IE after an ERCOT request, INR cancellation will be initiated
- ERCOT will initiate PGRR to define a formal cancellation process in 2018

TBD Status

- ERCOT will move INR with no communication to a new status, tentatively called TBD Status.
- INR in TBD Status will be calculated separately in GIS Reports.
- INR in TBD Status will have to pay INR fees again to move forward, keeping the INR number
 - FIS studies may have to be updated or redone
 - RARF data may have to be updated
- INR in TBD Status can cancel their request for no cost
- INR in TBD Status for **60 days** will follow cancellation process
- PGRR to define this in 2018

5.1.1 *Applicability*

- (1) The requirements in this Section 5, Generation Resource Interconnection or Change Request, are applicable, to the following:
 - (a) Any Entity proposing a new All-Inclusive Generation Resource, including a storage device, with an aggregate power output (gross Generation Resource output minus auxiliary Load directly related to the Generation Resource) of ten MW or greater, planning to interconnect to transmission in the ERCOT System; or
 - (b) Resource Entities that are seeking to:
 - (i) Upgrade the summer or winter Net Dependable Capability of an All-Inclusive Generation Resource by ten MW or greater within a single year;
 - (ii) Re-power an All-Inclusive Generation Resource of ten MW or greater; or**
 - (iii) Change or add a Point of Interconnection (POI) of an All-Inclusive Generation Resource of ten MW or greater

Re-Power GINR

- ERCOT has seen many of these in 2017
- The term “Re-Power” in PG not related to “Repowering” or “Repowered Facility” definitions in ERCOT Protocols or PUCT rules
- GINR must be submitted
 - Screening Study required if MW increase is 10 MW or more
 - Additional information for reactive, SSR, and VRT capability compared with pre re-power equipment helpful to determine which FIS studies need to be done
 - Stability model submission or detailed comparison with pre re-power equipment model necessary to determine if FIS stability study needs to be done
 - Part 2 and Part 3 necessary although facility has already synchronized
 - Need to check model and PFC, Voltage Control, Reactive Capability and AVR
- PGRR to clarify this information in 2018

Possible Changes to Interconnection Process

Sale of project before commercial operation

- Seller informs ERCOT of sale, identifies buyer, and provides contact information
- ERCOT asks buyer to confirm by submitting an updated RARF including contacts.
- ERCOT places project into **TBD status** until RARF confirmation received.
- ERCOT will cancel any project left in **TBD status** for more than **60** days.
- **Project clock continues to tick while in TBD status**

Possible Changes to Interconnection Process

Developers must reply to ERCOT requests

- When ERCOT staff request additional or updated information about a project, the developer shall either answer in full or acknowledge the request within **10** days and commit to answering by a future date. PG 5.3.2(1). **This request will be done by email for documentation purposes.**
- **INR will be put in TBD Status after 10 days**
- **ERCOT will cancel any project left in TBD status for more than 60 days.**

Possible Changes to Interconnection Process

Biannual Attestations as Proof of Life and Communication

- Bi-Annual RARF attestations are required by PG 5.3.2 (3)
 - There are numerous INR projects that have not had action in years
 - These INRs need to be cancelled to keep project list reflective of active projects
 - Attestations will alert ERCOT to projects not active or where communication avenues (email, phone) are not correct
 - New GINR app will provide attestation (slide 21).
 - Separate attestation from RARF submittal
 - Move GINR that has missed an attestation to TBD status if communication attempts fail

Possible Changes to Interconnection Process

Temporary and Permanent POI in same INR

- Aug 30: No longer allow temporary POI and permanent POI studies in same INR. These will be submitted as separate INRs. Currently allowed by PG 5.4.2.2 (2) if agreed by IE and TSP
 - Different POI quite often have very different power flow results
 - Leads to situation where a GTC is not needed for temporary POI but is needed for permanent POI
 - Comment: need for Temp POI not known until FIS underway
- For further discussion: Temp and Perm POI at the same physical location can be in same INR if at the same location.
 - If not at same location, then separate into two INRs and temp POI must have breakers and built to possibly be permanent.
 - Temp and perm POI in same INR, 16.5 requirements must be met for entire INR (both temp and perm POI) to synchronize at temp POI

Possible Changes to Interconnection Process

Projects cannot be split

- Developers will no longer be able to sub-divide projects into phases with same or different synchronization dates
 - Projects can be decreased in size
 - Additional projects can be submitted at the same POI
 - The current practice causes confusion and time-consuming documentation and reporting problems
 - Comment: Not liked by IE's as they divide due to power purchase agreements.
 - Further comment: Can split but need to pay fees for all INR's created by split

Possible Changes to Interconnection Process

Projects must have a unique name

- Interconnection requests must include a name that is not in use anywhere else in the ERCOT system and not too similar to any other name
 - Use ERCOT Planning Data Dictionary and GIS Report
 - ERCOT Operations uses NMMS model name but REs and TSPs may use different name. It is critical that equipment names are unique, easy to spell, and pronounce, and used by all
 - Once a project name is acceptable to ERCOT it will not be changed

Possible Changes to Interconnection Process

Propose new fee structure (Backlogged)

- Propose a new fee structure to make sure that INRs are serious propositions and not fishing.
 - Overloads ERCOT staff with extraneous studies
 - More attention needs to be paid to screening study results where generation deliverability is shown to be affected
 - Graduated scale (inc) for subsequent INR requests?
 - Higher fee for INR to voltage less than 345 kV since studies are more involved and lines more congested?
 - Non-responsive INR's moved to TBD status must pay fee to move forward from that status

Other contact information

- GINR@ercot.com - still used for INR activity
- ResourceIntegrationDepartment@ercot.com is distribution list for Resource Integration department

Questions?

Thank you!