ERCOT GTC Update

Yunzhi Cheng
ERCOT Operations Support

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Panhandle GTC Update (12/1/2023)

- This update includes the study results of the followings on the Panhandle GTC.
  - The impact of new resources inside Panhandle
  - The impact of different system conditions: day and night
- Study overview
  - Most recent 2023 DWG HWLL flat start case was used as the start base case
  - Topology changes and new resources were updated. A new IBR (265MW) are going to connect to Panhandle in Q4 2023
  - The nearby Panhandle IBRs (Wind & Solar) have been historically assumed at maximum dispatch for Panhandle GTC assessment
  - Solar resources in and nearby Panhandle were assumed offline in the night system condition

Panhandle GTC Update (12/1/2023) – Results and Observations

- The primary impact of the current Panhandle GTC is determined by the maximum power flow across the Panhandle GTC interface.
  - The impact of day or night system conditions has minimum impact (less than 1.5%) on the Panhandle GTL
  - The dispatch of nearby Panhandle IBRs could have impact on the Panhandle GTC given the Panhandle power is transferred through the nearby Panhandle area to reach the loads => high dispatch of nearby Panhandle IBRs would stress the system and affect the Panhandle IBRs dispatch for reliable transfer
  - The overall system condition such as inertia could also have impact on the Panhandle. => lower system inertia could lead to increasing volatility of dynamic response during the disturbance and cause unstable response
- Historical IBRs performance including wind and solar in and nearby Panhandle has been reviewed and revised for the Panhandle GTC study.
  - 90% dispatch of nearby Panhandle IBRs (wind and solar) was tested and adopted in this Panhandle GTC update

Next Steps

- ERCOT will start to use 90% dispatch of nearby Panhandle IBRs (Wind & Solar) in the Panhandle QSA/GTC studies and revise it as needed based on historical performance