



Long Term Stability Assessment for Year 2031 (Based on 2016 LTSA)

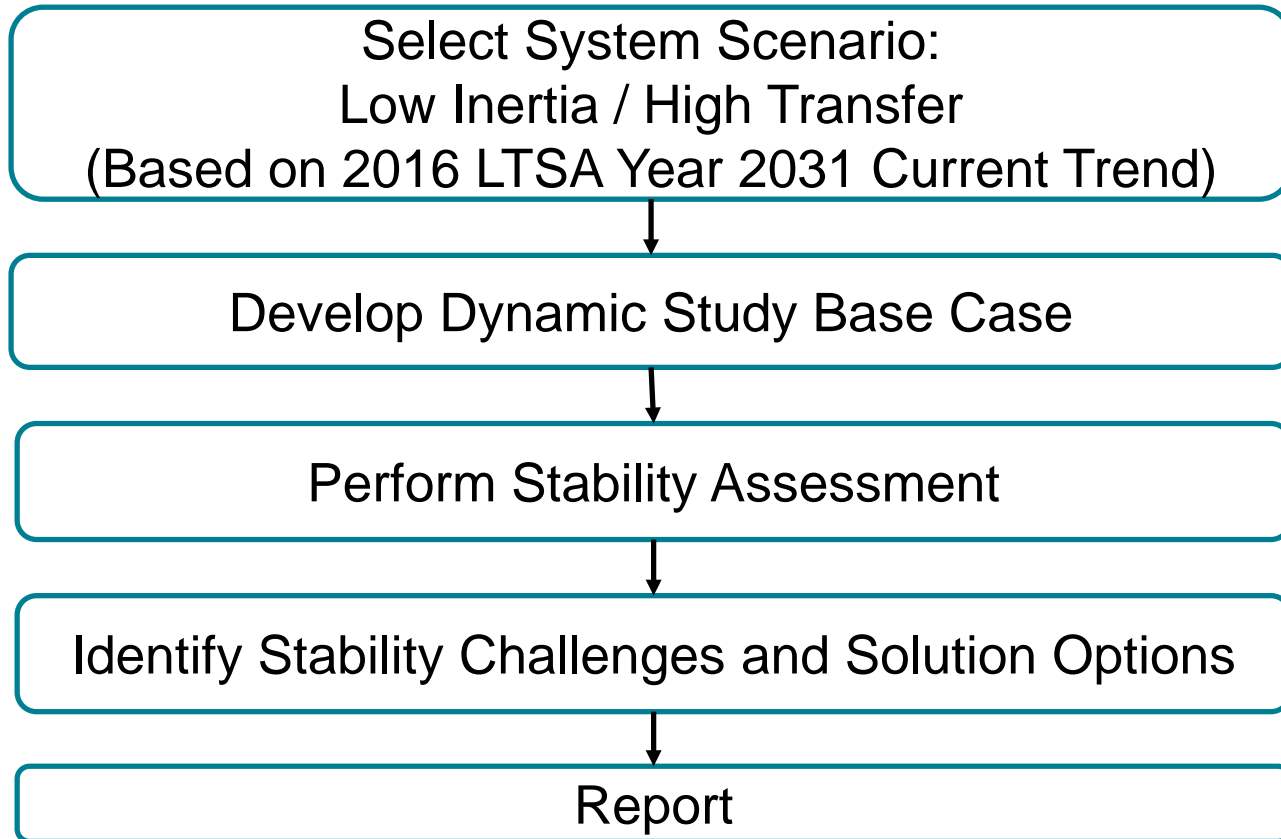
ERCOT Transmission Planning

RPG Meeting
March 21, 2017

Study Objective

- Analyze potential system conditions where the system is the most stressed from a stability perspective and evaluate solutions to address potential stability challenges.
- To facilitate communication and understanding of long-term system needs among stakeholders.
- Not intended to recommend specific upgrade projects

Study Process



Study Scenario

- Based on 2016 LTSA Year 2031 Current Trend Economic Study Results
 - System Inertia: 155 GW-sec
 - West-to-North Interface Flow: 15.5 GW (16 major 345 kV circuits)
 - Wind/Solar Penetration: 69%
 - System Load: 42.2 GW (includes self-serve load)
- Initial Observation
 - Additional reactive devices are required to support the high renewable transfer developed in the study case

Study Assumptions

- Transmission topology is based on 2016 LTSA reliability case
- Use Most Recent DWG Dynamic Data Where Applicable
- New/Speculative Facilities (with significant dynamic response)
 - Represent with Generic Models/Typical Controller Parameters
- Contingencies
 - Selected 345 kV Transmission Elements
 - Loss of Large Generators
- NERC and ERCOT Performance Criteria
- Sensitivity test may be included for different inertia and/or transfer level.

Next Steps

- Develop dynamic flat start base case
- Tentative Schedule
 - Finish the assessment by September, 2017