



**Item 8:
Green Bayou Unit 5 - RMR Analysis and
Final Determination**

Warren Lasher, Director, System Planning

Board of Directors Meeting

ERCOT Public
June 14, 2016

Background

On March 29, 2016, NRG Texas Power LLC submitted a Notification of Suspension of Operations (NSO) for the suspension of Greens Bayou Unit 5 (371 MW) located in Harris County.

NRG proposed that Greens Bayou Unit 5 be suspended from operations indefinitely starting on June 27, 2016

RMR Study Purpose and Selection Criteria

- ❑ To determine whether the Generation Resource is required to support ERCOT transmission system reliability
- ❑ RMR status may be granted if the reliability analysis identifies any deficiencies that cannot be resolved through the following list of alternatives:
 - Redispatch/reconfiguration through operator instruction
 - Remedial Action Plans (RAPs)
 - Special Protection Systems (SPSs) initiated on unit trips or Transmission Facilities' Outages
 - Load response alternatives once a suitable Load response service is defined and available
 - Resource alternatives, including capabilities of Distributed Generation (DG), Load Resources, Direct Current Ties (DC Ties), Block Load Transfers (BLTs), etc.
 - Transmission upgrades that can be implemented prior to the time period that the reliability deficiency has been identified

Green Bayou 5 - RMR Studies

- ❑ Proposed major generation and transmission additions in the area
 - PH Robinson Peakers (390 MW) in Galveston County - *projected in-service date of July 2016*
 - Colorado Bend 2 (1,148 MW) in Wharton County - *projected in-service date of July 2017*
 - Houston Import Project - *projected in-service date of May 2018*

Green Bayou 5 - RMR Study Results

- ❑ Summer 2016 and 2017 condition:
 - Thermal violations noted under G-1 + N-1 conditions with and without the Greens Bayou 5
 - Addition of future planned generation resources does not resolve the thermal violations
 - Operational mitigation plan would require load shed
 - Greens Bayou 5 would reduce the likelihood of load shed
- ❑ Winter 2016 - 2017 condition:
 - No thermal violations under G-1 + N-1 conditions without Greens Bayou 5
- ❑ Summer 2018 condition:
 - Thermal violations under G-1 + N-1 conditions without Greens Bayou 5 (if Houston Import Project is not in-service)
 - Houston Import project resolves the thermal violations

Green Bayou 5 RMR Study – Conclusion

- ❑ 2016 and 2017 summer peak conditions show reliability violations in the study area indicating that Greens Bayou Unit 5 is required to support the system reliability
- ❑ 2016 - 2017 winter peak condition indicates no reliability issue without Greens Bayou Unit 5
- ❑ The Houston Import Project (*projected in-service date of May 2018*) resolves the reliability violations
- ❑ None of the RMR alternatives specified in the protocols represent a viable option for summer 2016
- ❑ ERCOT will conduct an analysis of Must-Run Alternatives (MRA) as specified in the Protocols