



# **ERCOT PROTOCOLS: THE RELIABILITY RULES IN TEXAS' COMPETITIVE ENERGY MARKET**

**SENATE BUSINESS AND COMMERCE  
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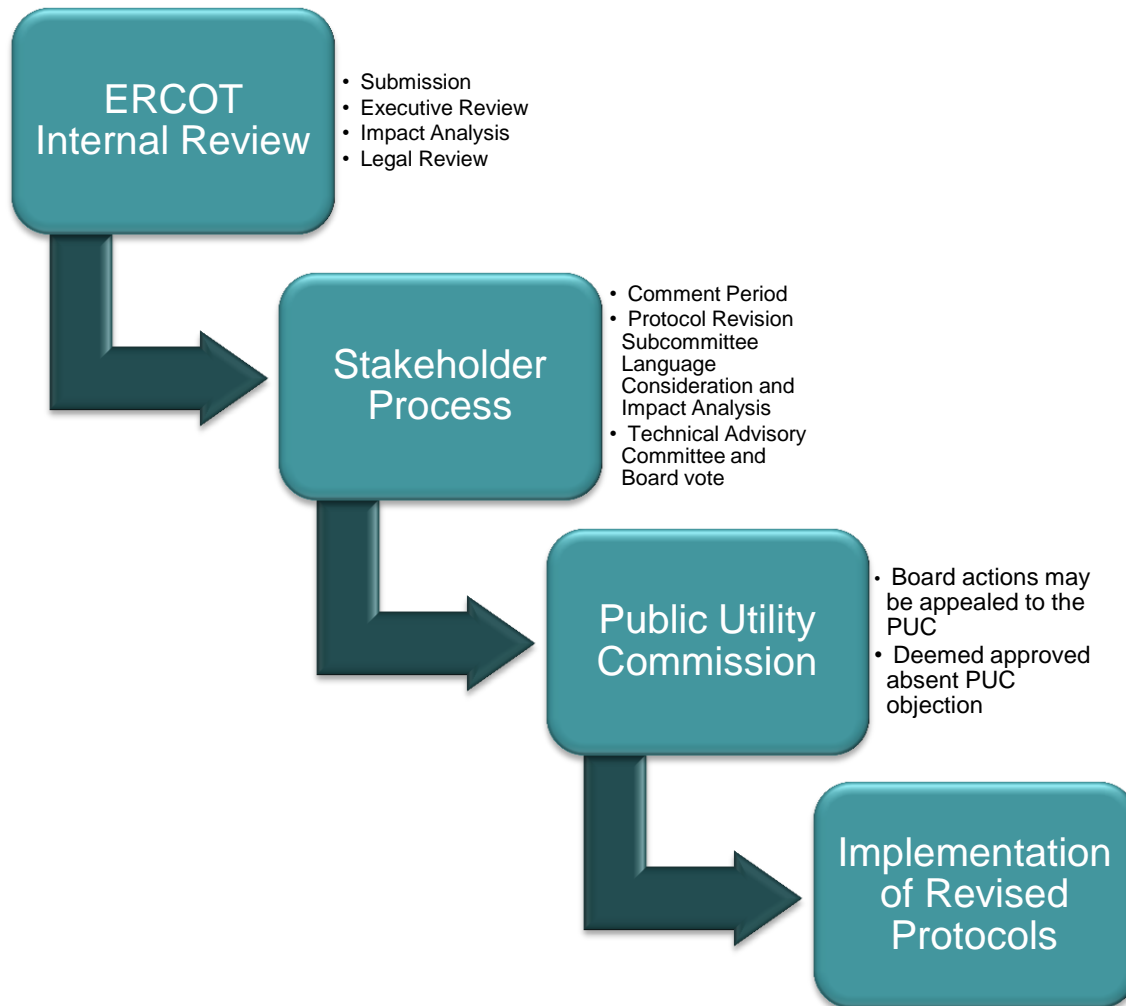
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**Protocol Revision Request:** a request to make additions, edits, deletions, revisions, or clarifications to the protocols. Protocol Revision Requests may be initiated by ERCOT staff or stakeholders.

Revision requests are evaluated in the stakeholder process, approved by the Board, and filed at the PUC.

The stakeholder process allows market participants to participate in developing business rules and practices that govern the ERCOT market.

# STEPS TO CREATE OR REVISE PROTOCOLS



## **When does the Revision Request become effective?**

- Upon Board approval, ERCOT implements revisions on the first day of the month following Board approval, unless the Board directs a different schedule.
- Revisions may be appealed to the Public Utility Commission within 35 days after Board approval. Appellate process at PUC may delay implementation, but appeals have been infrequent.
- ERCOT must provide notice to stakeholders of approved protocol changes no later than ten days prior to actual implementation.
- ERCOT incorporates approved revisions into the protocols. Revised protocols are filed with the PUC and posted on the ERCOT website one day prior to effective date.

# WHY ARE SOME RESOURCES TREATED DIFFERENTLY?

- Protocols govern how different electric generating resources interconnect and interact with the transmission grid and establish rules that enable grid operators to manage issues efficiently while recognizing the unique characteristics of certain resources.
- The ERCOT system features diverse generators using different technologies and fuels, with major contributions from units powered by natural gas, coal, nuclear, and wind resources.
- Different technological characteristics raise different issues for the grid operator:
  - How fast does this type of unit start up?
  - Can the unit's output be planned, or is it dependent on weather conditions?
  - Can the unit's output be controlled to what operators may require?
  - How do the different units available on a particular day affect electric system stability and transmission congestion on that day?

# EXAMPLES IN THE CURRENT ERCOT PROTOCOLS

- When ERCOT purchases capacity to meet reliability needs, the costs of those purchases are allocated to Qualified Scheduling Entities with capacity shortfall. Capacity shortfall is calculated based on forecast values for intermittent resources. For other resources, it is calculated based on the lower of the scheduled capacity value at time of purchase or at real-time.
- Generators are subject to penalties when generating power outside established ERCOT standards. Intermittent resources must comply with such standards, but compliance is reviewed in light of the difference in their ability to control, for example, changes in wind speed.
- If ERCOT needs to take generators offline for reliability reasons, nuclear and hydro will only be taken offline after all other plants are.
- Hydro generators are allowed to provide fast acting responsive reserve service up to 100% of their maximum output. All other generators are limited to 24% of maximum.