Key Principle 3 – Reliability Unit Commitment

To facilitate this change to the Real-Time Market (RTM), Reliability Unit Commitment (RUC) will be modified to co-optimize energy and Ancillary Services (AS). RUC will look at the Resources planned to be available to determine whether additional Resource commitments are needed to meet the load forecast and minimum AS requirements, as well as resolve transmission congestion.

# Principle Concepts

# *Approved Principle Concepts*

None

#  *Principle Concepts for Voting*

1. The RUC optimization will not use the Ancillary Service Demand Curves (ASDCs) that will be put into place for the RTM. Instead, RUC will attempt to solve for a generation unit commitment that meets the load forecast with sufficient capacity for the AS Plan using at a defined constant penalty value (similar to what is in place in the current RUC implementation).
2. Modifications will be made to the existing set of data elements provided by Qualified Scheduling Entities (QSEs) in Resource Current Operating Plans (COPs) to accommodate the changes to the RUC optimization.
3. Within the COPs, QSEs will have a mechanism through which to indicate for each hour the physical ability or inability of a Resource to provide AS (e.g., a Resource Status).
4. The amount of AS that can be provided by a Resource constrained that Resource’s qualifications and capabilities.
5. Proxy AS Offers will be used in RUC in determining a co-optimized solution that will meet the AS Plan.
6. The RUC engine will consider OFFQS Resources that are qualified for ECRS as being able to provide ECRS.
7. The RUC engine will consider OFF Resources that are qualified for Non-Spin when offline as being able to provide Non-Spin.
8. The current process under which ERCOT Operators review recommendations from the RUC optimization and make commitment instruction decisions will remain in place. This process includes:
9. ERCOT Operators will give the RTM ample time to respond to postings of capacity shortages for future hours
10. If a generation commitment is recommended by RUC for a future hour, ERCOT Operators will delay any Dispatch Instruction until that Resource’s start-up time is less than the current time and the recommended start time for the RUC commitment recommendation thus giving QSEs a chance to self-commit.
11. QSEs instructed to be committed by RUC may elect to forgo such instruction if they agree to a self-commitment.
12. Costs paid to a Resource that is committed by RUC will be borne by QSEs who have indicated a Resource short position in the RTM.

Note: For non-consensus items, opposing key principle or principle concept language would be provided in this form to TAC for their review.

# *Future Decision Points and Issues for Developing Principle Concepts*

Functionality and Process Concepts

1. Details on changes to COP or alternative source of Resource information
2. Potential floors for AS Offers on Resources committed through the RUC process

Settlement Concepts

1. Capacity short calculation and allocation of RUC make-whole
2. Changes to RUC claw-back and make-whole

# Applicable Protocol Sections

*Placeholder*