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February 9, 2022

Public Utility Commission of Texas
Chairman Peter Lake
Commissioner Will McAdams
Commissioner Lori Cobos
Commissioner Jimmy Glotfelty
1701 N. Congress Ave.
Austin, Texas 78711

Re: PUC Project No. 52373, *Review of Wholesale Electric Market Design*

Dear Chairman and Commissioners:

Pursuant to Public Utility Commission of Texas (PUC) instruction at the December 16, 2021 open meeting, Electric Reliability Council of Texas, Inc. (ERCOT) provides the following information regarding policy decisions, feasibility, and the interactive dynamics surrounding the Backstop Reliability Service (BRS) market design discussion.

Backstop Reliability Service (BRS)

Concept: Enable ERCOT to procure resources to provide a backstop reliability service that will be dispatched to meet specific reliability needs that are not met by ERCOT's real-time and ancillary services market to help prevent emergency conditions.

BRS will be used to procure accredited generation resources that will serve as an insurance policy to help ensure reliability in ERCOT. The intended outcome of BRS is to provide a forward price signal for new dispatchable generation investment and resource deployment.

Decision points for the efficient implementation of BRS in a timely fashion to meet criteria established in Sections 14 and 18 of Senate Bill 3 (SB 3), as set forth in PURA §§ 35.004(g) and 39.159(b)-(c)

As requested at the December 16, 2021 open meeting, ERCOT has identified the following four design elements that would enable ERCOT to efficiently develop and deploy BRS:

Procurement based on a Competitive Request for Proposal (RFP) Process
The most rapid way to implement BRS is to use a competitive RFP process to procure resources for the service. An automated competitive auction could ultimately serve as a long-term procurement mechanism, but a competitive auction will take longer to design, code, test, and deliver.

Allow the use of BRS resources for local reliability issues
Allowing the use of a BRS resource to solve local reliability issues would allow resources to participate in BRS without a Reliability Must-Run (RMR) study and will make implementation more efficient. Otherwise, ERCOT would have to conduct RMR studies to ensure a resource's participation in BRS does not create a local reliability issue.

Cost Allocation
Cost allocation on a Load Ratio Share (LRS) basis will save development and implementation time by using existing cost allocation processes.

Deployment of the BRS resource
The quickest implementation requires the use of existing Security-Constrained Economic Dispatch (SCED) and Reliability Unit Commitment (RUC) processes for BRS deployments.

Decision points from the Commission to incorporate into the Initial BRS RFP

ERCOT has identified the following design elements that are needed for an initial BRS RFP:

Quantity to Procure
ERCOT's RFP needs to reflect the minimum quantity that ERCOT would procure and any limits on spending or maximum payment per megawatt (MW).

Eligibility Criteria
Eligible resources need to be defined.

Performance Criteria
As part of the contract, the RFP needs to reflect performance requirements and associated penalties and payment claw-back for non-performance.

Key long-term BRS elements

As requested at the December 16, 2021 open meeting, ERCOT has identified the following technical specifications and decision points for the Commission's consideration. These items provide additional detail for potential decision points listed above.

Reliability Level
The Reliability Level is a measure of desired improvements to the reserve margin, Loss of Load Events (LOLE), Expected Unserved Energy (EUE) or Loss of Load Hours (LOLH).

- What is the *reliability level* that the BRS is intended to achieve?
- Is the level mandatory (a "standard") or a goal ("target")? ERCOT recommends a target. This could be managed through a cap on dollars spent for the service or some form of penalty pricing.
- Should the level be periodically revised? ERCOT recommends that the levels of backup reserves procured through BRS be reviewed and adjusted periodically.

Quantity to Procure

- What is the amount (in MW) of back-up reserves to be procured?
- Should the amount of procured backstop resources be established in conjunction with ORDC parameters? ERCOT recommends that the ORDC parameters and backstop resource MW volumes be considered together in order to determine the combination that is most likely to attract enough investment to achieve the established Reliability Level. For example, the procured volume could be set at the MW of firm supply that is estimated as the need to meet the established Reliability Level (i.e., deficiency estimated at equilibrium market conditions relative to target reliability levels). The Commission could consider whether to update procurement volumes in conjunction with its biennial ORDC performance review.
- The Commission may also consider a graduated implementation of BRS to moderate the market impacts of a large procurement. For example, if the ultimate amount of BRS is 3,000 MWs, the first procurement might be 1,000 MWs followed by 2,000 MWs and finally arrive at 3,000 MWs after three rounds of procurement.

Eligibility Criteria

The characteristics of resources eligible to participate in BRS is important to establish as those characteristics will also determine how much should be procured to meet the established Reliability Level.

- BRS resources must be demonstrably reliable, accredited, dispatchable, generation interconnected with ERCOT.
    - If deemed eligible, switchable resources must not be committed to another Independent System Operator market.
- Some level of start-time or ramp-rate requirements is appropriate.
- Resources would need to be qualified relative to a "firm MW" resource capability for the relevant season.
- Duration requirements would also be included, based on the anticipated duration of shortage events from reliability modeling.
- ERCOT recommends that only the entirety of a resource would be able to participate in the service. Allowing resources to participate with only a portion of their capacity, with the other portion presumably participating in energy and ancillary services, would significantly increase the complexity of implementation. Committed resources could be tested randomly, such as on a seasonal basis, to demonstrate their reliability, subject to payment claw-backs and penalties for failure to perform, including disqualification from the service. Lastly, the ability and timing of a BRS resource being able to return to being a normal market unit needs to be determined.

Seasonal Procurement

Is an option for the Commission to consider but it is not a necessary feature.

- Separate procurements could be conducted for each season, as applicable, based on seasonally adjusted firm MW capability from each resource and based on the reliability target for that season.
- ERCOT recommends that seasonal procurement not be introduced into BRS initially, because of the complexity it would add to the procurement.

Forward Timeframe

- The procurement volume could be segmented into multiple procurements conducted six months to several years forward in order to provide more pricing transparency and forward investment signals (even for resources not selling into BRS, the prices produced from each procurement would begin to signal the need for incremental investments).

Process for Procurement

- How should the BRS be procured? While procurement through a competitive RFP is much faster to implement, a competitive auction may be the better long-term procurement process.
- How Should BRS be paid? There are two options: one where each accepted offer would be paid at their offer: known as a pay-as-bid mechanism. Or second, participants could be paid based on a single clearing price where everyone gets paid the highest accepted bid.

Performance Requirements and Enforcement

- What are the performance requirements? Clear performance requirements for BRS must be set, including penalties for failures during resource testing and penalties for non-performance during actual deployment of the service.
- What are the penalties? Penalties would include claw-backs of payments, as well as other potential penalties, including disqualification from future participation in the service. Energy revenues above operating costs would be returned so the BRS units could not make excess profits from the energy market (similar to the design of ancillary services products).

Cost Allocation

- What is the preferred cost allocation mechanism? Options include cost allocation on a load ratio share basis or load ratio share measured on a coincident net peak interval.

Processes for deployment

- What are the best policies regarding BRS offers? The resources that receive BRS payments should not compete with resources that do not receive BRS payments. The best way to accomplish this task is use BRS resources last, when they are needed for reliability. ERCOT's recommendation would be to require BRS resources to offer their energy above their Low Sustainable Limit (LSL) at the applicable offer cap.
- Are there any other pricing adjustments that should be made? ERCOT recommends that BRS resource capacity not be counted in ORDC reserves. ERCOT further recommends that a pricing adjustment be made for energy output up to LSL. Should BRS resources continue to be part of SCED and RUC? ERCOT recommends that BRS resources be dispatched by SCED and be eligible to be dispatched by RUC to solve local reliability issues.
- Can BRS resources participate in other Ancillary Services Markets? ERCOT recommends BRS resources be excluded from the other Ancillary Services Markets while participating in BRS.

ERCOT thanks the Commission for its consideration of this matter. ERCOT is available to answer any questions the Commission may have and stands ready to take other action as directed by the Commission.

Regards,

/s/ Kenan Ögelman

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