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PROJECT NO. 57236

**PROJECT TO DEVELOP THE TEXAS
BACKUP POWER PACKAGE
PROGRAM**

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**PUBLIC UTILITY COMMISSION

OF TEXAS**

VISTRA CORP.'S COMMENTS

TO THE PUBLIC UTILITY COMMISSION OF TEXAS:

Vistra Corp. (Vistra) files these Comments in response to the request for comments issued by the Public Utility Commission of Texas (Commission) Staff on January 23, 2025 regarding Patrick Engineering, Inc.'s Final Report (Final Report) on the Texas Backup Power Package (TBPP) program.¹ These comments are timely filed.² As requested, the executive summary is included in a separate attachment at the end of the comments.

I. COMMENTS

Vistra has limited its written responses at this time to Staff's request for comments to Questions 3 & 4, answered jointly, based primarily on the italicized language below. Vistra's comments are focused on some important policy considerations for the Commission as it prepares for a rulemaking to implement the TBPP program.

3. In Sections 2-4 and 2-5, the Final Report outlines design requirements and assumptions; technology specifications; *operating sequences*; and installation requirements.
 - A. How, if at all, could the specifications described in these sections affect implementation of the TBPP program?
 - B. How, if at all, should the specifications be modified to ensure effective implementation of the TBPP program?
4. *How should the TBPP be designed to mitigate or remedy any other factors that could negatively affect program implementation or participation, while ensuring compliance with statutory requirements?* Please limit this response to factors not previously mentioned in responses to questions one through three above.

¹ Project No. 57236, Questions for Comment on the Texas Backup Power Package Program Research Entity Final Report (Jan. 23, 2025).

² *Id.* Staff requested comments by February 14, 2025.

a. The Commission should coordinate its policies to ensure that operation of Texas Backup Power Packages does not undermine the state’s objectives to achieve reliability through dispatchable generation in the ERCOT competitive market.

Texas policymakers, including the Commission, have embraced an “all of the above” approach to electric reliability. A key success factor for that approach is policy coordination to ensure that adopted policies complement and support each other. The state has repeatedly and through multiple policy channels emphasized its objective of achieving reliability through dispatchable generation in the ERCOT competitive market, placing that objective of reliability through competitive markets above all others.

The TBPP is, by statute, “a stand-alone, behind-the-meter, multiday backup power source that can be used for islanding.”³ The Final Report, to its credit, recognizes this limited statutory scope in several places – noting that “grid connection is not permitted”⁴ (outside of charging batteries)⁵ and that operation is limited to “power grid failure”⁶ events and “only islanded.”⁷ These are reasonable provisions and are consistent with PURA.

In light of that, references to “manual operation” of TBPPs for “Storm Anticipation” are not consistent with PURA’s limitations on TBPP operations. Manual operation of TBPPs for “Storm Anticipation” is outside of the scope of events the legislature permitted for TBPP operation. Allowing the “manual operation” of TBPPs outside of a “power grid failure” could undermine the state’s interest in supporting dispatchable generation investment by limiting revenues to competitive dispatchable generators. To protect against that potential undermining effect, if the Commission does decide to allow for the “manual operation” option it should be appropriately scoped, coordinated by ERCOT, and managed so that the distortionary effect is removed from market prices. Similarly, there are suggestions in the report that TBPPs could have “potential for future frequency and voltage regulation for utility to aid maintaining grid resiliency” even during normal operations—such use of TBPPs are prohibited and could create significant economic issues for competitive dispatchable generators. These discussions appear in the chart on page 20 of the Final Report, copied below with added emphasis in red, for reference.

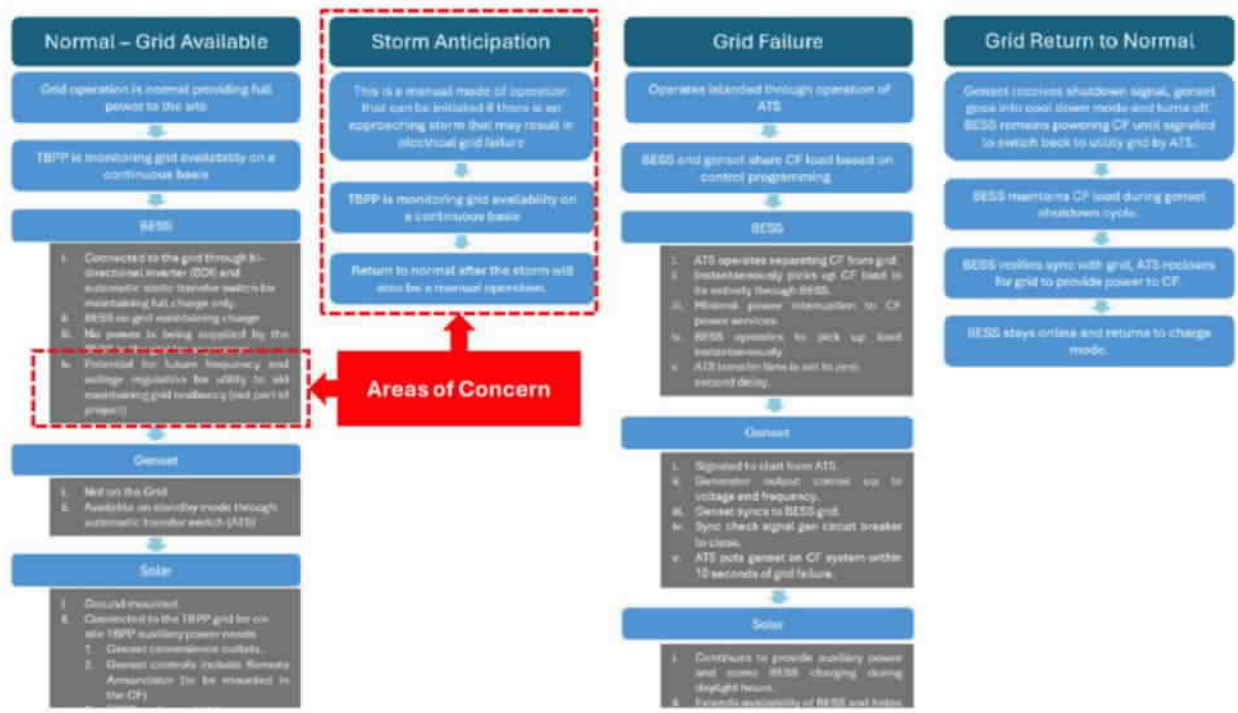
³ PURA § 34.0201

⁴ See Patrick Engineering Inc.-Texas Backup Power Packages Final Report, Item No. 11 in Project No. 57236, Project to Develop the Texas Backup Power Package Program (January 23, 2025) at 15 and 22.

⁵ *Id* at 15.

⁶ *Id* at 3, 15, and 22-23.

⁷ *Id* at 15 and 22.



In both instances, it is important for the Commission to recognize that generation resources rely on energy and ancillary service revenues to support their economic viability – and in the current ERCOT market structure, those are the only sources of revenue available to them. In an “energy-only” market design, customers only pay for what they use when they use it, and generators are paid only when they are dispatched for energy or awarded ancillary services. Therefore, an energy-only market favors resources that run frequently and have limited fixed costs (e.g., labor, debt service) that need to be recovered from the gross margins earned from providing energy and ancillary services. Energy-only markets struggle to adequately compensate resources that run primarily during infrequent, extreme system conditions and/or resources that tend to have large fixed costs. Yet these resources are necessary for the handful of exceptionally hot and cold days each year.

New entry into an energy-only market is challenging in the presence of out-of-market interventions because rational investors require a reasonable opportunity to earn back the equity invested and a return on that investment. When out-of-market resources run more and more, the ability for investors to earn their equity back is diminished because the competitive resources are dispatched at a lower level, and thus have less opportunity to earn revenues.

In that context, suggestions that TBPPs could be deployed to displace competitive generation resources in normal energy and ancillary service market conditions (i.e., outside of the extreme

“grid failure” conditions noted previously) signal a potential forthcoming subsidized market distortion. That would harm generators by crowding out the only sources of revenue for the dispatchable generation resources upon which the grid relies and the state has prioritized—particularly in high net load conditions where intermittent generation resource output is abnormally low. The more that out-of-market activities and subsidies interfere with the ability of in-market generation resources to compete for available revenues, the market will support fewer in-market generation resources. And the net result would be that the emergency tools such as TBPPs could, unhelpfully, need to be called on more often—but for their originally intended extreme scenario purpose.

b. The Legislature wants more development of competitive dispatchable generation in the ERCOT market.

The Texas Legislature has repeatedly signaled its desire to support development of more competitive dispatchable generation in the ERCOT market. Senate Bill 3 (SB3) added PURA § 35.004(g) in 2021, requiring the Commission to review the ancillary services suite and procurement practices to ensure that they continue to meet the needs of the ERCOT power region. That statute also directs the Commission to evaluate whether additional services are needed for reliability “while providing adequate incentives for dispatchable generation.” SB3 also added PURA § 35.159 – specifically titled “Power Region Reliability and Dispatchable Generation” – that directs the Commission to establish the reliability standard for ERCOT region, evaluate the ancillary services and reliability services needed to ensure appropriate reliability during extreme grid conditions, and (notably) “ensure that ... resources that provide [ancillary services and reliability services] are dispatchable and able to meet continuous operating requirements...” House Bill 1500 (HB1500) from 2023 similarly expressed preferences for dispatchable generation investment, amending PURA § 35.159 to require ERCOT to develop and implement a new ancillary service “for dispatchable generation facilities” to address inter-hour operational challenges, reduce Reliability Unit Commitments (RUCs), and support dispatchable generation resources needed to meet the reliability standard. HB1500 also added PURA § 35.1591, an annual report comparing dispatchable and non-dispatchable generation facilities, as well as included a guardrail on the Performance Credit Mechanism (PCM) in PURA § 35.1594(a)(2) that Performance Credits under the PCM could be “available only for dispatchable generation.” While

the PCM has been “shelved” for the time-being,⁸ it is still notable that the Legislature felt it important to focus its potential solely on dispatchable generation.

Particularly notable is 2023’s Senate Bill 2627 (SB2627), which established both the TBPP and the Texas Energy Fund. SB2627 authorized up to \$10B in funds, 72% of which was dedicated to loans and completion bonuses for upgrades to existing dispatchable generation and construction of new dispatchable generation. The dispatchable generation resource projects that the Texas Energy Fund is currently evaluating will all have to depend on energy and ancillary service market revenues to repay the loans ultimately taken out from the state, so it would be counterintuitive and at cross-purposes for TBPPs to be utilized in a manner that could undermine the financial viability of Texas Energy Fund projects.

c. The Legislature recognized that Texas Backup Power Packages represent potentially sizeable out-of-market distortions to the ERCOT energy market, and enacted limitations to prevent them.

In authorizing TBPPs, the Legislature had the foresight to include PURA § 34.0204(4) & (6), as well as PURA § 34.0205(e). These provisions limit the size of TBPPs, prohibit the use of TBPPs “for the sale of energy or ancillary services,” and preclude the TBPP from supporting commercial energy systems (among other things). These protections reflect an understanding that there could be temptation to use TBPPs for out-of-market purposes, which could negatively impact competitive dispatchable generation resources.

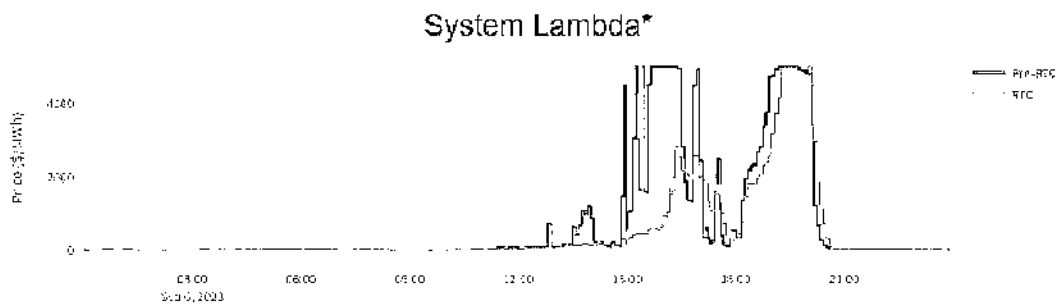
d. Real-Time Co-optimization will increase the ERCOT market’s dependence on physical scarcity to send financial signals for investment in generation resources, making the ERCOT market even more sensitive to out-of-market distortions.

Texas policymakers and stakeholders have spent many years grappling with the inherent tension between the energy-only market design and reliability objectives. It is to the Commission’s great credit that a reliability standard for the ERCOT region now exists in 16 Texas Admin. Code (TAC) § 25.508. The three-pronged approach to the reliability standard adopted in that rule is practical and rooted in the public experience of grid reliability. The rule also provides for a defined

⁸.See Project No. 55000.

process to review the alignment of market incentives and outcomes with the reliability standard, though that does not start until 2026.

In the meantime, however, the market design decisions made to date have not reconciled market incentives with the reliability standard. Real-Time Co-optimization (RTC) has the commendable motivation to enhance efficiency of market operations and dispatch, but that will also further limit pricing signals that investors must rely on to times of high physical scarcity, when ERCOT foregoes the risk mitigation of ancillary service reserves to avoid shedding load. RTC is therefore likely to increase the financial gap for new resources and existing resources that operate infrequently—reinforcing the crisis-based nature of the ERCOT market. For example, see this backcast of September 6, 2023 that ERCOT presented to the RTC + Batteries Task Force that suggests RTC would have resulted in materially lower real-time pricing, with scarcity pricing only occurring during the very tightest hours of the day:⁹



*Pre-RTC trendline includes ORDC Adders

Repeated over the handful of hours in the year when scarcity pricing historically has occurred (<2% of hours in 2024 saw hourly real-time North Hub prices above \$100/MWh, and the annual average was only \$25.89/MWh), RTC could have a material impact on the ERCOT market's ability to yield outcomes consistent with the reliability standard and to create an environment where fewer dispatchable resources can continue to operate economically, all else equal.

While the Texas Energy Fund has kick-started investment in dispatchable generation, it is not a market design and does not address the revenue gap and uncertainty that dispatchable generation resources face; without policy certainty in market design reforms that effectively align market outcomes with the reliability standard, the completion of Texas Energy Fund projects could, all else equal, drive existing dispatchable generation to exit the market, creating a situation in which the market is not net growing dispatchable resources as much as the TEF interest might indicate.

⁹ See https://www.ercot.com/files/docs/2024/10/17/2024-10-22_rtc_sim_tool_case_studies.pptx

While other market design considerations are ongoing (e.g., the development of Dispatchable Reliability Reserve Service (DRRS)), the fundamental takeaway is that the ERCOT energy-only market will continue to be extremely sensitive to out-of-market interference and market distortions, and will likely be even more so in the future following the launch of RTC. Therefore, in the context of TBPP it is of critical importance that \$1.2B of state-funding for backup power for critical facilities be used only as intended, and not be deployed for out-of-market purposes (or, if they are, that utilization must be limited in scope, coordinated by ERCOT, and the distortionary impact removed from market pricing).

e. Manual “Storm Anticipation” operation of Texas Backup Power Packages and use of Texas Backup Power Packages to provide frequency or voltage regulation appears inconsistent with PURA and would distort the ERCOT market.

Nowhere in PURA Chapter 34 Subchapter B (“Texas Power Promise: Backup Power Packages”) is the term “storm anticipation” used or is “manual mode of operation” in advance of a storm system contemplated or authorized. To the contrary, PURA § 34.0201 specifies that TBPPs are “a stand-alone, behind-the-meter, multiday *backup* power source that can be used for islanding.”¹⁰ PURA § 34.0202 further notes that the purpose of TBPPs is to “ensure the reliability or adequacy of an electric power grid in this state *for facilities on which communities rely for health, safety, and well-being.*”¹¹ Taken together, TBPPs are meant to backup the grid power supply for those specific facilities— making their individual service more reliable and resilient, but not replacing the grid power supply. This reading is consistent with the prohibitions in PURA § 34.0204 against using TBPPs to sell energy or ancillary services (which would specifically prohibit the use of TBPPs to provide voltage or frequency support) and in PURA § 34.0205 against providing state support through TBPPs for a commercial energy system. This is the only reasonable reading that coordinates the multiple policy priorities of the state, giving meaning to each both individually and holistically.

¹⁰ Emphasis added.

¹¹ Emphasis added.

- f. **If “Storm Anticipation” use is permitted, however, the Commission should direct ERCOT to coordinate that use and any other demand reduction through operation of Texas Backup Power Packages, and account for the operation of Texas Backup Power Packages in the Reliability Deployment Price Adder (RDPA) to mitigate their market-distortive effects.**

Markets have a unique ability to coordinate many different activities from many different market participants with many different objectives through pricing. In an energy-only electricity market, such as ERCOT, that pricing balances on a knife’s edge because supply and demand must always be instantaneously matched to maintain 60 Hz frequency of the grid. In support of that objective, ERCOT performs a massive market coordination function to align supply and demand across multiple timeframes. ERCOT uses the Day-Ahead Market and the Security Constrained Economic Dispatch (SCED) process that runs approximately every 5 minutes in real-time to assign energy dispatch instructions to generation and other resources across the system, and also employs the Load Frequency Control signal it sends to resources tasked with providing Regulation service, measured in seconds or less.

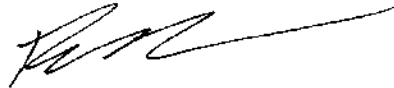
If “Storm Anticipation” operation of TBPPs were to be allowed, it would be critical that ERCOT coordinate that operation so that storm anticipation deployment does not disrupt the balance of the ERCOT system, creating reliability concerns for other customers or market participants. This would also allow ERCOT to account for the out-of-market price distortion created by the TBPPs operating in “Storm Anticipation” mode through a tool called the Reliability Deployment Price Adder (RDPA). The RDPA effectively creates a secondary pricing run of the SCED process to estimate what market prices would have been had there not been out-of-market interference. RDPA is a critical feature of an energy-only market that, as described above, depends on energy and ancillary service revenues to support the resource adequacy and reliability of the entire system.

II. CONCLUSION

Vistra appreciates the Commission's consideration of these comments and looks forward to working with the Commission, Staff, ERCOT, and other stakeholders in this project.

Dated: February 14, 2025

Respectfully submitted,



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VISTRA CORP.’S COMMENTS – EXECUTIVE SUMMARY

- The Commission should coordinate its policies to ensure that operation of Texas Backup Power Packages does not undermine the state’s objectives to achieve reliability through dispatchable generation in the ERCOT competitive market.
- The Legislature wants more development of competitive dispatchable generation in the ERCOT market.
- The Legislature recognized that Texas Backup Power Packages represent potentially sizeable out-of-market distortions to the ERCOT energy market and enacted limitations to prevent them.
- Real-Time Co-optimization will increase the ERCOT market’s dependence on physical scarcity conditions to send financial signals for investment in generation resources, making the ERCOT market even more sensitive to out-of-market distortions.
- Manual “Storm Anticipation” operation of Texas Backup Power Packages and use of Texas Backup Power Packages to provide frequency or voltage regulation appears inconsistent with PURA and would distort the ERCOT market.
- If “Storm Anticipation” use is permitted, however, the Commission should direct ERCOT to coordinate that use and any other demand reduction through operation of Texas Backup Power Packages, and account for the operation of Texas Backup Power Packages in the Reliability Deployment Price Adder (RDPA) to mitigate their market-distortive effects.