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REVIEW OF THE ERCOT SCARCITY
PRICING MECHANISM

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PUBLIC UTILITY COMMISSION
OF TEXAS

**VISTRA'S COMMENTS IN RESPONSE TO MARCH 8, 2021 STAFF REQUEST FOR
COMMENTS**

I. General

Vistra Corp. (Vistra) supports the Public Utility Commission of Texas's (Commission's) interest in reviewing its Low System-Wide Offer Cap (LCAP) rule¹ in light of the outcomes from Winter Storm Uri. Vistra supports comments by the Texas Competitive Power Advocates (TCPA) that any rule changes should follow a deliberative process and be undertaken after the completion of the current Texas legislative session. As a threshold matter, any review of the LCAP should be taken in the context of broader policy considerations regarding the incentives and outcomes inherent to the current ERCOT energy-only market construct.

Vistra also appreciates the Commission's concern implied in its request for comments in this project regarding the impact that implementation of the LCAP this early in 2021 could have on market performance through the balance of the year – particularly during the critical summer peak load period. Given the unique nature of Winter Storm Uri, including the wide diversity of generators' financial experiences during that period, good cause exists for the Commission to raise the LCAP above its current level for the balance of 2021. Vistra suggests \$4,500 per megawatt-

¹ 16 Tex. Admin. Code (TAC) § 25.505.

hour (MWh) as a revised LCAP (or 50 times the fuel index price, if greater) to continue to provide strong incentives to market participants and assist in constructively incentivizing new investment, while recognizing and respecting the costs already incurred by the market this year.

It also seems clear from legislative testimony and power industry disclosures that profiting by generators from the winter storm event was mixed at best and likely negative overall challenging the premise of the LCAP rule. In fact, surveying Wall Street analyst reports would strongly suggest that investors are quite skeptical of investing in the ERCOT market given the myriad of rules changes and triggers of which the LCAP rule is one. There is no doubt setting the cap at the LCAP price of \$2,000/MWh will be bearish for the ERCOT market and support the notion by investors that the ERCOT market rules have a number of provisions that trigger risk for generators.

II. Responses to Specific Questions

1. Should the Commission amend its rules to adjust the LCAP?

Yes. Vistra supports a thoughtful and thorough review of the policies that underpin the ERCOT market design to account for, and improve from, the shortcomings identified by Winter Storm Uri. The Commission's Scarcity Pricing Mechanism (SPM) rules, including the LCAP, are natural policies to evaluate in that exercise. If the Commission finds that the LCAP or the SPM more broadly are failing to achieve their intended functions, changes should be adopted.

2. If the Commission amends its rules to adjust the LCAP, what specific adjustments should it make?

The specific adjustments depend, as an initial matter, on legislative and/or Commission decisions on broader policy questions regarding the effectiveness of the current energy-only market structure. In light of Winter Storm Uri and its aftermath, policy makers should decide

whether the volatility of the energy-only market design produces desired reliability outcomes or if other policies are needed to encourage those desired outcomes with less market volatility.

With respect to the LCAP specifically, historically, it has been viewed as a “circuit breaker”² for the energy-only wholesale market—which, by nature, relies on periods of scarcity to send adequate pricing signals for both future generation development and continued investment in existing generation—against excess “transfers of wealth from load to generation during years where reserve margins are thin.”³ Vistra and its predecessors have historically advocated that the SPM and LCAP are an imperfect feature in an energy-only market that is conservatively biased by design,⁴ as demonstrated by years of consistently low wholesale prices and only very rare occurrences of scarcity pricing resulting in estimated generator net revenues for a year that reach

² See, e.g., *Petition of the Electric Reliability Council of Texas for Approval of the ERCOT Protocols*, Docket No. 23220, Order on Rehearing at 13 (Jun. 4, 2001) (In the proceeding in which the Commission approved the initial set of ERCOT Zonal Protocols, the Commission ordered ERCOT to establish offer caps as a necessary “circuit breaker” or backstop to prevent the possible exercise of market power by generation entities); *Rulemaking on Wholesale Electric Market Power and Resource Adequacy in the ERCOT Power Region*, Project No. 31972, Order Adopting Amendment to §25.502, New §25.504 and New §25.505 as Approved at the August 10, 2006 Open Meeting at 121 (Aug. 23, 2006) (In the rulemaking in which the LCAP was initially established, the Commission stated “that an important purpose of the LCAP is to prevent excessive transfers of wealth from load to generation during years when reserve margins are thin.”); see *PUC Rulemaking to Amend PUC Subst. R. 25.505, Relating to Resource Adequacy in the Electric Reliability Council of Texas Power Region*, Project No. 40268, Order Adopting Amendments to §25.505 as Approved at the October 25, 2012 Open Meeting at 31 (Oct. 30, 2012) (In increasing the LCAP to its current level, the Commission stated that: “Taken as a whole, the amended [peaker net margin (PNM)] and LCAP provide generators with a reasonable opportunity to earn a reasonable return on their investments while protecting loads from excessively high prices.”).

³ Project No. 31972, Order at 121.

⁴ See Project No. 31972, TXU Wholesale Comments on Proposed Substantive Rules 25.504 and 25.505 at 12-13 (Apr. 10, 2006) (commenting that the LCAP should be based on supportable economic foundations and suggesting certain changes to the SPM, plus periodic review of its effectiveness); Project No. 31972, TXU Wholesale Comments on Proposed Substantive Rules 25.504 and 25.505 (replies) at 2-3 (Apr. 24, 2006) (arguing that a “circuit breaker” or “cooling off period” was not a “realistic mechanism for an energy-only market”); Project No. 40268, Luminant’s Initial Comments Regarding Proposed Amendments to § 25.505 at 5-7 (Jun. 15, 2012) (advocating for an increase in the LCAP to better balance the goals of moderating extreme market outcomes and incentivizing investment in new and existing generation); *Rulemaking Proceeding to Amend 16 TAC 25.505, Relating to Resource Adequacy in the Electric Reliability Council of Texas Power Region and to Repeal 16 TAC 25.508, Relating to the High System-Wide Offer Cap in the Electric Reliability Council of Texas Power Region*, Project No. 48721, TCPA Comments at 1 (Feb. 11, 2019) (advocating that the LCAP either be increased to \$4,500 per megawatt-hour (MWh) or eliminated altogether).

the cost of new entry.⁵ Thus, consistent with Vistra's past advocacy on this issue, if the Commission determines that the energy-only market design should be maintained, then the Commission should consider eliminating the LCAP construct altogether. Without a capacity market, ERCOT market participants typically lock in the bulk of their expected revenues by hedging the risk of scarcity in the summer months (i.e., by selling power ahead to wholesale purchasers based on forward prices). Without a steady capacity payment, forward markets are the only way to send a price signal for the need for incremental new entry and exit, and the only way for generators to lock in a stable revenue based on that price signal that does not depend solely on rare scarcity events in which generators' revenues will vary widely and may even be negative due to the increased fuel prices during such events and other factors (discussed below). Lowering the system-wide offer cap to the LCAP now (and keeping it there) in the months leading up to summer has and will continue to have a dampening impact on forward prices and thus hinder the ability to encourage incremental new entry and exit that relies on stable revenue for the rest of the year.

At a minimum, the Commission should evaluate including gas transport and delivery costs in the peak operating cost (POC) calculation, which is an input to the peaker net margin (PNM) calculation that triggers the implementation of the LCAP under the current SPM when the PNM exceeds a specified threshold (three times the cost of new entry, as determined by ERCOT).⁶ Specifically, the PNM is calculated by deducting, from average system-wide real-time energy prices, the POC, which is set at ten times the daily index price of natural gas⁷ (based on the Katy

⁵ See Potomac Economics' 2019 State of the Market Report for the ERCOT Electricity Markets at iii (May 2020) (showing average annual real-time energy market prices from 2011 through 2019, which ranged between ~\$24 and \$53/MWh, with most years in the \$20 and \$30 range and the outliers consisting of years (2011 and 2019) with multiple shortage events). The Report further states that 2019 was the first year since 2011 that the estimated net revenues in all four zones in ERCOT exceeded the estimated cost of new entry. *Id.* at x.

⁶ 16 TAC § 25.505(g).

⁷ 16 TAC § 25.505(g)(2)-(4).

hub⁸). This impact was particularly pronounced during Winter Storm Uri for plants without any firm gas, which would have paid significant values in excess of the index price to secure gas for their plants, as discussed further below. Because it is not always possible for a generator to contract for firm gas (even if it wants to do so), the POC should take into account the costs to secure gas during scarcity events for generators with interruptible (or no) transportation contracts. Otherwise, the POC will not actually approximate generators' fuel costs during scarcity events, and the PNM, which is derived from the POC, will not be a very accurate proxy for generator net revenues during those events.

Indeed, the SPM's ability to perform its intended function as a backstop against extreme market outcomes, while also allowing prices to reflect scarcity in order to incentivize new and continued investment in generation, should be evaluated given the extreme gas prices that we now know can occur during scarcity events. During Winter Storm Uri, delivered gas prices at the Henry Hub reached their highest level since 2003,⁹ and gas prices across trading hubs varied drastically, reportedly reaching as high as nearly \$1,200 per MMBtu at one hub:

⁸ ERCOT changed the index price from the Houston Ship Channel to the Katy hub via Nodal Protocol Revision Request (NPRR) 952 (implemented December 12, 2019), which revised the definition of "fuel index price" in Section 2 of the Protocols.

⁹ <https://www.eia.gov/todayinenergy/detail.php?id=47016>.

Natural gas price ranges at selected trading hubs (Feb 2021)

dollars per million British thermal units

daily record high (\$/MMBtu)



Source: U.S. Energy Information Administration, based on *Natural Gas Intelligence* data

This wide variation of prices at different hubs, which should at least in part represent differences in transportation costs between locations, begs the question of whether a PNM based on the index cost of gas at one hub (the Katy hub)¹⁰ truly reflects the full cost of fuel. If it does not, then the PNM is a less reliable proxy for generator net revenues, particularly during extreme events when PNM can accumulate more quickly. This in turn suggests that lowering the system-wide offer cap to the LCAP on the basis of that approximation is arbitrary, particularly based on the outcomes of situations such as Winter Storm Uri. Notwithstanding these shortcomings, Vistra does not recommend removing the 50 times the fuel index price provision from LCAP until the Commission can undertake a holistic review of the ERCOT market design.

Further, it is questionable whether the SPM is actually functioning to act as a backstop for purchasers of electricity if, by harming the price signals that allow generators to invest in current

¹⁰ The Katy Hub spot gas price reached \$338.75/MMBtu on February 17. According to S&P Global. <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/february-spot-gas-values-in-parts-of-us-grew-by-900-month-over-month-62948924>

resources and pursue new build, less generation is ultimately available in the market. The SPM/PNM/LCAP mechanism measures generator net revenues for a hypothetical unhedged generator, which is also not reflective of actual generator performance, as demonstrated by the fact that the Winter Storm Uri event appears to have been severely negative for many generators. Since so much of the gas market was inoperable, even unsold or “long” generation received less or no revenues as full operational capacity was impossible. Generators that sold generation forward based on expected output would be negative. By acting to lower the system-wide offer cap to the current LCAP based on theoretical revenues that did not actually materialize for many generators, the SPM is in fact harming resource adequacy pricing signals for the rest of the year.

3. If the Commission amends its rules to adjust the LCAP, when should these adjustments take effect?

As noted at the outset, given that the Legislature is in session and the impacts of Winter Storm Uri are just beginning to be evaluated, permanent rule changes relating to the LCAP or SPM in general should not be rushed. Vistra does not recommend that the Commission take this up until after legislative session has ended and statutory policy changes (if any) can be incorporated.

However, in the short term, the Commission should find good cause to grant an exception to the rule and raise the LCAP for the remainder of 2021 to an interim level that balances the costs of Winter Storm Uri with the public policy objective of providing strong and proper behavior incentives for both generation and loads through the critical summer peak period. In addition, it is worth noting that raising the LCAP would not affect most end-use customers (particularly in the competitive market), who should be protected from direct exposure to real-time wholesale prices due to their contracting with retail electric providers (REPs) that should hedge their customers’ load to limit their financial risk.

If the Commission leaves the LCAP in place at its current level for the rest of the year, it is very possible that in some scenarios gas generators would not be able to recover their costs under the LCAP. For example, current summer 2021 5x16 market heat rates¹¹ have recently traded in the ~25-30 MMBtu/MWh range. Assuming a 25 MMBtu/MWh heat rate for simpler math, if the fuel index price (i.e., based on the Katy hub) remains less than \$40/MMBtu (meaning that the LCAP would be set at \$2,000/MWh¹²) but delivered gas were to go higher than ~\$80/MMBtu at some point during the summer (which we saw from Winter Storm Uri is possible during scarce conditions), a gas generator that had hedged its heat rate would not be able to recover costs under LCAP (i.e., 25 heat rate times >\$80 gas price would exceed \$2000). Before Winter Storm Uri, this level of divergence between the index price and delivered price of natural gas was never contemplated, but we now have seen that it is in fact possible.

Additionally, the ERCOT December Capacity, Demand, and Reserves (CDR) Report showed that just under half of the projected 15.5% reserve margin was dependent upon the expected peak load contributions of planned resources – that is resources not already in operation at the time of publication. The peak load contributions of those planned resources total 5,620 MW of the 11,669 MW projected reserve margin. If implementation of the LCAP were to modify developer economics such that some of that capacity is delayed, the ERCOT system could actually be more at risk of resource shortfalls this summer. In this way, the possibility of higher scarcity pricing could actually result in a lower probability of that scarcity pricing being realized.

¹¹ Note that the 5x16 market heat rates reflect an average heat rate across 80 hours, and thus the heat rates would at times be lower but at times be higher, making the negative impact discussed above even greater.

¹² 16 TAC § 25.505(g)(6)(A) (providing for the gas price to be set at the greater of \$2,000/MWh or 50 times the natural gas price index value as determined by ERCOT, which is based on the Katy hub). If the price at the Katy hub is \$40 or less, then the \$2,000 LCAP value would be equal to or greater than 50 times the Katy hub index value.

Vistra thus supports increasing the LCAP to the greater of \$4,500/MWh or 50 times the fuel index price for the remainder of 2021. As advocated in past comments,¹³ that level would represent only a 50% reduction from the high system-wide offer cap (HCAP) (rather than the current nearly 80% reduction), which could better achieve the original goal of the LCAP mechanism to balance the need to send a sufficient scarcity signal to promote investment in resources, while also protecting the minority of unhedged load from sustained high prices.

III. Conclusion

For the reasons stated above, Vistra supports a measured approach, after the end of the legislative session, for evaluating changes to the SPM/PNM/LCAP construct. As a short-term stop gap for 2021, Vistra supports a good cause exemption from the LCAP level in the rule to increase it to the greater of \$4,500/MWh or 50 times the fuel index price for the rest of the year.

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Respectfully submitted,



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¹³ Project No. 48721, TCPA Comments (Feb. 11, 2019).