PROJECT NO. 51871

REVIEW OF THE ERCOT SCARCITY PRICIING MECHANISM	**§** **§** **§**	**PUBLIC UTILITY COMMISSION** **OF TEXAS**

ORDER AMENDING §25.505
AS APPROVED AT THE JUNE 24, 2021 OPEN MEETING

The Public Utility Commission of Texas (commission) adopts amendments to 16 Texas Administrative Code (TAC) §25.505, relating to reporting requirements and the scarcity pricing mechanism in the Electric Reliability Council of Texas power region, with changes to the proposed text as published in the May 21, 2021 issue of the *Texas Register* (46 TexReg 3227). These amendments modify the value of the low system-wide offer cap (LCAP) by eliminating a provision that ties the value of the LCAP to the natural gas price index and replaces it with a provision that ensures resource entities are able to recover their actual marginal costs when the LCAP is in effect.

The commission received comments on the proposed amendments from NRG Energy, Inc. (NRG), Texas Electric Cooperatives, Inc. (TEC), the Lower Colorado River Authority (LCRA), Texas Industrial Energy Consumers (TIEC), South Texas Electric Cooperative, Inc. (STEC), the Steering Committee of Cities Served by Oncor and the Texas Coalition for Affordable Power (Cities/TCAP), ERCOT, Exelon Generation Company, LLC (Exelon), Texas Energy Association for Marketers (TEAM), Texas Competitive Power Advocates (TCPA), and Texas Retail Energy, LLC (Texas Retail). No party requested a hearing.

Subsection (g)(6)(A) – Removal of Natural Gas Price Index Component of the Low System Wide Offer Cap (LCAP)

Under §25.505(g)(6)(A), the LCAP is set on a daily basis to the higher of $2,000/MWh or 50 times the natural gas price index calculated by ERCOT. The proposed amendments would eliminate the natural gas price index component and set the LCAP at $2,000/MWh with no alternate calculation.

NRG, TIEC, Cities/TCAP, TEAM, and Texas Retail each expressed support for the proposed change to (g)(6)(A) that would remove the natural gas price index component of the LCAP. Cities/TCAP believed this decision was an important market policy that would provide greater certainty for consumers. TEAM and Texas Retail stated that the elimination of the natural gas price index provision would provide improved market predictability and stability while reducing price volatility.

TEC and STEC opposed eliminating the natural gas price index component of the LCAP calculation and argued in favor of reducing the multiplier. TEC specifically recommended that the 50X multiplier be reduced to 15X. STEC did not recommend a specific multiplier, but suggested it be sufficiently high to allow for full cost recovery by the most inefficient gas-fired resource in ERCOT. TEC and STEC each also recommended capping the LCAP at the high system wide offer cap (HCAP) to address the issue of gas prices driving the LCAP above the HCAP.

In support of its position, TEC argued that costs should be reflected in prices to the greatest extent possible and expressed concern that the proposed rule may result in escalating fuel costs during an emergency. Specifically, natural gas providers would know that, regardless of the fuel price charged, the costs would ultimately be reimbursed. TEC also expressed concern that certain load reduction programs are currently designed around a Value of Lost Load assumption set at $9,000/MWh. Therefore, capping the price at something lower could result in less demand response and less capital being invested to create additional demand response programs going forward.

STEC stated that a fuel index price multiplier supports reliability and market stability because it incentivizes a generation provider to lock-in and control its fuel costs. Further, this multiplier would mitigate the need for a make-whole provision and associated uplift allocation concerns. Without a fuel index multiplier, STEC continued, there would be no incentive for a generation provider to hedge its fuel costs and ensure that it was available during scarcity conditions because any costs above $2,000/MWh would be passed through under the make-whole provisions with no profit margin.

Commission Response

The commission agrees that removing the natural gas price index provision provides greater market predictability and stability going forward. The commission disagrees with TEC and STEC that reducing the multiplier applied to the natural gas price index provides sufficient stability. Natural gas prices can vary significantly such that applying any

multiplier could result in large swings in energy prices, as the events of February 2021 demonstrated.

While the commission acknowledges the concerns that TEC raises about load reduction programs, the commission disagrees that this rule change would have any impact on those programs over time. This rule only applies in the limited circumstances of when the system-wide offer cap is set at the LCAP and should not materially alter the value or growth of load reduction programs. Moreover, the passage of Senate Bill 3 by the 87th Texas Legislature requires a comprehensive review of ERCOT's scarcity pricing mechanism in the near future.

Subsection (g)(7) – Reimbursement for Operating Losses During an Event when the LCAP is in Effect

The proposed amendments include a make-whole provision that would require that "[d]uring an event when the system-wide offer cap is set to the LCAP, ERCOT must reimburse resource entities for any actual marginal costs in excess of real-time revenues. ERCOT must utilize existing settlement processes to the extent possible to verify the resource entity's costs for reimbursement."

Subsection (g)(7): "during an event"

The proposed amendments require ERCOT to reimburse market entities *during an event.* Cities/TCAP, Exelon, Texas Retail, TCPA and TIEC all stated that the term "event" was not clearly defined in the proposed rule.

Cities/TCAP pointed out that while reimbursing resource entities for actual marginal costs in excess of real-time revenue for the duration of a qualifying event could be feasibly implemented, the current language could be interpreted as reimbursing resource entities for actual marginal costs in excess of real-time revenues for the duration of the calendar year once the peaker net margin threshold is met and the LCAP is in effect. Cities/TCAP suggested that additional language is needed to clarify that cost recovery will be for isolated, qualifying events and to incentivize generation availability during these events.

Exelon, TEAM, and Texas Retail each argued that the commission should adopt specific criteria for what constitutes an event. Exelon argued that the rule needs to provide certainty to resource entities as to whether requests for reimbursement will be granted and recommended that "event" refer to periods during which ERCOT has issued an Operating Condition Notice or Energy Emergency Alert (EEA). Exelon stated that providing the incentive for full preparation in advance of an emergency increases the reliability of the system and could potentially avoid the emergency all together. Conversely, limiting recovery only to periods when the system is under an EEA or already in the midst of firm load shed could actually create an emergency. TEAM and Texas Retail, on the other hand, agreed that clarity was needed, but argued that a resource entity should only be allowed to receive payments for costs above the $2,000/MWh cap if that entity is subject to a reliability unit commitment (RUC) instruction from ERCOT.

TCPA agreed that the term "event" needs further clarification but suggested that the commission delegate the task of defining an event to ERCOT stakeholders. TCPA also recommended that the commission modify the term to convey an expectation that the cost recovery mechanism only applies in exceptional circumstances.

TIEC, while not proposing specific changes, remarked that the proposal could be further improved by providing a clear framework for temporarily applying the LCAP during force majeure conditions. TIEC and LCRA both expressed an interest in working with the commission to expeditiously develop the emergency pricing mechanism required by Senate Bill 3.

Commission

The commission agrees that the term "event" lacks sufficient clarity and is superfluous to the meaning of the provision. Therefore, the phrase "during an event" has been deleted from the rule.

The commission disagrees with Cities/TCAP that the make-whole provision should be limited to isolated, qualifying events. The addition of (g)(7) is meant to make a resource entity whole when the LCAP prevents it from being able to make offers that are sufficient to cover its costs. As such, (g)(7) only applies when the real-time energy price is at or exceeds the LCAP but is not limited to specific events. Presently, the ERCOT system-wide offer cap is set to the LCAP for the first time. The commission agrees with Exelon that

overly limiting the availability of the make-whole provision could contribute to the creation of new emergency conditions. Further, the commission intends to conduct a broader review of the scarcity pricing mechanism in the near future and can evaluate the effects of the make-whole provision at that time. The commission declines to delegate the decision of when the make-whole provision should apply to ERCOT stakeholders as recommended by TCPA for the same reasons.

The commission disagrees with TEAM and Texas Retail that the make-whole provision should be limited to resource entities that have received a RUC instruction from ERCOT. In addition to the reasons stated above, this is not a practical limitation since ERCOT would not know which resource entities risked exposure to high gas prices or other cost drivers in time to issue the necessary RUC instruction.

Implementation of the emergency pricing mechanism required by Senate Bill 3, as referenced by TIEC and LCRA, will be taken up in a future commission rulemaking.

Subsection (g)(7): "when the system wide offer cap is set to the LCAP"

TCPA and Exelon stated that the risk is not limited to when the LCAP is in effect, as extraordinary delivered fuel costs alone could exceed the HCAP of $9,000/MWh. As such, TCPA and Exelon proposed that the cost recovery mechanism in (g)(7) should not be limited to periods when the LCAP is in effect. Exelon proposed striking the language in (g)(7) that would limit the cost recovery mechanism to periods when the LCAP is in effect, while TCPA acknowledged that this could be part of a broader, more holistic review of wholesale market design elements.

Commission Response

The commission declines to expand (g)(7) to apply when the system wide offer cap is set at the HCAP as suggested by TCPA and Exelon. Periods when the HCAP is in effect are outside of the limited scope of this rulemaking.

Subsection (g)(7): "ERCOT must reimburse…"

STEC, TEAM, and Texas Retail each expressed concerns with how the costs associated with the proposed reimbursement would be allocated. STEC argued that the commission should give considerable thought to the mechanism's design and implementation to ensure that the make-whole costs are appropriately allocated to loads that should ultimately bear them. STEC stated that any make-whole mechanism should be designed to encourage market participants to hedge their market positions and to avert punishment to market participants that appropriately hedged their load. Specifically, STEC pointed to the current Reliability Unit Commitment make-whole mechanism, which assigns up to two times the cost of the RUC make-whole costs to entities that are short in the market, as a potential model. STEC further clarified that, in this instance, the 2X multiplier would not be required.

TEAM and Texas Retail each suggested that the proposed cost recovery mechanism be clarified to provide clear direction to ERCOT and disallow the use of market uplift, as market uplift cannot be hedged. TEAM and Texas Retail each proposed variations of possible additions to proposed (g)(7) that would clarify that ERCOT will recover the reimbursement costs from entities which were counterparties to settlements for procurement of real-time energy during the event.

Commission Response

The commission declines to make changes in response to these comments. Broadly speaking, the commission agrees with STEC, Texas Retail, and TEAM that the make-whole provision should be implemented in a manner that encourages market participants to fully hedge their loads. ERCOT is best positioned to evaluate the precise consequences of each potential recovery methodology. The commission expects the proposals of the commenters in this project to be among the proposals ERCOT considers in designing its reimbursement process.

Subsection (g)(7): "any actual marginal costs"

The proposed amendments would require ERCOT to reimburse resource entities for their *marginal costs* in excess of real time revenues. TCPA, Exelon, NRG, and TEC each argued that reimbursement for "marginal costs" does not provide adequate compensation for resource entities.

TCPA explained that generators regularly incur additional operating expenses that may not be considered marginal costs. Operating costs, they continued, are taken in support of grid reliability with an expectation that the market will support those prudent decisions. TCPA requested the commission replace "marginal costs" with "operating costs." Similarly, Exelon requested that “marginal costs” be replaced with “reasonably and prudently incurred operating costs.”

TEC believed that resource owners might not be incented to acquire high-cost natural gas unless they were guaranteed both complete cost recovery plus a margin. TEC proposed a reference to verifiable costs that are equal to or greater than what a unit would receive from a RUC over the current “marginal costs” in (g)(7).

NRG recommended that the commission allow resource entities to recover an additional margin above their marginal costs. NRG argued that this would provide a performance incentive and reduce the risk of financial loss for generators operating in times of scarcity.

Commission Response

The commission disagrees that reimbursement for marginal costs does not provide adequate compensation for resource entities. The ERCOT energy-only market is not designed to guarantee recovery of all of a resource entity’s costs across all intervals. Rather, it provides recovery of marginal costs for most intervals and other costs across the lifetime of an asset. The commission also disagrees with TEC that marginal costs would disincentivize resource owners from running when the cost of natural gas is sufficiently high. Fuel costs are precisely the type of cost that this make-whole provision provides protection against. Finally, while the commission agrees with NRG that providing an additional margin might provide a performance incentive to resource entities, it is not

appropriate or consistent with the current market structure to require ERCOT to finance this incentive beyond recovery of a resource's marginal costs.

Subsection (g)(7): "real time revenues"

The proposed make-whole provision would allow resource entities to recover their actual marginal costs in excess of "real-time revenues." TIEC and ERCOT each proposed alternatives to "real-time revenues" to avoid potential over-recovery. TIEC recommended replacing "real-time revenues" with the "LCAP" to clarify that a generator's revenues must be insufficient due to the operation of the LCAP, rather than a generator simply bidding too low. Similarly, ERCOT recommended "the larger of the LCAP or the real-time energy price for the resource" to prevent reimbursement for operating losses when the real-time energy price for a resource is less than the LCAP.

Commission Response

The commission agrees with the concerns expressed by TIEC and ERCOT that the proposed amendments could result in over recovery by resource entities. The commission has replaced "real-time revenues" with "the larger of the LCAP or the real-time energy price for the resource" in (g)(7) as recommended by ERCOT. The addition of (g)(7) is meant to make a resource entity whole when the LCAP prevents it from being able to make offers that are sufficient to cover its marginal costs. When the real-time energy price is at or exceeds LCAP, a resource entity would be made-whole for their marginal costs, minus the real-time revenues received.

The commission further agrees with ERCOT's clarification that a resource entity should only be reimbursed for its actual marginal costs in excess of the larger of the LCAP *or the real-time energy price for the resource.* Even when prices are at the LCAP, the actual price for a particular resource may be higher than the LCAP due to factors such as congestion pricing. The reimbursement is based on the actual price the resource is receiving (i.e. including the congestion price).

Subsection (g)(7): "ERCOT must utilize existing settlement processes…to verify …costs for reimbursement"

LCRA supported the proposed rule language that will require ERCOT to reimburse resource entities for their actual marginal costs that exceed real-time revenues, but opined that "…the 'existing settlement processes' that resource entities must exhaust at ERCOT to prove up their actual costs rarely result in complete or timely dispositions." LCRA asked the Commission to give clear direction to ERCOT that the actual costs submitted by the resource entity and supported by appropriate documentation should be given significant weight.

Commission Response

The commission declines to direct ERCOT to give significant weight to the actual costs submitted by the resource entity and supported by appropriate documentation as requested by LCRA. The commission expects ERCOT to develop a process for determining the level of reimbursement that gives an appropriate weight to the actual costs submitted by a resource entity but also guards against over recovery by resource entities. The commission agrees with LCRA that this process should be as complete and timely as

practicable, but not at the expense of ERCOT's ability to properly evaluate the submitted costs.

Other Comments

TEC recommended that the Commission prohibit critical gas infrastructure from participating in the wholesale market during emergencies as Load Resources or in the Emergency Response Service program at ERCOT, unless such load has proven capable to continue to operate during these conditions. TEC believed that critical gas supply chain infrastructure should not be compensated to shed load and exacerbate a gas shortage during an emergency.

Commission Response

The concerns raised by TEC are outside of the limited scope of this rulemaking. The commission will address this issue in Project No. 51888, *Review of Critical Load Standards and Processes*.

All comments, including any not specifically referenced herein, were fully considered by the commission. In adopting these amendments, the commission makes other minor modifications for the purpose of clarifying its intent.

These amendments are adopted under the Public Utility Regulatory Act, Tex. Util. Code §14.002 which provides the commission with the authority to make and enforce rules reasonably required in the exercise of its powers and jurisdiction; §39.101 which establishes that customers are entitled to safe, reliable, and reasonably priced electricity and gives the commission the authority to adopt and enforce rules to carry out these provisions; and §39.151 which grants the commission oversight and review authority over independent organizations such as ERCOT, directs the commission to adopt and enforce rules relating to the reliability of the regional electrical network and accounting for the production and delivery of electricity among generators and all other market participants, and authorizes the commission to delegate to an independent organization such as ERCOT responsibilities for establishing or enforcing such rules.

Cross reference to statutes: Public Utility Regulatory Act §14.002, 39.101, and 39.151.

§25.505. Reporting Requirements and the Scarcity Pricing Mechanism in the Electric Reliability Council of Texas Power Region.

(a) **General.** The purpose of this section is to prescribe reporting requirements for the Electric Reliability Council of Texas (ERCOT) and market participants, and to establish a scarcity pricing mechanism for the ERCOT market.

(b) **Definitions.** The following terms, when used in this section, have the following meanings, unless the context indicates otherwise:

(1) **Generation entity --** an entity that owns or controls a generation resource.

(2) **Load entity --** an entity that owns or controls a load resource. A load resource is a load capable of providing ancillary service to the ERCOT system or energy in the form of demand response and is registered with ERCOT as a load resource.

(3) **Resource entity --** an entity that is a generation entity or a load entity.

(c) **Resource adequacy reports.** ERCOT must publish a resource adequacy report by December 31 of each year that projects, for at least the next five years, the capability of existing and planned electric generation resources and load resources to reliably meet the projected system demand in the ERCOT power region. ERCOT may publish other resource adequacy reports or forecasts as it deems appropriate. ERCOT must prescribe requirements for generation entities and transmission service providers (TSPs) to report their plans for adding new facilities, upgrading existing facilities, and mothballing or retiring existing facilities. ERCOT also must prescribe requirements for load entities to report their plans for adding new load resources or retiring existing load resources.

(d) **Daily assessment of system adequacy.** Each day, ERCOT must publish a report that includes the following information for each hour for the seven days beginning with the day the report is published:

(1) System-wide load forecast; and

(2) Aggregated information on the availability of resources, by ERCOT load zone, including load resources.

(e) **Filing of resource and transmission information with ERCOT.** ERCOT must prescribe reporting requirements for resource entities and TSPs for the preparation of the assessment required by subsection (d) of this section. At a minimum, the following information must be reported to ERCOT:

(1) TSPs will provide ERCOT with information on planned and existing transmission outages.

(2) Generation entities will provide ERCOT with information on planned and existing generation outages.

(3) Load entities will provide ERCOT with information on planned and existing availability of load resources, specified by type of ancillary service.

(4) Generation entities will provide ERCOT with a complete list of generation resource availability and performance capabilities, including, but not limited to:

(A) the net dependable capability of generation resources;

(B) projected output of non-dispatchable resources such as wind turbines, run-of-the-river hydro, and solar power; and

(C) output limitations on generation resources that result from fuel or environmental restrictions.

(5) Load serving entities (LSEs) will provide ERCOT with complete information on load response capabilities that are self-arranged or pursuant to bilateral agreements between LSEs and their customers.

(f) **Publication of resource and load information in ERCOT markets.** To increase the transparency of the ERCOT-administered markets, ERCOT must post the information required in this subsection at a publicly accessible location on its website. In no event will ERCOT disclose competitively sensitive consumption data. The information released must be made available to all market participants.

(1) ERCOT will post the following information in aggregated form, for each settlement interval and for each area where available, two calendar days after the day for which the information is accumulated:

(A) Quantities and prices of offers for energy and each type of ancillary capacity service, in the form of supply curves;

(B) Self-arranged energy and ancillary capacity services, for each type of service;

(C) Actual resource output;

(D) Load and resource output for all entities that dynamically schedule their resources;

(E) Actual load; and

(F) Energy bid curves, cleared energy bids, and cleared load.

(2) ERCOT will post the following information in entity-specific form, for each settlement interval, 60 calendar days after the day for which the information is accumulated, except where inapplicable or otherwise prescribed. Resource-specific offer information must be linked to the name of the resource (or identified as a virtual offer), the name of the entity submitting the information, and the name of the entity controlling the resource. If there are multiple offers for the resource, ERCOT must post the specified information for each offer for the resource, including the name of the entity submitting the offer and the name of the entity controlling the resource. ERCOT will use §25.502(d) of this title (relating to Pricing Safeguards in Markets Operated by the Electric Reliability Council of Texas) to determine the control of a resource and must include this information in its market operations data system.

(A) Offer curves (prices and quantities) for each type of ancillary service and for energy in the real time market, except that, for the highest-priced offer selected or dispatched for each interval on an ERCOT-wide basis, ERCOT will post the offer price and the name of the entity submitting the offer three calendar days after the day for which the information is accumulated.

(B) If the clearing prices for energy or any ancillary service exceeds a calculated value that is equal to 50 times a natural gas price index selected by ERCOT for each operating day, expressed in dollars per megawatt-hour (MWh) or dollars per megawatt per hour, during any interval, the portion of every market participant's price-quantity offer pairs for balancing energy service and each other ancillary service that is at or above a calculated value that is equal to 50 times a natural gas price index selected by ERCOT for each operating day, expressed in dollars per megawatt-hour (MWh) or dollars per megawatt per hour, for that service and that interval must be posted seven calendar days after the day for which the offer is submitted.

(C) Other resource-specific information, as well as self-arranged energy and ancillary capacity services, and actual resource output, for each type of service and for each resource at each settlement point;

(D) The load and generation resource output, for each entity that dynamically schedules its resources; and

(E) For each hour, transmission flows, voltages, transformer flows, voltages and tap positions (i.e., State Estimator data). Notwithstanding the provisions of this subparagraph and the provisions of subparagraphs (A) through (D) of this paragraph, ERCOT must release relevant State Estimator data earlier than 60 days after the day for which the information is accumulated if, in its sole discretion, it determines the release is necessary to provide a complete and timely explanation and analysis of unexpected market operations and results or system events, including but not limited to pricing anomalies, recurring transmission congestion, and system disturbances. ERCOT's release of data in this event must be limited to intervals associated with the unexpected market or system event as determined by ERCOT. The data released must be made available simultaneously to all market participants

(g) **Scarcity pricing mechanism (SPM).** ERCOT will administer the SPM. The SPM will operate as follows:

(1) The SPM will operate on a calendar year basis.

(2) For each day, the peaking operating cost (POC) will be 10 times the natural gas price index value determined by ERCOT. The POC is calculated in dollars per megawatt-hour (MWh).

(3) For the purpose of this section, the real-time energy price (RTEP) will be measured as an average system-wide price as determined by ERCOT.

(4) Beginning January 1 of each calendar year, the peaker net margin will be calculated as: ∑((RTEP – POC) * (number of minutes in a settlement interval / 60 minutes per hour)) for each settlement interval when RTEP – POC >0.

(5) Each day, ERCOT will post at a publicly accessible location on its website the updated value of the peaker net margin, in dollars per megawatt (MW).

(6) System-Wide Offer Caps.

(A) The low system-wide offer cap (LCAP) will be set at $2,000 per MWh and $2,000 per MW per hour.

(B) The high system-wide offer cap (HCAP) will be $9,000 per MWh and $9,000 per MW per hour.

(C) The system-wide offer cap will be set equal to the HCAP at the beginning of each calendar year and maintained at this level until the peaker net margin during a calendar year exceeds a threshold of three times the cost of new entry of new generation plants.

(D) If the peaker net margin exceeds the threshold established in subparagraph (C) of this paragraph during a calendar year, the system-wide offer cap will be set to the LCAP for the remainder of that calendar year. In this event, ERCOT will continue to apply the operating reserve demand curve and the reliability deployment price adder for the remainder of that calendar year. Energy prices, exclusive of congestion prices, will not exceed the LCAP plus $1 for the remainder of that calendar year.

(E) The value of the lost load will be equal to the value of the system-wide offer cap in effect.

(7) **Reimbursement for Operating Losses when the LCAP is in Effect.** When the system-wide offer cap is set to the LCAP, ERCOT must reimburse resource entities for any actual marginal costs in excess of the larger of the LCAP or the real-time energy price for the resource. ERCOT must utilize existing settlement processes to the extent possible to verify the resource entity's costs for reimbursement.

(h) **Development and implementation.** ERCOT must use a stakeholder process to develop and implement rules that comply with this section. Nothing in this section prevents the commission from taking actions necessary to protect the public interest, including actions that are otherwise inconsistent with the other provisions in this section.

This agency certifies that the adoption has been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority. It is therefore ordered by the Public Utility Commission of Texas that §25.505, relating to reporting requirements and the scarcity pricing mechanism in the Electric Reliability Council of Texas power region, is hereby adopted with changes to the text as proposed.

Signed at Austin, Texas the ______ day of June 2021.

PUBLIC UTILITY COMMISSION OF TEXAS

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PETER LAKE, CHAIRMAN

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WILL MCADAMS, COMMISSIONER