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PUBLIC UTILITY COMMISSION

MONTEREY TX, LLC'S)	PUBLIC UTILITY COMMISSION
APPEAL AND COMPLAINT AGAINST)	
THE ELECTRIC RELIABILITY)	
COUNCIL OF TEXAS)	OF TEXAS

**MONTEREY TX, LLC'S APPEAL AND COMPLAINT
AGAINST THE ELECTRIC RELIABILITY COUNCIL OF TEXAS
PURSUANT TO PROCEDURAL RULE 22.251**

May 22, 2020

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MONTEREY TX, LLC'S) **PUBLIC UTILITY COMMISSION**
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THE ELECTRIC RELIABILITY)
COUNCIL OF TEXAS) **OF TEXAS**

Pursuant to Rule 22.251 of the Public Utility Commission of Texas's (Commission or PUCT) Procedural Rules, Monterey TX, LLC (Monterey or Complainant) hereby submits the following appeal and complaint against the Electric Reliability Council of Texas (ERCOT). As discussed in greater detail below, Monterey requests that the Commission find that ERCOT's *ex post facto* correction of Day-Ahead Market (DAM) clearing prices for Operating Days September 16-23, 2019, necessitated by an ERCOT software error, caused ERCOT to improperly charge Monterey for Point-to-Point (PTP) Congestion Revenue Right (CRR) Obligations significantly in excess of Monterey's Not-to-Exceed bid prices for those PTP Obligations, which provided the highest amount Monterey was willing to pay. In so doing, ERCOT violated certain of its own Nodal Protocols (Protocol) and provisions of the Texas Administrative Code. ERCOT's interpretation of its obligations under the Protocols, as explained in ERCOT's Market Notice terminating the Alternative Dispute Resolution (ADR) process with Monterey,¹ leads to an unjust and unreasonable result in which ERCOT shifts the financial harm caused by ERCOT's software error from one Market Participant or group of Market Participants to Monterey and other similarly-situated Market Participants, and makes it impossible for Market Participants to adequately manage their risk. Monterey respectfully requests that the Commission direct ERCOT to cease its unlawful behaviors and refund \$89,416.59 plus interest to Monterey.

¹ See Exhibit A, April 17, 2020 Market Notice From ERCOT Providing Determination Regarding ADR, attached hereto.

In the alternative, Monterey asks that the Commission direct ERCOT to prioritize and implement revisions to the Protocols to resolve material deficiencies in ERCOT's processes that create unreasonable risk for Market Participants.

In support of the Complaint, Monterey shows the following:

I. SUMMARY OF CLAIMS

Monterey seeks financial and injunctive relief from decisions ERCOT has made in the context of interpreting and implementing its Protocols, as described more fully below.

II. PARTIES

A. Monterey

Monterey is registered as a Qualified Scheduling Entity (QSE) in ERCOT, and regularly participates in ERCOT's DAM. Monterey is a Delaware limited liability company, with its principal place of business in Newark, Delaware. Monterey's authorized representatives in this proceeding are:

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Valerie L. Green, Esq.
Kayla J. Grant, Esq.**
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Monterey respectfully requests that all communications and correspondence regarding this Complaint be served on the above-referenced authorized representatives.

B. ERCOT

ERCOT was certified by the Commission in 2001 as an independent organization created pursuant to Public Utility Regulatory Act (PURA) section 39.151. ERCOT's procedures are subject to Commission oversight and review.² The relief sought in this Complaint, would, if granted, affect ERCOT. To the best of Monterey's knowledge, ERCOT's authorized representative for service of this Complaint is:

Chad V. Seely
Vice President, General Counsel and Corporate Secretary
ERCOT
7620 Metro Center Drive
Austin, Texas 78744
Tel. (512) 225-7035
cseely@ercot.com

III. STATEMENT OF THE CASE

A. Underlying Proceedings. No underlying proceedings exist in this matter, although Monterey and ERCOT Staff did go through the required ADR process under Section 20 of the ERCOT protocols, which process was terminated by ERCOT by its Market Notice issued April 17, 2020 (*see* Exhibit A, attached hereto).

B. Identity of Directly Affected Entities or Classes. There are no other entities or classes of entities that would be directly affected by the Commission's resolution of this proceeding. However, Monterey is aware of two other entities that are similarly situated to Monterey.³

² PURA § 39.151(d).

³ *See* the Market Notice regarding the resolution of ADR Proceedings between ERCOT and Peak Energy Capital LP, *available at* http://www.ercot.com/services/comm/mkt_notices/archives/4529, and the Market Notice regarding the resolution of ADR proceedings between ERCOT and DC Energy Texas, LLC, *available at* http://www.ercot.com/services/comm/mkt_notices/archives/4511.

C. Concise Description of Conduct From Which Relief is Sought. This complaint challenges ERCOT's imposition of Resettlement Statement charges on Monterey⁴ to recover the significant difference between the Not-to-Exceed bid price that Monterey committed to pay for certain PTP Obligations for Operating Days September 16-23, 2019, and the DAM clearing price that was established by a vote by the ERCOT Board of Directors on December 10, 2019, increasing the original DAM clearing price to resolve an ERCOT software error. Monterey submits that ERCOT's conduct violates its own Protocols and fails to meet ERCOT's obligations under the Texas Administrative Code to provide appropriate pricing safeguards to protect against market failures. Monterey respectfully requests an order from the Commission reversing ERCOT's ADR determination and directing ERCOT to pay refunds to Monterey.

Because ERCOT insists that its conduct is consistent with the existing Protocols and that any solution to the acknowledged problem must come through reform of those Protocols, Monterey asks the Commission, in the alternative, to direct ERCOT to revise its Protocols to provide adequate protections for Market Participants.

D. Statement of Applicable ERCOT Procedures. The following ERCOT Nodal Protocols are relevant to this Complaint: Protocol Sections 4.4.6, 4.5.1, 4.5.3, 16.16.1, 16.16.3, and 20.10.1. In addition, the following provisions of Title 16, Part 2 of the Texas Administrative Code are relevant: Tex. Admin. Code Sections 25.501(j) and 25.503(f)(2)(C).

E. Statement Related to Suspension. Monterey's Complaint formally concerns the September 2019 DAM price correction situation described herein, but ERCOT's responses to Monterey throughout the ADR process and determination regarding that process make it clear that that ERCOT intends to continue engaging in the same conduct complained of here, creating

⁴ See Exhibit B, September 16-23, 2019 Monterey Database Extractions of Resettlement Statements from ERCOT to Monterey.

significant ongoing financial risk for Market Participants. Monterey therefore requests that the Commission require ERCOT to suspend the conduct complained of, provide appropriate refunds of the charges to Monterey for PTP Obligations in excess of Monterey's Not-to-Exceed bid prices, and revise the relevant ERCOT Protocols to resolve this significant deficiency in ERCOT's current practices.

F. Commission Jurisdiction. The Commission possesses jurisdiction over this Complaint under PURA § 39.151. This proceeding seeks relief under Procedural Rule 22.251.

IV. STATEMENT OF ALL ISSUES AND POINTS RAISED

This Complaint presents the following issues:

1. Did ERCOT's imposition of Resettlement charges for PTP Obligations priced significantly in excess of Monterey's Not-to-Exceed Price plus \$0.01/MW per hour violate ERCOT Protocols?
2. Does ERCOT have the authority to grant Monterey's requested relief?
3. If ERCOT's conduct was consistent with existing Protocols, should ERCOT be required to revise those Protocols to address and resolve the potential for inconsistency between awards and bid prices in the event of a price correction after clearing and settlement?
4. Did ERCOT's conduct fail to comply with its obligations under the Texas Administrative Code?

V. STATEMENT OF FACTS

Monterey submitted bids for PTP Obligations in the DAM for a number of Operating Days in September 2019. Monterey's bids were capped at the maximum price that Monterey was willing to pay (Not-to-Exceed Price) for PTP Obligations.⁵ Under Protocol Section 4.4.6(1) a Not-to-Exceed Price represents the highest price that a Market Participant is willing to pay for a CRR in the ERCOT DAM. For Operating Days September 15-23, 2019, Monterey's Not-Exceed Price for PTP Obligations "cleared" the DAM by matching or exceeding the DAM clearing price, and Monterey was awarded PTP Obligations at the DAM clearing price.

On September 24, 2019, ERCOT determined that there was an issue with the software used to model Outages in the DAM and Reliability Unit Commitment for several Operating Days in August and September 2019. Upon further investigation into the prices for the Operating Day period of May 30, 2019 through September 25, 2019, ERCOT determined that prices in the DAM on Operating Days September 16-23, 2019, as well as other dates in August, were impacted by this software error.⁶ ERCOT issued a Market Notice on October 3, 2019 notifying Market Participants of a potential price correction and committed to providing an updated Market Notice when ERCOT had identified the specific Operating Days for which it would seek Board Review.

The ERCOT Protocols require ERCOT to correct prices in the DAM before prices become final at 1000 of the second Business Day after the Operating Day. If ERCOT determines that prices need to be corrected after they are final, and seeks review of the prices by the Board

⁵ See Protocol Section 4.4.6 (1): "A Point-to-Point (PTP) Obligation bid is a bid that specifies the source and sink, a range of hours, and a maximum price that the bidder is willing to pay ('Not-to-Exceed Price')."

⁶ See Exhibit C, December 10, 2019 Presentation by Carrie Bivens, ERCOT Manager, Forward Markets, to ERCOT Board of Directors: "Item 9.1: Day-Ahead Market Price Correction for Operating Days September 16-23, 2019."

of Directors, ERCOT must notify Market Participants and describe the need for correcting the prices, no later than 30 days after the Operating Day.⁷ The Board may review and change Day-Ahead Locational Marginal Prices (LMPs), Day-Ahead Settlement Point Prices (SPPs), and Market Clearing Prices for Capacity (MCPCs) if ERCOT provided timely notice to Market Participants and the Board finds that the prices were “significantly affected by an error.”⁸ At an ERCOT Board of Directors meeting held on December 10, 2019, nearly three months after Operating Days September 16-23, 2019 closed, ERCOT requested that the Board make a determination as to whether the LMPs, SPPs, and MCPCs for Operating Days September 16-23, 2019 were significantly affected by the software error, and requested authorization to correct the LMPs, SPPs, and MCPCs for those Operating Days.⁹ The Board determined that the LMPs, SPPs, and MCPCs for Operating Days September 16-23, 2019 were significantly affected by the ERCOT software error and approved a price correction for those Operating Days. ERCOT did not request, and the Board of Directors did not approve, a correction to the awarded quantities in the DAM for Operating Days September 16-23, 2019. ERCOT applied the corrected prices to the quantities originally awarded in the DAM for those Operating Days and issued Resettlement Statements to Market Participants.

The ERCOT Protocols that govern execution of the DAM specify that PTP Obligation bids, which contain the source and sink, a range of hours, and a maximum price that the bidder is willing to pay (Not-to-Exceed Price), shall not be awarded where the DAM clearing price for the

⁷ Protocol Section 4.5.3(5)(a).

⁸ Protocol Section 4.5.3(5)(b).

⁹ See Exhibit C, December 10, 2019 Presentation by Carrie Bivens, ERCOT Manager, Forward Markets, to ERCOT Board of Directors: “Item 9.1: Day-Ahead Market Price Correction for Operating Days September 16-23, 2019.”

PTP Obligation is greater than the PTP Obligation bid price plus \$0.01/MW per hour.¹⁰ As a result of the price correction, Monterey received a Resettlement Statement charging it for PTP Obligations awarded in the DAM for Operating Days September 16-19, 2019 at prices that exceeded Monterey's Not-to-Exceed bid prices. Monterey would not have otherwise been awarded the PTP Obligations for Operating Days September 16-19, 2019 at the corrected prices because they exceeded Monterey's maximum bid price.

Monterey and ERCOT Staff subsequently engaged in informal communications and a formal ADR process under Section 20 of the ERCOT Protocols, during which Monterey sought reimbursement of the amounts of \$89,416.59, representing the amount additionally charged for PTP Obligations during Operating Days September 16-23, 2019 on the Resettlement Statement in excess of Monterey's Not-to-Exceed Price for those PTP Obligations. On April 17, 2020, ERCOT issued a Market Notice of the Resolution of ADR Proceedings between ERCOT and Monterey that denied Monterey's requested relief and terminated the ADR proceeding.¹¹

VI. ARGUMENT

A. ERCOT's Conduct Violated ERCOT Protocols.

ERCOT violated its own Protocols by imposing Resettlement Statement charges on Monterey for PTP Obligations for Operating Days September 16-19, 2019 priced well in excess of Monterey's Not-to-Exceed Price bids.

1. ERCOT Violated Protocol Sections 4.4.6 and 4.5.1(13).

Protocol Section 4.4.6 defines a PTP Obligation bid as "a bid that specifies the source and sink, a range of hours, and a maximum price that the bidder is willing to pay (Not-to-Exceed

¹⁰ Protocol Section 4.5.1(13).

¹¹ See Exhibit A, April 17, 2020 Market Notice From ERCOT Providing Determination Regarding ADR. Monterey timely files this Appeal and Complaint pursuant to Procedural Rule 22.251.

Price’).” Protocol Section 4.5.1(13) states that “PTP Obligation bids shall not be awarded where the DAM clearing price for the PTP Obligation is greater than the PTP Obligation bid price plus \$0.01/MW per hour.” When Monterey placed its Not-to-Exceed bid price for Operating Days September 16, 23, 2029, that bid price was sufficient to clear, and Monterey was awarded PTP Obligations. However, when ERCOT adjusted the DAM clearing price three months after the clearing process concluded to address a software error, the corrected DAM clearing price ended up being significantly higher than Monterey’s Not-to-Exceed bid price, and based on that clearing price, Monterey would not have been awarded PTP obligations for those days. ERCOT violated Protocol Section 4.4.6 by imposing Resettlement Statement charges on Monterey in excess of Monterey’s PTP Obligation bid price plus \$0.01/MW per hour.

ERCOT argues incorrectly that Protocol Section 4.5.1(13) has no application here. (*See* Exhibit A at p. 2). ERCOT claims that while Section 4.5.1(13) of the Protocols places a limitation on how PTP Obligations are awarded in the DAM clearing process, Section 4.5.1(13) does not apply to events that occur *after* awards are made. *Id.* ERCOT acknowledges that the price correction resulted in awarded PTP Obligations being charged to Monterey at prices above its Not-to-Exceed bid price, but claims that it did not violate Section 4.5.1(13) of the Protocols because the clearing prices for the PTP Obligations awarded to Monterey *during* the DAM clearing process were below Monterey’s Not-to-Exceed bid prices. *Id.*

ERCOT’s claim that Protocol Section 4.5.1(13) is irrelevant here because the event in question happened *after* the DAM clearing process is contrary to the plain language of Protocol Section 4.5.1(13). The Protocol language does not limit the requirements applicable to PTP Obligation awards to the initial DAM clearing process. Rather, the Section simply states: “PTP Obligation bids *shall not be awarded* where the DAM clearing price for the PTP Obligation is

greater than the PTP Obligation bid price plus \$0.01/MW per hour.” (emphasis added) The Protocol language does not say “where the DAM clearing price *at the time of clearing*,” or otherwise limit the definition of “DAM clearing price” to a specific point in time.

ERCOT’s argument is internally inconsistent. On the one hand, ERCOT takes an expansive position on the definition of DAM clearing price, using the term to cover the clearing price when the auction cleared, as well as the corrected price three months later after the ERCOT Board of Directors took action to approve a price correction. ERCOT is also comfortable arguing that the corrected, December 2019 DAM clearing price is the appropriate price to use to settle Market Participants’ monetary obligations associated with Operating Days September 16-23, 2019. However, in the context of Monterey’s request for relief from financial harm caused by ERCOT’s error, ERCOT takes a very narrow view of the term “DAM clearing price,” insisting that the DAM clearing price is limited to one specific moment in time. In that context, “DAM clearing price” means only the price when the DAM cleared, and according to ERCOT, at that time, the DAM clearing price did not exceed Monterey’s Not-to-Exceed bid price. ERCOT argues, essentially, that its hands are tied. However, ERCOT ignores the authority it is provided in Protocol Section 4.5.3(5)(a), (a)(iii), which notes in the context of price corrections approved by the ERCOT Board of Directors, that “nothing in this section shall be understood to limit or otherwise inhibit . . . ERCOT’s authority to grant relief to a Market Participant pursuant to the timelines specified in Section 20, Alternative Dispute Resolution Procedure.” ERCOT’s interpretation of the Protocols is overly rigid and causes harm to Market Participants.

ERCOT’s claim that it can modify prices after-the-fact and impose PTP Obligations on Market Participants that had entirely different price expectations is also inconsistent with the purpose of Protocol Section 4.5.1(13) and leads to an unjust and unreasonable result. After

consideration of its particular needs and risks, Monterey submitted PTP Obligation bids at specified Not-to-Exceed prices, with the expectation that Monterey would not be awarded PTP Obligations that exceeded its specified Not-to-Exceed price. Protocol Section 4.5.1(13) prohibits the award of PTP Obligations to Market Participants when the clearing price for the PTP Obligation is greater than the PTP Obligation bid price plus \$0.01/MW per hour. That prohibition exists to protect Market Participants and to allow them certainty when bidding into the DAM. If ERCOT is permitted to impose Resettlement charges for PTP Obligations on entities that would not have otherwise obtained the PTP Obligation absent an after-the-fact price correction, Market Participants do not benefit from the safeguards embodied by the Protocols and have no way to assess and mitigate their risk.

ERCOT's administration of the DAM in such a manner places business decisions entirely in ERCOT's purview and outside the Market Participants' control. By bifurcating the price and awarded quantities, and correcting prices without making a corresponding change to the awarded PTP Obligations, ERCOT solved one problem and created another. As discussed below in Section VII.C, ERCOT's solution merely shifted the harm caused by its software error to the Market Participants whose bids would not have cleared the DAM absent the price correction that occurred three months later.

2. ERCOT's Refusal to Grant Monterey's Requested Relief is Inconsistent with Protocol Section 20.10.1.

ERCOT has the authority to grant Monterey's request for relief from the financial harm caused by ERCOT's error. Monterey seeks reimbursement for the increased charges it incurred for its PTP Obligations as a result of the DAM price correction to put Monterey in the same financial position it would have been in had ERCOT awarded the PTP Obligations at Monterey's Not-to-Exceed bid price (the original DAM clearing price). ERCOT declined to provide

Monterey with its requested relief during the ADR process, claiming that it would have to “uplift those costs to the market in order to maintain revenue neutrality,” and that there is a lack of language in the Protocols “that would dictate who in the market should bear those costs.” (Exhibit A at p. 3). However, this argument completely ignores Protocol Section 20.10.1, which requires ERCOT to “make . . . adjustments through a separate ADR Invoice” if resettlement to effectuate an adjustment is not practicable. Despite ERCOT’s arguments that its hands are tied, the Protocols provide ERCOT with broad authority to make any adjustments necessary to remedy Protocol violations through separate ADR Invoices produced outside of normal Settlement Invoices. Because resettlement is not practicable at this point, ERCOT should exercise its authority under Section 20.10.1 of the Protocols to issue a separate ADR Invoice to restore Monterey to the financial position that it would have been in had it not been awarded PTP Obligations that exceeded its bid price.

3. ERCOT Violated Protocol Sections 16.16.1(3) and 16.16.3(e).

ERCOT’s interpretation and implementation of its Protocols undermines Market Participants’ existing and accepted risk management programs and negatively impacts Market Participants’ ability to meet ERCOT’s eligibility criteria for participating in ERCOT’s markets. ERCOT’s conduct creates the potential for a Market Participant, for reasons entirely outside of that Market Participants’ control, to be in material breach of its Market Participant Agreement.

To participate in ERCOT’s DAM and other markets, entities must satisfy, “and at all times remain in compliance with,” ERCOT’s Counter-Party Criteria.¹² The Counter-Party Criteria mandate that each Counter-party “shall maintain appropriate, comprehensive risk management capabilities with respect to the ERCOT markets in which the Counter-Party

¹² Protocol Section 16.16.1(1).

transacts or wishes to transact.”¹³ The Protocols further specify that an appropriate and comprehensive risk management framework will include “risk limits in place to control [a Counter Party’s] risk exposures.”¹⁴ In other words, ERCOT requires that a Market Participant have risk limits in place as part of a comprehensive risk management program in order to qualify for participation in the ERCOT markets. ERCOT may review and assess a Market Participant’s risk management practices at any time, at ERCOT’s sole discretion.¹⁵

ERCOT’s Risk Management policies further specify that a material deficiency in a Counter-Party’s risk management practices can be found by ERCOT to “constitute a material breach under the Counter-Party’s Standard Form Market Participant Agreement.”¹⁶ A material breach by a Market Participant gives ERCOT the right to suspend “any and all future activities in the ERCOT market” by that Market Participant, pending remediation of the breach.¹⁷

If a Market Participant conducts transactions in the DAM without appropriate risk limits to control its risk exposure, that Market Participant is at risk of being held in material breach of its Market Participant Agreement, and barred from participating in the ERCOT markets. Monterey maintains a comprehensive risk management framework and manages its risk exposure in the DAM by setting appropriate Not-to-Exceed bid prices for CRRs, to maintain Monterey’s pre-determined risk limits. However, under ERCOT’s interpretation and implementation of its Protocols, ERCOT has the ability to unilaterally negate Monterey’s existing and accepted risk management practices. If ERCOT can hold Monterey accountable for PTP Obligation charges significantly in excess of Monterey’s Not-to-Exceed bid price, based on

¹³ Protocol Section 16.16.1(1)(e).

¹⁴ Protocol Section 16.16.3(3)(e).

¹⁵ Protocol Section 16.16.3(1), 16.16.3(6)(b)(i).

¹⁶ Protocol Section 16.16.3(8).

¹⁷ Protocol Section 16.16.3(7).

an after-the-fact DAM clearing price correction to resolve an ERCOT error, then Monterey's internal risk limits are rendered functionally meaningless. The Resettlement Statement charges imposed by ERCOT expose Monterey to financial harm beyond Monterey's established risk exposure parameters. ERCOT's actions can erase the efficacy of Monterey's risk management practices, forcing Monterey into non-compliance with the Counter-Party Criteria and Risk Management policies. This is an unjust and unreasonable result that requires Commission intervention.

4. ERCOT Violated Protocol Section 4.5.3(a)(i).

Finally, if ERCOT violated Section 4.5.1(13) and 16 of the Protocols, then it also violated Protocol Section 4.5.3(5)(a)(i). That Section requires ERCOT to notify the Commission when ERCOT becomes, or is made aware that it has violated its Protocols. Section 4.5.3(5)(a)(i) imposes a duty on ERCOT to "inform the [Commission] of potential or actual violations of the ERCOT Protocols or [Commission] Rules and its right to request that the [Commission] authorize correction of any prices that may have been affected by such potential or actual violations." Monterey made ERCOT aware of the violations described herein before and during the ADR process. To Monterey's best knowledge and belief, ERCOT did not comply with its duty to notify the Commission regarding its violations of Sections 4.5.1(13) and 16 of the Protocols.

B. Argument in the Alternative – ERCOT Has Repeatedly Failed to Remedy a Known Deficiency in its Protocols.

Monterey views ERCOT's conduct as violating the existing Protocols, for the reasons explained above. However, ERCOT insists that it has complied with all applicable Protocols, and that the problem is with those Protocols. If that is the case, then ERCOT has been aware of the potential for the existing Protocols to create inconsistencies between awards and DAM prices in

the event of an after-the-fact price correction for well over four years and has failed to take action to correct the deficiency. While ERCOT notes in the Market Notice that it has previously considered “the issue of DAM price corrections causing price/award inconsistencies and has sponsored Protocol revisions to address this issue,” ERCOT has elected to withdraw some proposed revisions to the Protocols that could have provided relief to Market Participants harmed by DAM price corrections, and has allowed others to languish in the stakeholder process without sufficient urgency and attention.

For example, on November 14, 2016, ERCOT submitted Nodal Protocol Revision Request (NPRR) 807, “Day-Ahead Market Price Correction,” to clarify that a price correction would be performed for the DAM “only in the event that DAM awards were not affected by the error that caused invalid prices.” (*See* Exhibit D, attached hereto). ERCOT engaged with stakeholders to discuss potential remedies available to Market Participants as part of the ADR process in the event a Market Participant was impacted by a price correction. Specifically, ERCOT and stakeholders discussed whether ERCOT would make Market Participants whole for damages incurred due to a pricing error under Section 4.5.3 of the Protocols. However, ERCOT ultimately determined that adequate relief was available through the existing ADR Procedure in Protocol 20 and withdrew NPRR807 to “provide ERCOT and Market Participants with the opportunity to focus on the dispute aspects that may arise from a DAM pricing error.” (*See* Exhibit E, attached hereto). In justifying its decision to withdraw NPRR807, ERCOT noted that “Protocol Section 4.5.3(5)(a)(iii) specifically states that nothing in Section 4.5.3 “shall be understood to limit or otherwise inhibit... (iii) ERCOT’s authority to grant relief to a Market Participant pursuant to the timelines specified in Section 20, [ADR] Procedure.” (*Id.* at p. 2).

The same Protocol deficiency was raised on November 7, 2019, and revisions to Protocol Sections 4.5.1 and 4.5.3 were proposed in NPRR981, “Day-Ahead Market Price Correction Process.” (See Exhibit E, attached hereto). The proposed revisions provide a way for Market Participants who have been harmed by a price correction after clearing to be made whole, adding language to Protocol Section 4.5.3(5) stating that “ERCOT will compare the Market Participant’s original bid or offer to the settled DAM LMPs, MCPCs, or Settlement Point Prices to determine the net amount to be paid to the Market Participant.” (Exhibit E at p. 8). Despite the ongoing nature of the need to address the issue, in December 2019, and again in January 2020, ERCOT stakeholders in the Protocol Revision Subcommittee voted to table the issue for further discussion in the stakeholder process instead of moving forward immediately (See Exhibits F and G, attached hereto).

The concern identified in the NPRR807 stakeholder process, that a price correction could theoretically cause inconsistency between awards and prices, has occurred, and it has caused Monterey significant financial harm. However, ERCOT refuses to grant Monterey relief under the existing Protocols or the ADR process. In its Market Notice of the Resolution of ADR Proceedings with Monterey, ERCOT states that if “stakeholders wish to prohibit DAM price corrections that could result in inconsistencies between corrected prices and bid prices, that should be made clear through revisions to Protocol Section 4.5.3.” (Exhibit A at p. 3). Yet ERCOT has declined to actively pursue and implement revisions to adequately address inconsistencies between corrected prices and bid prices during the NPRR807 and NPRR981 stakeholder processes, and has opted instead to redress harm to Market Participants incurred as a result of any such inconsistencies through the existing ADR process, which provides “ERCOT’s authority to grant relief.”

The ADR process, which Monterey recently completed in an attempt to address this issue, has proven to be a meaningless exercise. Although the ADR process provided a forum for Monterey to discuss its harm with ERCOT, there is no meaningful opportunity for Monterey to be granted relief through the ADR process because ERCOT's interpretation of its Protocols does not provide for correction of award quantities after the fact. ERCOT reasoned in its ADR Market Notice that "[g]iven the nature of an awarded DAM energy bid, it is not functionally possible to change the quantity of such an award when performing a DAM price correction after the operative [Operating Day]. (Exhibit A at p. 3). According to its Market Notice, ERCOT finds no basis in the Protocols to allow "PTP Obligation award quantities to be changed as part of a DAM price correction." *Id.* Those statements are inherently inconsistent with ERCOT's determination in 2018 that the existing ADR processes provided adequate avenues of relief for Market Participants who may be harmed by an inconsistency between awards and DAM prices caused by an after-the-fact price correction. If it is not "functionally possible" for ERCOT to grant a Market Participant relief through the ADR process, then how can ERCOT justify abandoning revision of the relevant Protocols in 2018 based on a finding that relief was available through the existing ADR Procedure in Protocol 20? By refusing to take action to revise its Protocols to address inconsistent award quantities and corrected prices, and refusing to meaningfully address this issue through the ADR process, ERCOT fails to remedy, and continues to actively perpetuate, a material deficiency in its Protocols.

C. ERCOT's Conduct Fails to Comply with its Obligations Under the Texas Administrative Code.

ERCOT's interpretation of its Protocols and conduct related to this matter do not comply with ERCOT's obligations under the Administrative Code. ERCOT is charged with protecting the markets it administers from failure by implementing appropriate pricing safeguards. The

Administrative Code section regarding “Pricing safeguards” states that “ERCOT shall apply pricing safeguards to protect against market failure....”¹⁸ Here, ERCOT has allowed its own software error to shift financial harm from one Market Participant, or group of Market Participants, to another. That situation should be recognized as a failure of ERCOT’s market administration. As discussed above in Section VII.B, ERCOT has been on notice since at least 2016 that an after-the-price correction to DAM clearing prices could create inconsistencies between PTP Obligation awards and Not-to-Exceed bid prices. However, instead of addressing that material deficiency in its processes by revising its Protocols to provide adequate pricing safeguards for Market Participants, ERCOT has let the risk continue unabated. ERCOT allows the issue to slowly work its way through the stakeholder process rather than taking decisive action to fulfill its statutory obligation to provide pricing safeguards to protect against market failures. A price correction that merely shifts harm from one Market Participant to another rather than mitigating that harm does not provide adequate market safeguards consistent with ERCOT’s statutory mandates. The Commission should find that ERCOT’s failure to address a known deficiency in its Protocols in a timely failure violates ERCOT’s statutory mandate under the Administrative Code.

ERCOT has also failed to meet its obligations under the Administrative Code by refusing to provide relief to a Market Participant harmed by an ERCOT market failure. The Administrative Code allows ERCOT to excuse a Market Participant from compliance with a Protocol requirement if the participant’s non-compliance “is due to communication or equipment failure beyond the reasonable control of the Market Participant.”¹⁹ In this situation, the price correction, which occurred several months after Monterey’s PTP Obligation bids cleared in the DAM, was

¹⁸ 16 Tex. Admin. Code § 25.501(j) Pricing safeguards.

¹⁹ 16 Tex. Admin. Code § 25.503(f)(2)(C).

necessitated solely by ERCOT's own software error. Monterey had no knowledge of the error until ERCOT notified Market Participants; had no ability to revise its Not-to-Exceed Price bid for the PTP Obligations; and was given no opportunity to reject the PTP Obligation award based on the adjusted clearing price. The trigger for the price correction event was clearly beyond Monterey's reasonable control, and ERCOT failed to provide the relief specifically contemplated in the Administrative Code. Instead, ERCOT continues to rely on a rigid and narrow interpretation of its own Protocols to insist that it has no ability to make Monterey whole for the harm it has suffered as a result of ERCOT's software error and subsequent clearing price correction.

VII. REQUEST FOR RELIEF

Given ERCOT's Protocol and Administrative Code violations and the on-going harms suffered by Market Participants in general, and Monterey specifically, Monterey respectfully request that the Commission promptly address the price correction issues which underlie the issues detailed in this complaint.

A. The Commission Should Order Financial Relief for Monterey and Other Impacted Market Participants.

The only way in which Monterey can avoid being adversely affected by ERCOT's software error and subsequent price correction is by refund to Monterey, with interest, all amounts by which it was over-charged for PTP Obligations in excess of its Not-to-Exceed bid prices. The magnitude of the damages in this instance were significant to Monterey, almost \$90,000, and failure by the Commission to order ERCOT to pay the refunds requested by Monterey herein will result in a significant injustice.

B. The Commission Should Direct ERCOT to Revise its Protocols to Implement a Long-Term Solution to the Potential Inconsistency Between Awards and DAM Prices.

In the alternative, Monterey respectfully requests that the Commission order ERCOT to revise its Protocols to eliminate the potential for after-the-fact price corrections to cause significant financial harm to Market Participants. Monterey believes that implementation of these changes will greatly improve Market Participants' confidence in ERCOT's markets. ERCOT should not consider the requested Protocol revision to be onerous, particularly given the fact that such a revision is already pending in the stakeholder process. Given that the risk identified in the pending Nodal Protocol Revision Request has become a reality, and has proven to be harmful to ERCOT Market Participants, the Commission should direct ERCOT to prioritize correcting this material deficiency in its DAM market processes.

VIII. QUESTIONS OF FACT FOR EVIDENTIARY HEARING

At this time, Monterey believes that this dispute involves only the interpretation and implementation of the relevant Protocols sections, and that the parties do not dispute the relevant facts. Monterey reserves the right to supplement this statement should ERCOT's response or subsequent discovery reveal disputed factual issues.

IX. REQUEST FOR SUSPENSION OF CONDUCT

Monterey's Complaint formally concerns the September/December 2019 DAM price correction situation described herein, but ERCOT's responses to Monterey throughout the ADR process and determination regarding that process make it clear that that ERCOT intends to continue engaging in the same conduct complained of here, creating significant ongoing financial risk for Market Participants. Monterey therefore requests that the Commission require

ERCOT, in the context of DAM price corrections identified and implemented after the market has cleared, to immediately suspend its practice of issuing Resettlement Statement charges to Market Participants for PTP Obligation awards if those awards would not have been granted based on the Market Participant's Not-to-Exceed bid price as compared to the correct DAM clearing price pending the resolution of this proceeding.

X. EXHIBITS

Monterey provides the following list of exhibits in support of this Complaint:

- Exhibit A April 17, 2020 Market Notice From ERCOT Providing Determination Regarding ADR

- Exhibit B September 16-23, 2019 Monterey Database Extractions of Resettlement Statements from ERCOT to Monterey

- Exhibit C December 10, 2019 Presentation by Carrie Bivens, ERCOT Manager, Forward Markets, to ERCOT Board of Directors: "Item 9.1: Day-Ahead Market Price Correction for Operating Days September 16-23, 2019"

- Exhibit D November 14, 2016. Nodal Revision Request 807. "Day Ahead Market Price Correction"

- Exhibit E June 6, 2018 ERCOT Request for Withdrawal of Nodal Protocol Revision Request 807

- Exhibit F November 7, 2019, Nodal Protocol Revision Request 981, "Day-Ahead Market Price Correction Process").

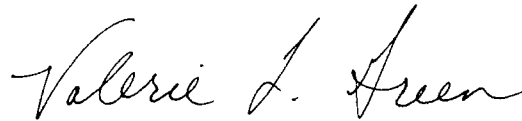
- Exhibit G December 12, 2019 ERCOT Protocol Revision Subcommittee Report on NPRR981, "Day-Ahead Market Price Correction Process"

- Exhibit H January 9, 2020 ERCOT Wholesale Market Subcommittee Comments on NPR981, "Day-Ahead Market Price Correction Process"

XI. CONCLUSION

Based on the foregoing, and for good cause shown, Monterey respectfully requests that the Commission enter an order granting this Complain: (i) reversing ERCOT's determination regarding the ADR process; (ii) finding that ERCOT violated its Protocols and the Administrative Code; (iii) ordering ERCOT to refund \$89,416.59 plus applicable interest to Monterey. In the alternative, should the Commission find that ERCOT acted in compliance with its existing Protocols, Monterey respectfully request that the Commission order ERCOT to prioritize revisions to the Protocols to remedy the current situation, where an *ex post facto* price correction under the current Protocol language has the potential to cause significant inconsistencies between the charges for awarded PTP Obligations and Market Participants' capped bid prices.

Respectfully submitted,



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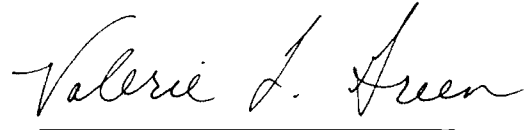
Counsel to Monterey TX, LLC

Dated May 22, 2020

Enclosures

CERTIFICATE OF SERVICE

I hereby certify that on this 22nd day of May, 2020, a true and correct copy of the foregoing document was served on all parties of record in this proceeding by electronic mail, pursuant to the Public Utility Commission of Texas Order Suspending Rules, issued in PUC Docket No. 50664 on March 16, 2020.

A handwritten signature in cursive script that reads "Valerie L. Green". The signature is written in black ink and is positioned above a horizontal line.

Valerie L. Green

EXHIBIT A

**ERCOT MARKET NOTICE PROVIDING
DETERMINATION REGARDING
ALTERNATIVE DISPUTE RESOLUTION PROCEEDING**

LONG DESCRIPTION: Upon ERCOT's determination of the disposition of an Alternative Dispute Resolution (ADR) proceeding, ERCOT Protocol Section 20.9 requires ERCOT to issue a Market Notice providing a brief description of the relevant facts, a list of the parties involved in the dispute, and ERCOT's disposition of the proceeding and reasoning in support thereof.

Parties: ERCOT and Monterey TX LLC (Monterey)

Relevant Facts:

On December 10, 2019, the ERCOT Board of Directors (Board), pursuant to ERCOT Protocol Section 4.5.3(5), approved a price correction for the Day-Ahead Market (DAM) for Operating Days (ODs) September 16-23, 2019. Specifically, the Board: (1) determined that the Day-Ahead Locational Marginal Prices (LMPs), Day-Ahead Settlement Point Prices (SPPs) and Market Clearing Prices for Capacity (MCPCs) for ODs September 16-23, 2019, were significantly affected by a software error; and (2) authorized ERCOT staff to implement a DAM price correction for those ODs.¹ Protocol Section 4.5.3(5)(b) provides that the "ERCOT Board may review and change DAM LMPs, MCPCs, or Settlement Point Prices if ERCOT gave timely notice to Market Participants and the ERCOT Board finds that such prices are significantly affected by an error."

Following the Board's decision to correct prices, ERCOT resettled the DAM by applying the corrected LMPs, MCPCs, and SPPs to the quantities originally awarded in the DAM, and issued Resettlement Statements to impacted Market Participants. Monterey received Resettlement Statements for Point-to-Point (PTP) Obligations it had been awarded in the DAM for ODs September 16-19, 2019. As a result of the DAM price correction, Monterey was charged for certain PTP Obligations for ODs September 16-19, 2019, at prices that were above the "Not-to-Exceed" (NTE) bid prices submitted by Monterey.

In its ADR request, Monterey asserts that it would never have been awarded these PTP Obligations for ODs September 16-19, 2019, based on the corrected DAM prices. Monterey cites Protocol Section 4.5.1(13), which provides that "PTP Obligation bids shall not be awarded where the DAM clearing price for the PTP Obligation is greater than the PTP Obligation bid price plus \$0.01/MW per hour." Monterey argues that ERCOT violated this Protocol by issuing Resettlement Statements that charged Monterey for PTP Obligations in excess of the NTE bid prices.

Monterey claims it should be reimbursed \$89,416.59, which it states is the amount of increased charges it incurred in the DAM for PTP Obligations for ODs September 16-19, 2019, due to the price correction.

¹ For details regarding the process used by ERCOT to correct prices in the DAM, see the presentation *Day-Ahead Market Price Correction for Operating Days September 16-23, 2019*, as presented to the ERCOT Board on December 10, 2019, available at http://www.ercot.com/content/wcm/key_documents_lists/161483/9.1_Day-Ahead_Market_Price_Correction_for_Operating_Days_September_16-23_2019.pdf.

ERCOT's Disposition/Reasoning:

Pursuant to ERCOT Protocol Section 20.1(1), a Market Participant may seek relief through the ADR process by making a claim that “ERCOT has violated or misinterpreted any law,” including an ERCOT Protocol. In this ADR proceeding, ERCOT has determined that the appropriate disposition is to deny Monterey’s request for relief because ERCOT did not violate or misinterpret the ERCOT Protocols.

Although Monterey argues that ERCOT violated Protocol Section 4.5.1(13), that Protocol section does not apply here. Protocol Section 4.5.1(13) imposes a limitation on how PTP Obligations must be awarded in the DAM clearing process. For ODs September 16-19, 2019, the clearing prices for the PTP Obligations awarded to Monterey during the DAM clearing process were below the NTE bid prices submitted by Monterey, in conformance with Protocol Section 4.5.1(13).² Protocol Section 4.5.1(13) does not apply to events that occur *after* awards are made in the DAM clearing process, such as price corrections authorized by the ERCOT Board under Protocol Section 4.5.3(5). Therefore, while the DAM price correction did result in some previously-awarded PTP Obligations being charged to Monterey at prices above the NTE bid price, that was not a violation of Protocol Section 4.5.1(13).

By its plain terms, Protocol Section 4.5.3(5) only authorizes the ERCOT Board to approve changes to LMPs, MCPCs, and SPPs when performing a DAM price correction—no authority is granted in the Protocols to change the quantities previously awarded in the DAM.³ The revision history of Protocol Section 4.5.3 reflects that it has always been made clear to stakeholders that a DAM price correction involves only the substitution of corrected *prices*, not quantities; that is, the entire DAM is not “rerun” when a DAM price correction is performed.⁴ In light of this, ERCOT acted in conformance with Protocol Section 4.5.3(5) when it implemented the DAM price correction for ODs September 16-23, 2019, by issuing Resettlement Statements using the same quantities originally awarded and only substituting in corrected LMPs, MCPCs, and SPPs.

ERCOT cannot act beyond its authority in Protocol Section 4.5.3(5) by changing PTP Obligation awards quantities as part of the DAM price correction, even if the price correction results in a

² For this reason, this matter is distinguishable from the *Resolution of ADR Proceedings between ERCOT and North Maple Energy LLC* (http://www.ercot.com/services/comm/mkt_notices/archives/1495). In that matter, ERCOT found that it was contrary to Protocols to award PTP Obligations above the NTE bid price *as part of the DAM clearing process*. Because no PTP Obligations were awarded above the NTE bid price as part of the DAM clearing process in this matter, ERCOT’s resolution of the North Maple Energy LLC ADR does not control resolution of this dispute.

³ The presentation to the Board in December 2019 made clear when discussing the impact of the price correction that “[q]uantities (awarded MWs) do not change; only prices.” See Slide 5 of Item 9.1: Day-Ahead Market Price Correction for Operating Days September 16-23, 2019, at http://www.ercot.com/content/wcm/key_documents/lists/161483/9.1_Day-Ahead_Market_Price_Correction_for_Operating_Days_September_16-23_2019.pdf.

⁴ See ERCOT Comments to NPRR 279, *Resolution of Alignment Item A144 - Clarify Posting of MCPC for DAM and SASM* (filed October 4, 2010) at 3 (explaining that in performing a DAM price correction the market is not “rerun” and that only “[p]rices will be substituted”) *available at* http://www.ercot.com/content/mktrules/issues/npr/276-300/279/keydocs/279NPRR-08_ERCOT_Comments_100410.doc.

previously awarded PTP Obligation being resettled at a price above the NTE bid price. In order to reimburse Monterey for the increased charges it incurred for its PTP Obligations as a result of the DAM price correction, ERCOT would have to uplift those costs to the market in order to maintain revenue neutrality. However, there is no language in the Protocols that would dictate who in the market should bear those costs. The absence of such an uplift mechanism in the Protocols further supports the conclusion that ERCOT properly implemented the DAM price correction for the relevant ODs under Protocol Section 4.5.3(5) by changing only prices and not award quantities.⁵

Because a DAM price correction involves only the correction of prices and not award quantities, other types of awarded DAM bids (such as an awarded energy bid) could also be resettled at prices above the awarded bid price when the DAM price correction is implemented. Given the nature of an awarded DAM energy bid, it is not functionally possible to change the quantity of such an award when performing a DAM price correction after the operative OD. ERCOT can find no basis in the Protocols for allowing PTP Obligation award quantities to be changed as part of a DAM price correction when other types of DAM awards cannot be given such treatment.

Finally, ERCOT notes that it has previously raised the issue of DAM price corrections causing price/award inconsistencies and has sponsored Protocol revisions to address this issue.⁶ To date, however, stakeholders have yet to approve any such revisions.⁷ If stakeholders wish to prohibit DAM price corrections that could result in inconsistencies between corrected prices and bid prices, that should be made clear through revisions to Protocol Section 4.5.3.

In conclusion, ERCOT did not violate any statute, rule, Protocol, Other Binding Document, or Agreement in implementing the DAM price correction for ODs September 16-23, 2019. Therefore, Monterey's request for relief is denied.

This Market Notice serves to conclude the ADR proceedings between ERCOT and Monterey.

⁵ For example, the Protocols include a methodology for uplift related to certain make-whole payments. *See, e.g.*, ERCOT Protocol Section 5.7.4.2, RUC Make-Whole Uplift Charge. No such mechanism exists here to address the necessary uplift charges that would be associated with awarding Monterey the relief it seeks.

⁶ *See* NPRR 807, *Day-Ahead Market Price Correction* (withdrawn June 6, 2018).

⁷ A currently-pending NPRR, NPRR981, *Day-Ahead Market Price Correction Process*, does propose revisions to ERCOT Protocol Section 4.5.3 that, if approved, could alter the manner in which ERCOT performs DAM price corrections. Further, NPRR991, *Day-Ahead Market (DAM) Point-to-Point (PTP) Obligation Bid Clearing Price Clarification*, is also currently pending and proposes to add clarifying language to ERCOT Protocol Section 4.5.1(13).

EXHIBIT B

MONTEREY DATABASE EXTRACTIONS OF
RESETTLEMENT STATEMENTS FROM ERCOT TO MONTEREY
FOR OPERATING DAYS SEPTEMBER 16-23, 2019

DAM_RESETTLEMENT for 16 September 2019

Charge	Amount	Bill Amount
Total	\$99,733.73	\$86,094.63
DAY-AHEAD ANCILLARY SERVICES	\$0.00	\$0.00
REGULATION UP SERVICE PAYMENT AMOUNT		
Day-Ahead Regulation Up Service Charge Amount		
REGULATION DOWN SERVICE PAYMENT AMOUNT		
Day-Ahead Reg-Down amount per OSE		
RESPONSIVE RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Responsive-Reserve amount per OSE		
NON SPINNING RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Non-Spin amount per OSE		
DAY-AHEAD CONGESTION REVENUE RIGHTS	\$99,733.73	\$86,094.63
Day-Ahead Pymnts and Chrgs for PTP Obl Bought Amnt OSE Total	\$99,733.73	\$86,094.63
DayAhead RTM Obl linked to Opt Amt for OSE		
DAY-AHEAD ENERGY	\$0.00	\$0.00
Day-Ahead Energy Payment Amount OSE Total		
Day-Ahead Energy Charge Amount OSE Total		
DAY-AHEAD MAKE-WHOLE	\$0.00	\$0.00
Day-Ahead Make-Whole amt per OSE		
Day-Ahead Make-Whole charge per OSE		

SUM: STD DEV:

DAM_RESETTLEMENT for 17 September 2019

Charge	Amount	Bill Amount
Total	\$16,177.11	(\$305.68)
DAY-AHEAD ANCILLARY SERVICES	\$0.00	\$0.00
REGULATION UP SERVICE PAYMENT AMOUNT		
Day-Ahead Regulation Up Service Charge Amount		
REGULATION DOWN SERVICE PAYMENT AMOUNT		
Day-Ahead Reg-Down amount per OSE		
RESPONSIVE RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Responsive-Reserve amount per OSE		
NON SPINNING RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Non-Spin amount per OSE		
DAY-AHEAD CONGESTION REVENUE RIGHTS	\$16,177.11	(\$305.68)
Day-Ahead Pymnts and Chrgs for PTP Obl Bought Amnt OSE Total	\$16,177.11	(\$305.68)
DayAhead RTM Obl linked to Opt Amt for OSE		
DAY-AHEAD ENERGY	\$0.00	\$0.00
Day-Ahead Energy Payment Amount OSE Total		
Day-Ahead Energy Charge Amount OSE Total		
DAY-AHEAD MAKE-WHOLE	\$0.00	\$0.00
Day-Ahead Make-Whole amt per OSE		
Day-Ahead Make-Whole charge per OSE		

SUM: STD DEV:

DAM_RESETTLEMENT for 18 September 2019

Charge	Amount	Bill Amount
Total	\$ 7,454.58	(\$27.53)
DAY-AHEAD ANCILLARY SERVICES		\$0.00
REGULATION UP SERVICE PAYMENT AMOUNT		
Day-Ahead Regulation Up Service Charge Amount		
REGULATION DOWN SERVICE PAYMENT AMOUNT		
Day-Ahead Reg-Down amount per OSE		
RESPONSIVE RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Responsive-Reserve amount per OSE		
NON SPINNING RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Non-Spin amount per OSE		
DAY-AHEAD CONGESTION REVENUE RIGHTS	\$7,445.56	(\$14.97)
Day-Ahead Pymnts and Chras for PTP Obl Bought Amnt OSE Total	\$7,445.56	(\$14.97)
DayAhead RTM Obl linked to Opt Amt for OSE		
DAY-AHEAD ENERGY	\$0.00	\$0.00
Day-Ahead Energy Payment Amount OSE Total		
Day-Ahead Energy Charge Amount OSE Total		
DAY-AHEAD MAKE-WHOLE	\$9.02	(\$12.56)
Day-Ahead Make-Whole amt per OSE		
Day-Ahead Make-Whole charge per OSE	\$9.02	(\$12.56)
SUM:		
STD DEV:		

DAM_RESETTLEMENT for 19 September 2019

Charge	Amount	Bill Amount
Total	\$15,697.01	\$1,225.58
DAY-AHEAD ANCILLARY SERVICES	\$0.00	\$0.00
REGULATION UP SERVICE PAYMENT AMOUNT		
Day-Ahead Regulation Up Service Charge Amount		
REGULATION DOWN SERVICE PAYMENT AMOUNT		
Day-Ahead Reg-Down amount per OSE		
RESPONSIVE RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Responsive-Reserve amount per OSE		
NON SPINNING RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Non-Spin amount per OSE		
DAY-AHEAD CONGESTION REVENUE RIGHTS	\$15,697.01	\$1,230.35
Day-Ahead Pymnts and Chras for PTP Obl Bought Amnt OSE Total	\$15,697.01	\$1,230.35
DayAhead RTM Obl linked to Opt Amt for OSE		
DAY-AHEAD ENERGY	\$0.00	\$0.00
Day-Ahead Energy Payment Amount OSE Total		
Day-Ahead Energy Charge Amount OSE Total		
DAY-AHEAD MAKE-WHOLE	\$0.00	(\$4.77)
Day-Ahead Make-Whole amt per OSE		
Day-Ahead Make-Whole charge per OSE		(\$4.77)
SUM:		
STD DEV:		

DAM_RESETTLEMENT for 20 September 2019

Charge	Amount	Bill Amount
Total	\$10,284.06	(\$173.78)
DAY-AHEAD ANCILLARY SERVICES	\$0.00	\$0.00
REGULATION UP SERVICE PAYMENT AMOUNT		
Day-Ahead Regulation Up Service Charge Amount		
REGULATION DOWN SERVICE PAYMENT AMOUNT		
Day-Ahead Reg-Down amount per OSE		
RESPONSIVE RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Responsive-Reserve amount per OSE		
NON SPINNING RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Non-Spin amount per OSE		
DAY-AHEAD CONGESTION REVENUE RIGHTS	\$10,260.75	(\$172.61)
Day-Ahead Pymnts and Chras for PTP Obl Bouaht Amnt OSE Total	\$10,260.75	(\$172.61)
DayAhead RTM Obl linked to Opt Amt for OSE		
DAY-AHEAD ENERGY	\$0.00	\$0.00
Day-Ahead Energy Payment Amount OSE Total		
Day-Ahead Energy Charge Amount OSE Total		
DAY-AHEAD MAKE-WHOLE	\$23.31	(\$1.17)
Day-Ahead Make-Whole amt per OSE		
Day-Ahead Make-Whole charge per OSE	\$23.31	(\$1.17)
SUM: <input type="text"/>	STD DEV: <input type="text"/>	

DAM_RESETTLEMENT for 21 September 2019

Charge	Amount	Bill Amount
Total	\$5,311.90	(\$138.26)
DAY-AHEAD ANCILLARY SERVICES	\$0.00	\$0.00
REGULATION UP SERVICE PAYMENT AMOUNT		
Day-Ahead Regulation Up Service Charge Amount		
REGULATION DOWN SERVICE PAYMENT AMOUNT		
Day-Ahead Reg-Down amount per OSE		
RESPONSIVE RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Responsive-Reserve amount per OSE		
NON SPINNING RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Non-Spin amount per OSE		
DAY-AHEAD CONGESTION REVENUE RIGHTS	\$5,242.19	(\$136.42)
Day-Ahead Pymnts and Chras for PTP Obl Bouaht Amnt OSE Total	\$5,242.19	(\$136.42)
DayAhead RTM Obl linked to Opt Amt for OSE		
DAY-AHEAD ENERGY	\$0.00	\$0.00
Day-Ahead Energy Payment Amount OSE Total		
Day-Ahead Energy Charge Amount OSE Total		
DAY-AHEAD MAKE-WHOLE	\$69.71	(\$1.84)
Day-Ahead Make-Whole amt per OSE		
Day-Ahead Make-Whole charge per OSE	\$69.71	(\$1.84)
UM: <input type="text"/>	STD DEV: <input type="text"/>	

DAM_RESETTLEMENT for 22 September 2019

Charge	Amount	Bill Amount
Total	\$2,531.11	(\$25.19)
DAY-AHEAD ANCILLARY SERVICES	\$0.00	\$0.00
REGULATION UP SERVICE PAYMENT AMOUNT		
Day-Ahead Regulation Up Service Charge Amount		
REGULATION DOWN SERVICE PAYMENT AMOUNT		
Day-Ahead Reg-Down amount per OSE		
RESPONSIVE RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Responsive-Reserve amount per OSE		
NON SPINNING RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Non-Spin amount per OSE		
DAY-AHEAD CONGESTION REVENUE RIGHTS	\$2,530.33	(\$25.20)
Day-Ahead Pymnts and Chrgs for PTP Obl Bought Amnt OSE Total	\$2,530.33	(\$25.20)
DayAhead RTM Obl linked to Opt Amt for OSE		
DAY-AHEAD ENERGY	\$0.00	\$0.00
Day-Ahead Energy Payment Amount OSE Total		
Day-Ahead Energy Charge Amount OSE Total		
DAY-AHEAD MAKE-WHOLE	\$0.78	\$0.01
Day-Ahead Make-Whole amt per OSE		
Day-Ahead Make-Whole charge per OSE	\$0.78	\$0.01
SUM:		
STD DEV:		

DAM_RESETTLEMENT for 23 September 2019

Charge	Amount	Bill Amount
Total	\$23,206.69	(\$735.41)
DAY-AHEAD ANCILLARY SERVICES	\$0.00	\$0.00
REGULATION UP SERVICE PAYMENT AMOUNT		
Day-Ahead Regulation Up Service Charge Amount		
REGULATION DOWN SERVICE PAYMENT AMOUNT		
Day-Ahead Reg-Down amount per OSE		
RESPONSIVE RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Responsive-Reserve amount per OSE		
NON SPINNING RESERVE SERVICE PAYMENT AMOUNT		
Day-Ahead Non-Spin amount per OSE		
DAY-AHEAD CONGESTION REVENUE RIGHTS	\$23,206.69	(\$735.41)
Day-Ahead Pymnts and Chrgs for PTP Obl Bought Amnt OSE Total	\$23,206.69	(\$735.41)
DayAhead RTM Obl linked to Opt Amt for OSE		
DAY-AHEAD ENERGY	\$0.00	\$0.00
Day-Ahead Energy Payment Amount OSE Total		
Day-Ahead Energy Charge Amount OSE Total		
DAY-AHEAD MAKE-WHOLE	\$0.00	\$0.00
Day-Ahead Make-Whole amt per OSE		
Day-Ahead Make-Whole charge per OSE		
SUM:		
STD DEV:		

EXHIBIT C

**DECEMBER 10, 2019 PRESENTATION BY CARRIE BIVENS,
ERCOT MANAGER, FORWARD MARKETS,
TO ERCOT BOARD OF DIRECTORS:
“ITEM 9.1: DAY-AHEAD MARKET PRICE CORRECTION
FOR OPERATING DAYS SEPTEMBER 16-23, 2019”**



**Item 9.1: Day-Ahead Market Price Correction
for Operating Days September 16-23, 2019**

Carrie Bivens
Manager, Forward Markets

Board of Directors Meeting

ERCOT Public
December 10, 2019

Issue for Board Consideration

- On Operating Days (ODs) September 16 - 23, 2019, prices in the Day-Ahead Market (DAM) were impacted by a software error. Because the deadline for ERCOT to correct prices for these ODs has passed, ERCOT is seeking Board determination as to whether prices have been “significantly affected by an error,” and if so, authorization from the Board for ERCOT staff to correct prices for some/all of the affected ODs.
- ERCOT recommends that the Board:
 - a) Make a determination that DAM prices for ODs September 16 - 23, 2019, were significantly affected by a software error; and
 - b) Direct/authorize ERCOT staff to correct some or all such prices for those ODs.

Background

- **May 30, 2019** – Market Management System (MMS) system enhancement for modeling Outages in DAM and Reliability Unit Commitment (RUC)
 - Enhancement intended to only model withdrawn Outages in DAM and RUC where out-of-service equipment was under restoration
 - Software Implementation Error - MMS inadvertently modeled all withdrawn Outages for DAM and RUC; not just those undergoing restoration.
 - Outages withdrawn before their planned outage start date were erroneously modeled in the DAM as out-of-service—i.e., some in-service Transmission Elements were identified as out-of-service in ERCOT’s network model when clearing the DAM.
 - Prior to this system enhancement/software implementation error, when a transmission Outage status was withdrawn, the Outage would not be included in DAM and RUC models; DAM and RUC would not see the Outage.
- **September 24, 2019** – ERCOT became aware of the software implementation error and began investigating prices for Operating Days (ODs) May 30, 2019 through September 25, 2019, and placed an emergency patch into production the next day for OD September 26, 2019.
- **October 3, 2019** – ERCOT issued [Market Notice M-A100319-01](#)
- **October 9, 2019** – ERCOT issued [Market Notice M-A100319-02](#)



Background

Example - Pre-System Enhancement:

EQUIPMENT NAME	PLANNED START DATE	PLANNED END DATE	ACTUAL START DATE	ACTUAL END DATE	STATUS	DAM/RUC Model for 5/2
ABCD_A	5/1/2019 10:00	12/11/2019 12:00			Withd	Not Included
ABCD_B	5/1/2019 10:00	12/11/2019 12:00	5/1/2019 22:04		Withd	Not Included
ABCD_C	5/1/2019 10:00	12/11/2019 12:00	5/1/2019 22:04	5/1/2019 22:04	Withd	Not Included

Example – Post-System Enhancement:

EQUIPMENT NAME	PLANNED START DATE	PLANNED END DATE	ACTUAL START DATE	ACTUAL END DATE	STATUS	DAM/RUC Model for 9/2
ABCD_A	9/1/2019 10:00	12/11/2019 12:00			Withd	Included
ABCD_B	9/1/2019 10:00	12/11/2019 12:00	9/1/2019 22:04		Withd	Included
ABCD_C	9/1/2019 10:00	12/11/2019 12:00	9/1/2019 22:04	9/1/2019 22:04	Withd	Not Included

Unintended error

Intended change

Price Correction Study

- Market: DAM
- ODs: 09/16/2019 – 09/23/2019
- ERCOT reran DAM with correct model inputs—i.e., Outages that had been withdrawn before their planned Outage start date were identified as in-service.
- The following slides include analysis of the Settlement impacts of changing the prices to those that were a result of the new DAM solution.
 - Quantities (awarded MWs) do not change; only prices.

Price Correction Impact Review

- ERCOT's analysis used original settled quantities with corrected prices based on DAM reruns, with erroneous outages removed.
 - Note: The Settlement data provided herein is an estimate; final Settlement amounts may differ.
- All Settlement amounts are net amounts due to/from ERCOT in \$ thousands. Negative amounts are increased payments to Market Participants; positive amounts are increased charges.
- The % amount is the absolute value of the % of impact to the previously settled net amount due to/from ERCOT.
- In addition to the DAM impacts detailed herein:
 - An increased payment to Load of approximately \$300K due to the resettlement of the Congestion Revenue Right (CRR) Balancing Account.
 - Minimal changes to Real-Time Settlements due to Ancillary Service charges that will be reconciled based on actual Load Ratio Shares.

Settlement Impacts

	9/16		9/17		9/18		9/19	
Energy purchases	\$94	0.4%	\$56	0.3%	\$918	5.0%	\$152	0.8%
Energy sales	(\$205)	0.8%	(\$92)	0.5%	(\$958)	5.4%	(\$211)	1.2%
PTP purchases	\$225	10.6%	(\$25)	1.3%	\$125	7.5%	\$418	24.1%
Make-whole payments	-	-	-	-	\$7	57.3%	\$2	100%
AS payments	(\$114)	9.3%	(\$16)	1.7%	(\$71)	8.7%	(\$10)	2.0%
CRR settlements	\$7	0.2%	\$51	2.2%	(\$59)	2.9%	(\$117)	5.3%

*\$ Thousands

Settlement Impacts

	9/20		9/21		9/22		9/23	
Energy purchases	(\$58)	0.3%	\$48	0.3%	\$20	0.1%	\$406	1.1%
Energy sales	\$40	0.2%	(\$91)	0.7%	(\$26)	0.1%	(\$513)	1.5%
PTP purchases	(\$7)	0.3%	(\$25)	1.0%	\$8	0.5%	(\$64)	1.4%
Make-whole payments	\$1	7.2%	\$1	3.5%	-	-	-	-
AS payments	\$1	0.3%	(\$8)	1.4%	-	-	(\$49)	2.0%
CRR settlements	\$33	1.0%	\$77	2.2%	-	-	\$96	1.4%

*\$ Thousands

Summary of Price Impacts For Board Review

OD	Number of Impacted Transmission Lines/Transformers	Count of Changes in Price for the 4 Hubs and 4 Competitive Load Zones across All Hours of the Affected ODs						
		< -\$10/MWh	>= -\$10/MWh & < -\$1/MWh	>= -\$1/MWh & < -\$0.1/MWh	>= -\$0.1/MWh & < \$0.1/MWh	>= \$0.1/MWh & < \$1/MWh	>= \$1/MWh & < \$10/MWh	>= \$10/MWh
9/16/19	5	1	24	67	34	38	28	0
9/17/19	3	0	3	29	64	88	8	0
9/18/19	2	0	2	67	52	7	55	9
9/19/19	1	0	6	32	47	83	24	0
9/20/19	1	0	6	44	117	25	0	0
9/21/19	1	0	2	58	90	25	17	0
9/22/19	1	0	2	12	137	39	2	0
9/23/19	5	0	1	28	102	30	29	2

Note: a positive value indicates that the corrected or proposed price is higher than the original price.



Date: December 3, 2019
To: Board of Directors
From: Kenan Ögelman
Subject: Day-Ahead Market Price Correction for Operating Days
September 16-23, 2019

Issue for the ERCOT Board of Directors

ERCOT Board of Directors Meeting Date: December 10, 2019

Item No.: 9.1

Issue:

Pursuant to paragraph 5 of Protocol Section 4.5.3, Communicating DAM Results, whether the ERCOT Board of Directors (Board) should approve price corrections for Day-Ahead Locational Marginal Prices (DALMPs), Day-Ahead Settlement Point Prices (DASPPs), and Market Clearing Prices for Capacity (MCPCs) for Operating Days September 16-23, 2019, that were affected by a software error.

Background/History:

ERCOT staff has identified a need to correct prices in the Day-Ahead Market (DAM) for Operating Days September 16-23, 2019. The impacted prices include:

- DALMPs;
- DASPPs; and
- MCPCs.

The ERCOT Protocols require ERCOT to correct prices when invalid prices are identified in an otherwise valid market solution. If ERCOT determines that prices are erroneous, ERCOT must correct the prices before they are final; prices are final at 1000 of the second Business Day after the Operating Day. However, if ERCOT determines that prices are in need correction after they are final and seeks Board review of such prices, then ERCOT must notify Market Participants, and describe the need for such correction, no later than 30 days after the Operating Day.

The Board may review and change DALMPs, DASPPs, and MCPCs if (a) ERCOT gave timely notice to Market Participants, and (b) the Board finds that such prices are “significantly affected by an error.” The Board may rely on the following reasons to find that such prices are significantly affected by an error:

- Data Input Error: Missing, incomplete, or incorrect versions of one or more data elements input to the DAM application may result in an invalid market solution and/or prices.
- Software Error: Pricing errors may occur due to software implementation errors in DAM pre-processing, DAM clearing process, and/or DAM post processing.

- Inconsistency with the Protocols or the Public Utility Commission of Texas (PUC) Substantive Rules: Pricing errors may occur when specific circumstances result in prices that are in conflict with such Protocol language or the PUC Substantive Rules.

(See Protocol Sections 4.5.3(4) and (5).)

On September 24, 2019, ERCOT became aware of an issue concerning the modeling of withdrawn Outages in the DAM and Reliability Unit Commitment (RUC) for various Operating Days in August and September 2019 (i.e., Operating Days August 20-21, 2019, and September 16-25, 2019). On May 30, 2019, ERCOT deployed a system enhancement for modeling Outages in DAM and RUC. The enhancement was intended to only model withdrawn Outages in DAM and RUC for instances where out-of-service equipment was in the process of being restored. However, ERCOT determined that certain withdrawn Outages—i.e., Outages that had been withdrawn before their planned Outage start date—were erroneously modeled in the DAM as out-of-service for the affected Operating Days. In other words, some in-service Transmission Elements were identified as out-of-service in ERCOT's network model when clearing the DAM for the affected Operating Days. Upon discovery of the issue, ERCOT immediately implemented an emergency fix, and began investigating prices for the affected Operating Days. ERCOT has determined that DAM clearing was impacted for all of the affected Operating Days.

On October 3, 2019, ERCOT notified Market Participants of the software error, and described the need for correction. ERCOT informed Market Participants that although Operating Days August 20-21, 2019, were affected by the software error, ERCOT would not be seeking Board review of prices for those Operating Days because the timeline under Protocol Section 4.5.3(5) precludes Board review. ERCOT further informed Market Participants that it corrected prices for Operating Days September 24, 2019 and September 25, 2019 in accordance with ERCOT Protocol Section 4.5.3(4). ERCOT advised that it was continuing to investigate the remaining Operating Days (i.e., September 16-23, 2019), and would provide an updated notice with respect to which Operating Days' ERCOT would seek Board review of prices for. (See Market Notice M-A100319-01.)

On October 9, 2019, ERCOT notified Market Participants that DAM clearing was impacted for Operating Days September 16-23, 2019, and ERCOT would be seeking Board review of DAM prices for those Operating Days. (See Market Notice M-A100319-02.)

Accordingly, ERCOT requests that the Board: (a) review DALMPs, DASPPs, and MCPCs for Operating Days September 16-23, 2019; (b) make a determination as to whether such prices were significantly affected by a software error; and (c) authorize ERCOT to correct some or all DALMPs, DASPPs, and MCPCs for Operating Days



September 16-23, 2019. Attached hereto are documents containing the corrected prices for the DALMPs, DASPPs, and MCPCs for Operating Days September 16-23, 2019 as follows:

- **Attachment A** – Price Correction DAM SPPs;
- **Attachment B** – Price Correction DAM LMPs; and
- **Attachment C** – Price Correction DAM MCPCs.

It is important to note that while this issue affected models used by RUC, ERCOT has reviewed RUC instructions for the Operating Days at issue and does not believe any were associated with transmission congestion or other system conditions that may have arisen out of this modeling issue. Moreover, this issue did not affect pricing outcomes in the Real-Time Market, as ERCOT System topology in Real-Time is based on telemetry, rather than information from the Outage Scheduler.

Relevant Protocol Sections:

4.5.3 Communicating DAM Results

- (4) ERCOT shall correct prices when: (i) a market solution is determined to be invalid or (ii) invalid prices are identified in an otherwise valid market solution, unless accurate prices cannot be determined. The following are some reasons that may cause these conditions.
 - (a) Data Input error: Missing, incomplete, or incorrect versions of one or more data elements input to the DAM application may result in an invalid market solution and/or prices.
 - (b) Software error: Pricing errors may occur due to software implementation errors in DAM pre-processing, DAM clearing process, and/or DAM post processing.
 - (c) Inconsistency with these Protocols or the Public Utility Commission of Texas (PUCT) Substantive Rules: Pricing errors may occur when specific circumstances result in prices that are in conflict with such Protocol language or the PUCT Substantive Rules.
- (5) All DAM LMPs, MCPCs, and Settlement Point Prices are final at 1000 of the second Business Day after the Operating Day.
 - (a) However, after DAM LMPs, MCPCs, and Settlement Point Prices are final, if ERCOT determines that prices are in need of correction and seeks ERCOT Board review of such prices, it shall notify Market Participants and describe the need for such correction as soon as practicable but no later than 30 days after the Operating Day. Failure to

notify Market Participants within this timeline precludes the ERCOT Board from reviewing such prices. However, nothing in this section shall be understood to limit or otherwise inhibit any of the following:

- (i) ERCOT's duty to inform the PUCT of potential or actual violations of the ERCOT Protocols or PUCT Rules and its right to request that the PUCT authorize correction of any prices that may have been affected by such potential or actual violations;
 - (ii) The PUCT's authority to order price corrections when permitted to do so under other law; or
 - (iii) ERCOT's authority to grant relief to a Market Participant pursuant to the timelines specified in Section 20, Alternative Dispute Resolution Procedure.
- (b) The ERCOT Board may review and change DAM LMPs, MCPCs, or Settlement Point Prices if ERCOT gave timely notice to Market Participants and the ERCOT Board finds that such prices are significantly affected by an error.
- (c) In review of DAM LMPs, MCPCs, or Settlement Point Prices, the ERCOT Board may rely on the same reasons identified in paragraph (4) above to find that the prices are significantly affected by an error.

Key Factors Influencing Issue:

A Market Management System (MMS) system enhancement for modeling Outages in the DAM was intended to only model withdrawn Outages where out-of-service equipment was under restoration. MMS inadvertently modeled all withdrawn Outages for DAM, not just those undergoing restoration. Outages withdrawn before their planned Outage start date were erroneously modeled in the DAM as out-of-service—i.e., some in-service Transmission Elements were identified as out-of-service in ERCOT's network model when clearing the DAM. Prior to this system enhancement/software implementation error, when a transmission Outage status was withdrawn, the Outage would not be included. Prices were different when the Outage was included versus when it was not.

Settlement analysis indicates that energy purchases/sales were impacted by as much as \$950K, depending on the Operating Day, and Point-to-Point purchases were impacted by as much as \$420K. The single largest impact to a QSE invoice is approximately \$200K.

Conclusion/Recommendation:

ERCOT recommends that the Board make a determination as to whether DALMPs,



DASPPs, and MCPCs for Operating Days September 16-23, 2019 were significantly affected by the above-referenced software error; and direct/authorize ERCOT to correct some or all DALMPs, DASPPs, and MCPCs for those Operating Days.



ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.
BOARD OF DIRECTORS RESOLUTION

WHEREAS, paragraph (5) of Protocol Section 4.5.3 (September 1, 2019 version), Communicating DAM Results, authorizes the Board of Directors (Board) of Electric Reliability Council of Texas, Inc. (ERCOT) to approve a price correction only upon a finding that Day-Ahead Locational Marginal Prices (DALMPs), Day-Ahead Settlement Point Prices (DASPPs) or Market Clearing Prices for Capacity (MCPCs) have been significantly affected by an error; and

WHEREAS, pursuant to paragraph (5)(a) of Protocol Section 4.5.3, ERCOT gave timely notice to Market Participants that Day-Ahead Market (DAM) prices for Operating Days September 16-23, 2019, were in need of correction, and ERCOT would be seeking Board review of such prices; and

WHEREAS, after due consideration of the alternatives, the Board deems it desirable and in the best interest of ERCOT to correct DALMPs, DASPPs and MCPCs for Operating Days September 16-23, 2019, as such prices were significantly affected by software error;

THEREFORE, BE IT RESOLVED, that the Board hereby (1) determines that the DALMPs, DASPPs and MCPCs affected by a software error on Operating Days September 16-23, 2019 were significantly affected by such software error, and (2) authorizes ERCOT staff to implement the appropriate price corrections pursuant to paragraph (5) of Protocol Section 4.5.3.

CORPORATE SECRETARY'S CERTIFICATE

I, Vickie G. Leady, Assistant Corporate Secretary of ERCOT, do hereby certify that, at its December 10, 2019 meeting, the ERCOT Board passed a motion approving the above Resolution by _____.

IN WITNESS WHEREOF, I have hereunto set my hand this ____ day of December, 2019.

Vickie G. Leady
Assistant Corporate Secretary

EXHIBIT D

NOVEMBER 14, 2016,
NODAL REVISION REQUEST 807,
“DAY AHEAD MARKET PRICE CORRECTION”

Nodal Protocol Revision Request

NPRR Number	<u>807</u>	NPRR Title	Day-Ahead Market Price Correction
Date Posted		November 14, 2016	

Requested Resolution	Normal
Nodal Protocol Sections Requiring Revision	4.5.3, Communicating DAM Results
Related Documents Requiring Revision/Related Revision Requests	None
Revision Description	<p>This Nodal Protocol Revision Request (NPRR) clarifies that price corrections will only be performed for the Day-Ahead Market (DAM) in the case where awards are not affected by the error (e.g., a correction at a logical combined cycle resource node where the generator did not participate in DAM).</p> <p>When both prices and awards are affected by an error, a price correction would cause price/dispatch inconsistency, and there is no mechanism under the Protocols to make Market Participants whole to their DAM bids and offers. In these situations, ERCOT proposes that published prices and awards be final to provide market certainty, as Market Participants begin making Real-Time decisions based on DAM results prior to the opportunity for price correction to occur.</p>
Reason for Revision	<p><input checked="" type="checkbox"/> Addresses current operational issues.</p> <p><input type="checkbox"/> Meets Strategic goals (tied to the <u>ERCOT Strategic Plan</u> or directed by the ERCOT Board).</p> <p><input type="checkbox"/> Market efficiencies or enhancements</p> <p><input type="checkbox"/> Administrative</p> <p><input type="checkbox"/> Regulatory requirements</p> <p><input type="checkbox"/> Other: (explain) <i>(please select all that apply)</i></p>
Business Case	Provides market certainty by explicitly declaring the finality of the DAM solution, thereby ensuring that Market Participants can confidently make decisions based on the results.

Nodal Protocol Revision Request

Sponsor	
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Phone Number	512-248-6678
Market Segment	N/A

Market Rules Staff Contact	
Name	Lindsay Butterfield
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Phone Number	512-248-6521

Proposed Protocol Language Revision
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4.5.3 *Communicating DAM Results*

- (1) As soon as practicable, but no later than 1330 in the Day-Ahead, ERCOT shall notify the parties to each cleared DAM transaction (e.g., the buyer and the seller) of the results of the DAM as follows:
 - (a) Awarded Ancillary Service Offers, specifying Resource, MW, Ancillary Service type, and price, for each hour of the awarded offer;
 - (b) Awarded energy offers from Three-Part Supply Offers and from DAM Energy-Only Offers, specifying Resource (except for DAM Energy-Only Offers), MWh, Settlement Point, and Settlement Point Price, for each hour of the awarded offer;
 - (c) Awarded DAM Energy Bids, specifying MWh, Settlement Point, and Settlement Point Price for each hour of the awarded bid; and
 - (d) Awarded PTP Obligation Bids, number of PTP Obligations in MW, source and sink Settlement Points, and price for each Settlement Interval of the awarded bid.

- (2) As soon as practicable, but no later than 1330, ERCOT shall post on the MIS Public Area the hourly:
 - (a) Day-Ahead MCPC for each type of Ancillary Service for each hour of the Operating Day;
 - (b) DASPPs for each Settlement Point for each hour of the Operating Day;

Nodal Protocol Revision Request

- (c) Day-Ahead hourly LMPs for each Electrical Bus for each hour of the Operating Day;
 - (d) Shadow Prices for every binding constraint for each hour of the Operating Day;
 - (e) Quantity of total Ancillary Service Offers received in the DAM, in MW by Ancillary Service type for each hour of the Operating Day;
 - (f) Energy bought in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Bids (in MWh) bought in the DAM at each Settlement Point for each hour of the Operating Day; and
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that sink at each Settlement Point for each hour of the Operating Day.
 - (g) Energy sold in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Offers (in MWh), from Three-Part Supply Offers and DAM Energy Only Offers, bought in the DAM at each Settlement Point for each hour of the Operating Day; and
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that source at each Settlement Point for each hour of the Operating Day.
 - (h) Aggregated Ancillary Service Offer Curve of all Ancillary Service Offers for each type of Ancillary Service for each hour of the Operating Day;
 - (i) Electrically Similar Settlement Points used during the DAM clearing process; and
 - (j) Settlement Points that were de-energized in the base case; and
 - (k) System Lambda.
- (3) ERCOT shall monitor Day-Ahead MCPCs and Day-Ahead hourly LMPs for errors and if there are conditions that cause the price to be questionable, ERCOT shall notify all Market Participants that the DAM prices are under investigation as soon as practicable.
- (4) If accurate prices can be determined and awards are not affected, ERCOT shall correct prices when invalid prices are identified. The following are some reasons that may cause these conditions.
- (a) Data Input error: Missing, incomplete, or incorrect versions of one or more data elements input to the DAM application may result in an invalid market solution and/or prices.

Nodal Protocol Revision Request

- (b) Software error: Pricing errors may occur due to software implementation errors in DAM pre-processing, DAM clearing process, and/or DAM post processing.
 - (c) Inconsistency with these Protocols or the Public Utility Commission of Texas (PUCT) Substantive Rules: Pricing errors may occur when specific circumstances result in prices that are in conflict with such Protocol language or the PUCT Substantive Rules.
- (5) All DAM LMPs, MCPCs, and Settlement Point Prices are final at 1000 of the second Business Day after the Operating Day. Awarded DAM transaction quantities are final when they are posted.
- (a) However, after DAM LMPs, MCPCs, and Settlement Point Prices are final, if ERCOT determines that prices are in need of correction and seeks ERCOT Board review of such prices, it shall notify Market Participants and describe the need for such correction as soon as practicable but no later than 30 days after the Operating Day. Failure to notify Market Participants within this timeline precludes the ERCOT Board from reviewing such prices. However, nothing in this section shall be understood to limit or otherwise inhibit any of the following:
 - (i) ERCOT's duty to inform the PUCT of potential or actual violations of the ERCOT Protocols or PUCT Rules and its right to request that the PUCT authorize correction of any prices that may have been affected by such potential or actual violations;
 - (ii) The PUCT's authority to order price corrections when permitted to do so under other law; or
 - (iii) ERCOT's authority to grant relief to a Market Participant pursuant to the timelines specified in Section 20, Alternative Dispute Resolution Procedure.
 - (b) The ERCOT Board may review and change DAM LMPs, MCPCs, or Settlement Point Prices if ERCOT gave timely notice to Market Participants and the ERCOT Board finds that such prices are significantly affected by an error.
 - (c) In review of DAM LMPs, MCPCs, or Settlement Point Prices, the ERCOT Board may rely on the same reasons identified in paragraph (4) above to find that the prices are significantly affected by an error.
- (6) As soon as practicable, but no later than 1330, ERCOT shall make available the Day-Ahead Shift Factors for binding constraints in the DAM and post to the MIS Secure Area.

EXHIBIT E

JUNE 6, 2018

ERCOT REQUEST FOR WITHDRAWAL OF
NODAL PROTOCOL REVISION REQUEST 807

Request for Withdrawal

NPRR Number	807	NPRR Title	Day-Ahead Market Price Correction
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Date	June 6, 2018
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Submitter's Information	
Name	Kenan Ögelman & Juliana Morehead
Company	ERCOT
E-mail Address	Kenan.Ogelman@ercot.com , Juliana.Morehead@ercot.com
Phone Number	512-248-6707, 512-225-7184
Cell Number	
Market Segment	N/A

Reason for Request for Withdrawal
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On November 14, 2016, ERCOT submitted NPRR807 to clarify that a price correction would be performed for the Day-Ahead Market (DAM) only in the event that DAM awards were not affected by the error that caused invalid prices. Currently, when prices and awards are affected by an error in the DAM, a price correction under the current Protocol language has the potential to cause inconsistency between awards and prices.

On February 22, 2017, Morgan Stanley Capital Group, Inc. (Morgan Stanley) submitted comments to allow parties impacted by a price correction under ERCOT's proposed revisions to "recover any harm caused by the error." For the past two years, ERCOT and stakeholders have discussed what remedies, if any, stakeholders would have through the Alternative Dispute Resolution (ADR) Procedure set forth in Protocol Section 20. Several sets of comments have been submitted by ERCOT and stakeholders in an attempt to address the issue as to whether ERCOT would, through the ADR Procedure, make a Market Participant "whole" for damages incurred because of a pricing error under Section 4.5.3. Most recently, on June 4, 2018, Austin Energy, Calpine Corporation, Lower Colorado River Authority, Luminant Generation Company LLC, Morgan Stanley, Reliant Energy Retail Services, Shell Energy North America and South Texas Electric Cooperative, Inc. and Tenaska Power Service Co. (the Coalition), submitted comments to include language that would require ERCOT to "grant relief to the Market Participant as part of the [ADR] Procedure in Section 20" if ERCOT determines that a Market Participant was harmed by an ERCOT error. ERCOT believes that the issue requires a more thorough vetting through the stakeholder process, independent of NPRR807.

Request for Withdrawal

While ERCOT understands that Market Participants would like further assurance that the ADR Procedure would apply to situations in which a DAM pricing error occurred as a result of ERCOT's failure to properly act under the Protocols (i.e., an ERCOT error), it is ERCOT's position that (under NPRR807, as originally proposed by ERCOT, and as the Protocols currently stand) if a Market Participant is harmed as a result of ERCOT's action/inaction (i.e., failure to properly act under the Protocols), then that Market Participant may seek relief through the ADR Procedure in Protocol Section 20. This availability to seek relief through the ADR Procedure is not new, and has been available to Market Participants since inception of the Nodal Protocols. Furthermore, Protocol Section 4.5.3(5)(a)(iii) specifically states that nothing in Section 4.5.3 "shall be understood to limit or otherwise inhibit... (iii) ERCOT's authority to grant relief to a Market Participant pursuant to the timelines specified in Section 20, [ADR] Procedure." However, the language currently proposed by the Coalition arguably deviates from the ADR Procedure set forth in Protocol Section 20 by requiring ERCOT to grant a dispute without having to follow the process or satisfy the requirements for ADR under Protocol Section 20.

At this point, ERCOT believes that clarification of the DAM price correction process has been superseded by the dispute resolution issue. Accordingly, ERCOT is withdrawing NPRR807 to provide ERCOT and Market Participants with the opportunity to focus on the dispute aspects that may arise from a DAM pricing error. ERCOT is interested in continuing market dialogue regarding the current dispute process as relates to DAM pricing errors, and would encourage interested parties to sponsor a NPRR to clarify any dispute issues related thereto. Once such issues have been addressed, ERCOT will likely refile an NPRR to address DAM price corrections.

EXHIBIT F

NOVEMBER 7, 2019, NODAL PROTOCOL REVISION REQUEST 981,
“DAY-AHEAD MARKET PRICE CORRECTION PROCESS”).

Nodal Protocol Revision Request

NPRR Number	<u>981</u>	NPRR Title	Day-Ahead Market Price Correction Process
Date Posted	November 7, 2019		

Requested Resolution	Normal
Nodal Protocol Sections Requiring Revision	4.5.1, DAM Clearing Process 4.5.3, Communicating DAM Results
Related Documents Requiring Revision/Related Revision Requests	None
Revision Description	This Nodal Protocol Revision Request (NPRR) ensures awarded Day-Ahead Market (DAM) transaction quantities are final when they are posted and allows Market Participants impacted by an error to utilize the Alternative Dispute Resolution (ADR) process.
Reason for Revision	<input checked="" type="checkbox"/> Addresses current operational issues. <input type="checkbox"/> Meets Strategic goals (tied to the <u>ERCOT Strategic Plan</u> or directed by the ERCOT Board). <input type="checkbox"/> Market efficiencies or enhancements <input type="checkbox"/> Administrative <input type="checkbox"/> Regulatory requirements <input type="checkbox"/> Other: (explain) <i>(please select all that apply)</i>
Business Case	This NPRR is the continuation of the discussion on NPRR807, Day-Ahead Market Price Correction. These initial revisions are a direct net copy of the June 5, 2018 Joint Commenters comments to NPRR807. Luminant believes that this NPRR is needed as faith in the DAM output is an important aspect of the ERCOT market and a clear process for Market Participants harmed by DAM errors is required.

Sponsor	
Name	Ian Haley
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Nodal Protocol Revision Request

Company	Luminant Generation Company LLC
Phone Number	512-349-6407
Cell Number	
Market Segment	Independent Generator

Market Rules Staff Contact	
Name	Cory Phillips
E-Mail Address	Cory.Phillips@ercot.com
Phone Number	512-248-6464

Proposed Protocol Language Revision
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4.5.1 *DAM Clearing Process*

- (1) At 1000 in the Day-Ahead, ERCOT shall start the Day-Ahead Market (DAM) clearing process. If the processing of DAM bids and offers after 0900 is significantly delayed or impacted by a failure of ERCOT software or systems that directly impacts the DAM, ERCOT shall post a Notice as soon as practicable on the Market Information System (MIS) Public Area, in accordance with paragraph (1) of Section 4.1.2, Day-Ahead Process and Timing Deviations, extending the start time of the execution of the DAM clearing process by an amount of time at least as long as the duration of the processing delay plus ten minutes. In no event shall the extension exceed more than one hour from when the processing delay is resolved.
- (2) ERCOT shall complete a Day-Ahead Simultaneous Feasibility Test (SFT). This test uses the Day-Ahead Updated Network Model topology and evaluates all Congestion Revenue Rights (CRRs) for feasibility to determine hourly oversold quantities.
- (3) The purpose of the DAM is to economically and simultaneously clear offers and bids described in Section 4.4, Inputs into DAM and Other Trades.
- (4) The DAM uses a multi-hour mixed integer programming algorithm to maximize bid-based revenues minus the offer-based costs over the Operating Day, subject to security and other constraints, and ERCOT Ancillary Service procurement requirements.
 - (a) The bid-based revenues include revenues from DAM Energy Bids and Point-to-Point (PTP) Obligation bids.
 - (b) The offer-based costs include costs from the Startup Offer, Minimum Energy Offer, and Energy Offer Curve of any Resource that submitted a Three-Part Supply Offer, DAM Energy-Only Offers and Ancillary Service Offers.

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- (c) Security constraints specified to prevent DAM solutions that would overload the elements of the ERCOT Transmission Grid include the following:
 - (i) Transmission constraints – transfer limits on energy flows through the ERCOT Transmission Grid, e.g., thermal or stability limits. These limits must be satisfied by the intact network and for certain specified contingencies. These constraints may represent:
 - (A) Thermal constraints – protect Transmission Facilities against thermal overload.
 - (B) Generic constraints – protect the ERCOT Transmission Grid against transient instability, dynamic stability or voltage collapse.
 - (C) Power flow constraints – the energy balance at required Electrical Buses in the ERCOT Transmission Grid must be maintained.
 - (ii) Resource constraints – the physical and security limits on Resources that submit Three-Part Supply Offers:
 - (A) Resource output constraints – the Low Sustained Limit (LSL) and High Sustained Limit (HSL) of each Resource; and
 - (B) Resource operational constraints – includes minimum run time, minimum down time, and configuration constraints.
 - (iii) Other constraints –
 - (A) Linked offers – the DAM may not select any one part of that Resource capacity to provide more than one Ancillary Service or to provide both energy and an Ancillary Service in the same Operating Hour. The DAM may, however, select part of that Resource capacity to provide one Ancillary Service and another part of that capacity to provide a different Ancillary Service or energy in the same Operating Hour, provided that linked Energy and Off-Line Non-Spinning Reserve (Non-Spin) Ancillary Service Offers are not awarded in the same Operating Hour.
 - (B) The sum of the awarded Ancillary Service capacities for each Resource must be within the Resource limits specified in the Current Operating Plan (COP) and Section 3.18, Resource Limits in Providing Ancillary Service, and the Resource Parameters as described in Section 3.7, Resource Parameters.
 - (C) Block Ancillary Service Offers for a Load Resource – blocks will not be cleared unless the entire quantity block can be awarded. Because block Ancillary Service Offers cannot set the Market Clearing Price for Capacity (MCPC), a block Ancillary Service

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Offer may clear below the Ancillary Service Offer price for that block.

- (D) Block DAM Energy Bids, DAM Energy-Only Offers, and PTP Obligation bids – blocks will not be cleared unless the entire time and/or quantity block can be awarded. Because quantity block bids and offers cannot set the Settlement Point Price, a quantity block bid or offer may clear in a manner inconsistent with the bid or offer price for that block.
 - (E) Combined Cycle Generation Resources – The DAM may commit a Combined Cycle Generation Resource in a time period that includes the last hour of the Operating Day only if that Combined Cycle Generation Resource can transition to a shutdown condition in the DAM Operating Day.
- (d) Ancillary Service needs for each Ancillary Service include the needs specified in the Ancillary Service Plan that are not part of the Self-Arranged Ancillary Service Quantity and that must be met from available DAM Ancillary Service Offers while co-optimizing with DAM Energy Offers. ERCOT may not buy more of one Ancillary Service in place of the quantity of a different service. See Section 4.5.2, Ancillary Service Insufficiency, for what happens if insufficient Ancillary Service Offers are received in the DAM.
- (5) ERCOT shall determine the appropriate Load distribution factors to allocate offers, bids, and source and sink of CRRs at a Load Zone across the energized power flow buses that are modeled with Load in that Load Zone. The non-Private Use Network Load distribution factors are based on historical State Estimator (SE) hourly distribution using a proxy day methodology representing anticipated weather conditions. The Private Use Network Load distribution factors are based on an estimated Load value considering historical net consumption at all Private Use Networks. If ERCOT decides, in its sole discretion, to change the Load distribution factors for reasons such as anticipated weather events or holidays, ERCOT shall select an SE hourly distribution from a proxy day reasonably reflecting the anticipated Load in the Operating Day. ERCOT may also modify the Load distribution factors to account for predicted differences in network topology between the proxy day and Operating Day. ERCOT shall develop a methodology, subject to Technical Advisory Committee (TAC) approval, to describe the modification of the proxy day bus-load distribution for this purpose.
- (6) ERCOT shall allocate offers, bids, and source and sink of CRRs at a Hub using the distribution factors specified in the definition of that Hub in Section 3.5.2, Hub Definitions.
- (7) A Resource that has a Three-Part Supply Offer cleared in the DAM may be eligible for Make-Whole Payment of the Startup Offer and Minimum Energy Offer submitted by the Qualified Scheduling Entity (QSE) representing the Resource under Section 4.6, DAM Settlement.

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- (8) The DAM Settlement is based on hourly MW awards and on Day-Ahead hourly Settlement Point Prices. All PTP Options settled in the DAM are settled based on the Day-Ahead Settlement Point Prices (DASPPs). ERCOT shall assign a Locational Marginal Price (LMP) to de-energized Electrical Buses for use in the calculation of the DASPPs by using heuristic rules applied in the following order:
 - (a) Use an appropriate LMP predetermined by ERCOT as applicable to a specific Electrical Bus; or if not so specified
 - (b) Use the following rules in order:
 - (i) Use average LMP for Electrical Buses within the same station having the same voltage level as the de-energized Electrical Bus, if any exist.
 - (ii) Use average LMP for all Electrical Buses within the same station, if any exist.
 - (iii) Use System Lambda.
- (9) The Day-Ahead MCPC for each hour for each Ancillary Service is the Shadow Price for that Ancillary Service for the hour as determined by the DAM algorithm.
- (10) If the Day-Ahead MCPC cannot be calculated by ERCOT, the Day-Ahead MCPC for the particular Ancillary Service is equal to the Day-Ahead MCPC for that Ancillary Service in the same Settlement Interval of the preceding Operating Day.
- (11) If the DASPPs cannot be calculated by ERCOT, all CRRs shall be settled based on Real-Time prices. Settlements for all CRRs shall be reflected on the Real-Time Settlement Statement.
- (12) Constraints can exist between the generator's Resource Connectivity Node and the Resource Node, in which case the awarded quantity of energy may be inconsistent with the clearing price when the constraint between the Resource Connectivity Node and the Resource Node is binding.
- (13) PTP Obligation bids shall not be awarded where the DAM clearing price for the PTP Obligation is greater than the PTP Obligation bid price plus \$0.01/MW per hour.
- (14) ERCOT shall execute price validation prior to publication of DAM results.

4.5.3 Communicating DAM Results, Price Validations, and Corrections

- (1) As soon as practicable, but no later than 1330 in the Day-Ahead, ERCOT shall notify the parties to each cleared DAM transaction (e.g., the buyer and the seller) of the results of the DAM as follows:
 - (a) Awarded Ancillary Service Offers, specifying Resource, MW, Ancillary Service type, and price, for each hour of the awarded offer;

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- (b) Awarded energy offers from Three-Part Supply Offers and from DAM Energy-Only Offers, specifying Resource (except for DAM Energy-Only Offers), MWh, Settlement Point, and Settlement Point Price, for each hour of the awarded offer;
 - (c) Awarded DAM Energy Bids, specifying MWh, Settlement Point, and Settlement Point Price for each hour of the awarded bid; and
 - (d) Awarded PTP Obligation Bids, number of PTP Obligations in MW, source and sink Settlement Points, and price for each Settlement Interval of the awarded bid.
- (2) As soon as practicable, but no later than 1330, ERCOT shall post on the MIS Public Area the hourly:
- (a) Day-Ahead MCPC for each type of Ancillary Service for each hour of the Operating Day;
 - (b) DASPPs for each Settlement Point for each hour of the Operating Day;
 - (c) Day-Ahead hourly LMPs for each Electrical Bus for each hour of the Operating Day;
 - (d) Shadow Prices for every binding constraint for each hour of the Operating Day;
 - (e) Quantity of total Ancillary Service Offers received in the DAM, in MW by Ancillary Service type for each hour of the Operating Day;
 - (f) Energy bought in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Bids (in MWh) bought in the DAM at each Settlement Point for each hour of the Operating Day; and
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that sink at each Settlement Point for each hour of the Operating Day.
 - (g) Energy sold in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Offers (in MWh), from Three-Part Supply Offers and DAM Energy Only Offers, bought in the DAM at each Settlement Point for each hour of the Operating Day; and
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that source at each Settlement Point for each hour of the Operating Day.
 - (h) Aggregated Ancillary Service Offer Curve of all Ancillary Service Offers for each type of Ancillary Service for each hour of the Operating Day;
 - (i) Electrically Similar Settlement Points used during the DAM clearing process; and

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- (j) Settlement Points that were de-energized in the base case; and
 - (k) System Lambda.
- (3) ERCOT shall monitor Day-Ahead MCPCs and Day-Ahead hourly LMPs for errors and if there are conditions that cause a price to be questionable, ERCOT shall notify all Market Participants that the DAM prices are under investigation as soon as practicable.
- (4) If ERCOT determines that price errors have occurred in the DAM prior to publication of the DAM results, ERCOT may invalidate the results of the DAM and implement the Adjustment Period process found in paragraph (2) of Section 4.1.2, Day-Ahead Process and Timing Deviations. If ERCOT has determined that an error has significantly affected prices, that accurate prices can be determined, and that prices can be corrected without making the prices inconsistent with the underlying bid and offer prices for awarded transactions, ERCOT shall correct prices. The following are some reasons that may cause these conditions.
- (a) Data Input error: Missing, incomplete, or incorrect versions of one or more data elements input to the DAM application may result in an invalid market solution and/or prices.
 - (b) Software error: Pricing errors may occur due to software implementation errors in DAM pre-processing, DAM clearing process, and/or DAM post processing.
 - (c) Inconsistency with these Protocols or the Public Utility Commission of Texas (PUCT) Substantive Rules: Pricing errors may occur when specific circumstances result in prices that are in conflict with such Protocol language or the PUCT Substantive Rules.
- (5) All DAM LMPs, MCPCs, and Settlement Point Prices are final at 1000 of the second Business Day after the Operating Day. Awarded DAM transaction quantities are final when they are posted.
- (a) However, after DAM LMPs, MCPCs, and Settlement Point Prices are final, if ERCOT determines that prices are in need of correction they shall request that the ERCOT Board review the error and the price impacted. ERCOT shall notify Market Participants and describe the need for such correction as soon as practicable but no later than 30 days after the Operating Day. Failure to notify Market Participants within this timeline precludes the ERCOT Board from reviewing such prices. However, nothing in this section shall be understood to limit or otherwise inhibit any of the following:
 - (i) ERCOT's duty to inform the PUCT of potential or actual violations of the ERCOT Protocols or PUCT Rules and its right to request that the PUCT authorize correction of any prices that may have been affected by such potential or actual violations;

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- (ii) The PUCT's authority to order price corrections when permitted to do so under other law; or
 - (iii) ERCOT's authority to grant relief to a Market Participant pursuant to the timelines specified in Section 20, Alternative Dispute Resolution Procedure.
- (b) The ERCOT Board may review and change DAM LMPs, MCPCs, or Settlement Point Prices if ERCOT gave timely notice to Market Participants and the ERCOT Board finds that such prices are significantly affected by an error.
 - (c) In review of DAM LMPs, MCPCs, or Settlement Point Prices, the ERCOT Board may rely on the same reasons identified in paragraph (4) above to find that the prices are significantly affected by an error.
 - (d) Market Participants who were impacted by an ERCOT error that was not subject to a price correction may apply for relief as specified in Section 20 regardless of the magnitude of the error.
 - (e) If ERCOT determines that a Market Participant was harmed by the ERCOT error, then ERCOT shall grant relief to the Market Participant as part of the Alternative Dispute Resolution (ADR) procedure in Section 20. ERCOT will compare the Market Participant's original bid or offer to the settled DAM LMPs, MCPCs, or Settlement Point Prices to determine the net amount to be paid to the Market Participant.
- (6) As soon as practicable, but no later than 1330, ERCOT shall make available the Day-Ahead Shift Factors for binding constraints in the DAM and post to the MIS Secure Area.

EXHIBIT G

DECEMBER 12, 2019

ERCOT PROTOCOL REVISION SUBCOMMITTEE REPORT ON NPRR981,
“DAY-AHEAD MARKET PRICE CORRECTION PROCESS”

PRS Report

NPRR Number	<u>981</u>	NPRR Title	Day-Ahead Market Price Correction Process
Date of Decision	December 12, 2019		
Action	Tabled		
Timeline	Normal		
Proposed Effective Date	To be determined		
Priority and Rank Assigned	To be determined		
Nodal Protocol Sections Requiring Revision	4.5.1, DAM Clearing Process 4.5.3, Communicating DAM Results		
Related Documents Requiring Revision/Related Revision Requests	None		
Revision Description	This Nodal Protocol Revision Request (NPRR) ensures awarded Day-Ahead Market (DAM) transaction quantities are final when they are posted and allows Market Participants impacted by an error to utilize the Alternative Dispute Resolution (ADR) process.		
Reason for Revision	<input checked="" type="checkbox"/> Addresses current operational issues. <input type="checkbox"/> Meets Strategic goals (tied to the <u>ERCOT Strategic Plan</u> or directed by the ERCOT Board). <input type="checkbox"/> Market efficiencies or enhancements <input type="checkbox"/> Administrative <input type="checkbox"/> Regulatory requirements <input type="checkbox"/> Other: (explain) <i>(please select all that apply)</i>		
Business Case	This NPRR is the continuation of the discussion on NPRR807, Day-Ahead Market Price Correction. These initial revisions are a direct net copy of the June 5, 2018 Joint Commenters comments to NPRR807. Luminant believes that this NPRR is needed as faith in the DAM output is an important aspect of the ERCOT market and a clear process for Market Participants harmed by DAM errors is required.		

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Credit Work Group Review	To be determined
PRS Decision	On 12/12/19, PRS unanimously voted to table NPRR981 and refer the issue to WMS. All Market Segments were present for the vote.
Summary of PRS Discussion	On 12/12/19, the sponsor reviewed the purpose of NPRR981 and requested PRS table NPRR981 until such time as stakeholders settle on a preferred resolution for the issues addressed by NPRR903, Day-Ahead Market Timing Deviations.

Sponsor	
Name	Ian Haley
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Company	Luminant Generation Company LLC
Phone Number	512-349-6407
Cell Number	
Market Segment	Independent Generator

Market Rules Staff Contact	
Name	Cory Phillips
E-Mail Address	Cory.Phillips@ercot.com
Phone Number	512-248-6464

Comments Received	
Comment Author	Comment Summary
None	

Market Rules Notes

None

Proposed Protocol Language Revision
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4.5.1 DAM Clearing Process

- (1) At 1000 in the Day-Ahead, ERCOT shall start the Day-Ahead Market (DAM) clearing process. If the processing of DAM bids and offers after 0900 is significantly delayed or

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impacted by a failure of ERCOT software or systems that directly impacts the DAM, ERCOT shall post a Notice as soon as practicable on the Market Information System (MIS) Public Area, in accordance with paragraph (1) of Section 4.1.2, Day-Ahead Process and Timing Deviations, extending the start time of the execution of the DAM clearing process by an amount of time at least as long as the duration of the processing delay plus ten minutes. In no event shall the extension exceed more than one hour from when the processing delay is resolved.

- (2) ERCOT shall complete a Day-Ahead Simultaneous Feasibility Test (SFT). This test uses the Day-Ahead Updated Network Model topology and evaluates all Congestion Revenue Rights (CRRs) for feasibility to determine hourly oversold quantities.
- (3) The purpose of the DAM is to economically and simultaneously clear offers and bids described in Section 4.4, Inputs into DAM and Other Trades.
- (4) The DAM uses a multi-hour mixed integer programming algorithm to maximize bid-based revenues minus the offer-based costs over the Operating Day, subject to security and other constraints, and ERCOT Ancillary Service procurement requirements.
 - (a) The bid-based revenues include revenues from DAM Energy Bids and Point-to-Point (PTP) Obligation bids.
 - (b) The offer-based costs include costs from the Startup Offer, Minimum Energy Offer, and Energy Offer Curve of any Resource that submitted a Three-Part Supply Offer, DAM Energy-Only Offers and Ancillary Service Offers.
 - (c) Security constraints specified to prevent DAM solutions that would overload the elements of the ERCOT Transmission Grid include the following:
 - (i) Transmission constraints – transfer limits on energy flows through the ERCOT Transmission Grid, e.g., thermal or stability limits. These limits must be satisfied by the intact network and for certain specified contingencies. These constraints may represent:
 - (A) Thermal constraints – protect Transmission Facilities against thermal overload.
 - (B) Generic constraints – protect the ERCOT Transmission Grid against transient instability, dynamic stability or voltage collapse.
 - (C) Power flow constraints – the energy balance at required Electrical Buses in the ERCOT Transmission Grid must be maintained.
 - (ii) Resource constraints – the physical and security limits on Resources that submit Three-Part Supply Offers:
 - (A) Resource output constraints – the Low Sustained Limit (LSL) and High Sustained Limit (HSL) of each Resource; and

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- (B) Resource operational constraints – includes minimum run time, minimum down time, and configuration constraints.
- (iii) Other constraints –
 - (A) Linked offers – the DAM may not select any one part of that Resource capacity to provide more than one Ancillary Service or to provide both energy and an Ancillary Service in the same Operating Hour. The DAM may, however, select part of that Resource capacity to provide one Ancillary Service and another part of that capacity to provide a different Ancillary Service or energy in the same Operating Hour, provided that linked Energy and Off-Line Non-Spinning Reserve (Non-Spin) Ancillary Service Offers are not awarded in the same Operating Hour.
 - (B) The sum of the awarded Ancillary Service capacities for each Resource must be within the Resource limits specified in the Current Operating Plan (COP) and Section 3.18, Resource Limits in Providing Ancillary Service, and the Resource Parameters as described in Section 3.7, Resource Parameters.
 - (C) Block Ancillary Service Offers for a Load Resource – blocks will not be cleared unless the entire quantity block can be awarded. Because block Ancillary Service Offers cannot set the Market Clearing Price for Capacity (MCPC), a block Ancillary Service Offer may clear below the Ancillary Service Offer price for that block.
 - (D) Block DAM Energy Bids, DAM Energy-Only Offers, and PTP Obligation bids – blocks will not be cleared unless the entire time and/or quantity block can be awarded. Because quantity block bids and offers cannot set the Settlement Point Price, a quantity block bid or offer may clear in a manner inconsistent with the bid or offer price for that block.
 - (E) Combined Cycle Generation Resources – The DAM may commit a Combined Cycle Generation Resource in a time period that includes the last hour of the Operating Day only if that Combined Cycle Generation Resource can transition to a shutdown condition in the DAM Operating Day.
- (d) Ancillary Service needs for each Ancillary Service include the needs specified in the Ancillary Service Plan that are not part of the Self-Arranged Ancillary Service Quantity and that must be met from available DAM Ancillary Service Offers while co-optimizing with DAM Energy Offers. ERCOT may not buy more of one Ancillary Service in place of the quantity of a different service. See Section 4.5.2,

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Ancillary Service Insufficiency, for what happens if insufficient Ancillary Service Offers are received in the DAM.

- (5) ERCOT shall determine the appropriate Load distribution factors to allocate offers, bids, and source and sink of CRRs at a Load Zone across the energized power flow buses that are modeled with Load in that Load Zone. The non-Private Use Network Load distribution factors are based on historical State Estimator (SE) hourly distribution using a proxy day methodology representing anticipated weather conditions. The Private Use Network Load distribution factors are based on an estimated Load value considering historical net consumption at all Private Use Networks. If ERCOT decides, in its sole discretion, to change the Load distribution factors for reasons such as anticipated weather events or holidays, ERCOT shall select an SE hourly distribution from a proxy day reasonably reflecting the anticipated Load in the Operating Day. ERCOT may also modify the Load distribution factors to account for predicted differences in network topology between the proxy day and Operating Day. ERCOT shall develop a methodology, subject to Technical Advisory Committee (TAC) approval, to describe the modification of the proxy day bus-load distribution for this purpose.
- (6) ERCOT shall allocate offers, bids, and source and sink of CRRs at a Hub using the distribution factors specified in the definition of that Hub in Section 3.5.2, Hub Definitions.
- (7) A Resource that has a Three-Part Supply Offer cleared in the DAM may be eligible for Make-Whole Payment of the Startup Offer and Minimum Energy Offer submitted by the Qualified Scheduling Entity (QSE) representing the Resource under Section 4.6, DAM Settlement.
- (8) The DAM Settlement is based on hourly MW awards and on Day-Ahead hourly Settlement Point Prices. All PTP Options settled in the DAM are settled based on the Day-Ahead Settlement Point Prices (DASPPs). ERCOT shall assign a Locational Marginal Price (LMP) to de-energized Electrical Buses for use in the calculation of the DASPPs by using heuristic rules applied in the following order:
 - (a) Use an appropriate LMP predetermined by ERCOT as applicable to a specific Electrical Bus; or if not so specified
 - (b) Use the following rules in order:
 - (i) Use average LMP for Electrical Buses within the same station having the same voltage level as the de-energized Electrical Bus, if any exist.
 - (ii) Use average LMP for all Electrical Buses within the same station, if any exist.
 - (iii) Use System Lambda.
- (9) The Day-Ahead MCPC for each hour for each Ancillary Service is the Shadow Price for that Ancillary Service for the hour as determined by the DAM algorithm.

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- (10) If the Day-Ahead MCPC cannot be calculated by ERCOT, the Day-Ahead MCPC for the particular Ancillary Service is equal to the Day-Ahead MCPC for that Ancillary Service in the same Settlement Interval of the preceding Operating Day.
- (11) If the DASPPs cannot be calculated by ERCOT, all CRRs shall be settled based on Real-Time prices. Settlements for all CRRs shall be reflected on the Real-Time Settlement Statement.
- (12) Constraints can exist between the generator's Resource Connectivity Node and the Resource Node, in which case the awarded quantity of energy may be inconsistent with the clearing price when the constraint between the Resource Connectivity Node and the Resource Node is binding.
- (13) PTP Obligation bids shall not be awarded where the DAM clearing price for the PTP Obligation is greater than the PTP Obligation bid price plus \$0.01/MW per hour.
- (14) ERCOT shall execute price validation prior to publication of DAM results.

4.5.3 Communicating DAM Results, Price Validations, and Corrections

- (1) As soon as practicable, but no later than 1330 in the Day-Ahead, ERCOT shall notify the parties to each cleared DAM transaction (e.g., the buyer and the seller) of the results of the DAM as follows:
 - (a) Awarded Ancillary Service Offers, specifying Resource, MW, Ancillary Service type, and price, for each hour of the awarded offer;
 - (b) Awarded energy offers from Three-Part Supply Offers and from DAM Energy-Only Offers, specifying Resource (except for DAM Energy-Only Offers), MWh, Settlement Point, and Settlement Point Price, for each hour of the awarded offer;
 - (c) Awarded DAM Energy Bids, specifying MWh, Settlement Point, and Settlement Point Price for each hour of the awarded bid; and
 - (d) Awarded PTP Obligation Bids, number of PTP Obligations in MW, source and sink Settlement Points, and price for each Settlement Interval of the awarded bid.
- (2) As soon as practicable, but no later than 1330, ERCOT shall post on the MIS Public Area the hourly:
 - (a) Day-Ahead MCPC for each type of Ancillary Service for each hour of the Operating Day;
 - (b) DASPPs for each Settlement Point for each hour of the Operating Day;
 - (c) Day-Ahead hourly LMPs for each Electrical Bus for each hour of the Operating Day;

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- (d) Shadow Prices for every binding constraint for each hour of the Operating Day;
 - (e) Quantity of total Ancillary Service Offers received in the DAM, in MW by Ancillary Service type for each hour of the Operating Day;
 - (f) Energy bought in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Bids (in MWh) bought in the DAM at each Settlement Point for each hour of the Operating Day; and
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that sink at each Settlement Point for each hour of the Operating Day.
 - (g) Energy sold in the DAM consisting of the following:
 - (i) The total quantity of awarded DAM Energy Offers (in MWh), from Three-Part Supply Offers and DAM Energy Only Offers, bought in the DAM at each Settlement Point for each hour of the Operating Day; and
 - (ii) The total quantity of awarded PTP Obligation Bids (in MWh) cleared in the DAM that source at each Settlement Point for each hour of the Operating Day.
 - (h) Aggregated Ancillary Service Offer Curve of all Ancillary Service Offers for each type of Ancillary Service for each hour of the Operating Day;
 - (i) Electrically Similar Settlement Points used during the DAM clearing process; and
 - (j) Settlement Points that were de-energized in the base case; and
 - (k) System Lambda.
- (3) ERCOT shall monitor Day-Ahead MCPCs and Day-Ahead hourly LMPs for errors and if there are conditions that cause a price to be questionable, ERCOT shall notify all Market Participants that the DAM prices are under investigation as soon as practicable.
- (4) If ERCOT determines that price errors have occurred in the DAM prior to publication of the DAM results, ERCOT may invalidate the results of the DAM and implement the Adjustment Period process found in paragraph (2) of Section 4.1.2, Day-Ahead Process and Timing Deviations. If ERCOT has determined that an error has significantly affected prices, that accurate prices can be determined, and that prices can be corrected without making the prices inconsistent with the underlying bid and offer prices for awarded transactions, ERCOT shall correct prices. The following are some reasons that may cause these conditions.

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- (a) Data Input error: Missing, incomplete, or incorrect versions of one or more data elements input to the DAM application may result in an invalid market solution and/or prices.
 - (b) Software error: Pricing errors may occur due to software implementation errors in DAM pre-processing, DAM clearing process, and/or DAM post processing.
 - (c) Inconsistency with these Protocols or the Public Utility Commission of Texas (PUCT) Substantive Rules: Pricing errors may occur when specific circumstances result in prices that are in conflict with such Protocol language or the PUCT Substantive Rules.
- (5) All DAM LMPs, MCPCs, and Settlement Point Prices are final at 1000 of the second Business Day after the Operating Day. Awarded DAM transaction quantities are final when they are posted.
- (a) However, after DAM LMPs, MCPCs, and Settlement Point Prices are final, if ERCOT determines that prices are in need of correction they shall request that the ERCOT Board review the error and the price impacted. ERCOT shall notify Market Participants and describe the need for such correction as soon as practicable but no later than 30 days after the Operating Day. Failure to notify Market Participants within this timeline precludes the ERCOT Board from reviewing such prices. However, nothing in this section shall be understood to limit or otherwise inhibit any of the following:
 - (i) ERCOT's duty to inform the PUCT of potential or actual violations of the ERCOT Protocols or PUCT Rules and its right to request that the PUCT authorize correction of any prices that may have been affected by such potential or actual violations;
 - (ii) The PUCT's authority to order price corrections when permitted to do so under other law; or
 - (iii) ERCOT's authority to grant relief to a Market Participant pursuant to the timelines specified in Section 20, Alternative Dispute Resolution Procedure.
 - (b) The ERCOT Board may review and change DAM LMPs, MCPCs, or Settlement Point Prices if ERCOT gave timely notice to Market Participants and the ERCOT Board finds that such prices are significantly affected by an error.
 - (c) In review of DAM LMPs, MCPCs, or Settlement Point Prices, the ERCOT Board may rely on the same reasons identified in paragraph (4) above to find that the prices are significantly affected by an error.
 - (d) Market Participants who were impacted by an ERCOT error that was not subject to a price correction may apply for relief as specified in Section 20 regardless of the magnitude of the error.

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- (e) If ERCOT determines that a Market Participant was harmed by the ERCOT error, then ERCOT shall grant relief to the Market Participant as part of the Alternative Dispute Resolution (ADR) procedure in Section 20. ERCOT will compare the Market Participant's original bid or offer to the settled DAM LMPs, MCPCs, or Settlement Point Prices to determine the net amount to be paid to the Market Participant.
- (6) As soon as practicable, but no later than 1330, ERCOT shall make available the Day-Ahead Shift Factors for binding constraints in the DAM and post to the MIS Secure Area.

EXHIBIT H

JANUARY 9, 2020
ERCOT WHOLESALE MARKET SUBCOMMITTEE
COMMENTS ON NPR981,
“DAY-AHEAD MARKET PRICE CORRECTION PROCESS”

NPRR Comments

NPRR Number	<u>981</u>	NPRR Title	Day-Ahead Market Price Correction Process
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Date	January 9, 2020
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Submitter's Information	
Name	David Kee on behalf of the Wholesale Market Subcommittee (WMS)
E-mail Address	DEKee@CPSEnergy.com
Company	CPS Energy
Phone Number	210-353-6912
Cell Number	210-667-5206
Market Segment	Not Applicable

Comments

On January 8, 2020, WMS reviewed Nodal Protocol Revision Request (NPRR) 981. WMS voted unanimously to request PRS continue to table NPRR981 to allow for further review by the Wholesale Market Working Group (WMWG). All Market Segments were present for the vote.

Revised Cover Page Language

None

Revised Proposed Protocol Language

None

AFFIDAVIT OF PETER JONES

STATE OF DELAWARE

§

COUNTY OF *New Castle*

§

I, Peter Jones, Managing Member of Monterey TX, LLC, first being duly sworn, do hereby state as follows:

- “1. I affirm that I have reviewed Monterey TX, LLC’s Complaint Against the Electric Reliability Council of Texas Pursuant to Procedural Rule 22.251 (Complaint), including all attachments to the Complaint.
2. I further affirm that I have personal knowledge of the facts stated in the Complaint, and that I have authority to submit this Complaint on behalf of Monterey TX, LLC.
3. I certify that the factual allegations contained within the Complaint are true and accurate to the best of my knowledge, information, and belief, and that all documents attached to the Complaint are true and correct copies of the original documents.”

Further affiant sayeth not.

Peter Jones

Peter Jones

Given under my hand and seal of office this 21st day of May, 2020.

JOYCE L. WORSLEY
Notary Public - State of Delaware
My Commission Expires August 3, 2022

Joyce L. Worsley

Notary Public in and for the State of Delaware

My Commission Expires On:

8/3/2022

[Faint handwritten text]

JOYCE L. WORSLEY
Notary Public - State of Delaware
My Commission Expires August 3, 2023

