

NPRR Comments

NPRR Number	1216	NPRR Title	Implementation of Emergency Pricing Program
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Date	March 26, 2024
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Market Segment	Not applicable

Comments

TCPA respectfully files these comments on Nodal Protocol Revision Request (NPRR) 1216, which ERCOT submitted to implement 16 Texas Administrative Code (TAC) §25.509, the Emergency Pricing Program and the Emergency Pricing Cap (ECAP). In discussion with ERCOT staff, there appears to be an inadvertent oversight in the original drafting of this NPRR relating to the attestation for fuel cost recovery. The wording of the attestation presumes all costs submitted for recovery are related to fuel costs. However, recovery of costs when the Emergency Pricing Program is in effect is not limited to fuel costs only. In fact, PURA 39.160 (g) specifically states “(t)he emergency pricing program must allow generators to be reimbursed for reasonable, verifiable operating costs that exceed the emergency cap,” clearly indicating the ability to recover costs beyond fuel costs. A recommended revision in these comments makes it clear that the attestation itself refers to the fuel cost portion only of the submission, in accordance with the adopted rule in 16 TAC §25.509.

In addition, TCPA modifies the methodology to determine when the ECAP goes into effect to be in alignment with the publication of 15-minute Settlement Point Prices so Market Participants can more easily follow the initiation of the ECAP. The change from using 5-minute SCED-level data to using 15-minute time-weighted Settlement Interval Equivalent data will better align with how energy is settled. A second clarifying edit makes it clear the ECAP goes into effect starting at the beginning of the next Operating Hour to provide Market Participants with a time-certain of when the ECAP will be effective. ERCOT staff has indicated the initiation of the EPP may not be immediate and ERCOT should eliminate the potential for retroactive price changes. The last clean-up change ensures ERCOT’s ability to require fuel purchase contracts only applies to situations when an impacted Market Participant is seeking cost recovery related to fuel costs. Similarly, the sentence regarding ERCOT denial should be discretionary based on review of the information provided and, accordingly, changes below move from a mandatory “shall” to a discretionary “may.”

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TCPA looks forward to discussing these recommendations with stakeholders and continuing to work with ERCOT to implement the Emergency Pricing Program as envisioned in rule and statute.

Revised Cover Page Language

Revision Description	
	<p>This Nodal Protocol Revision Request (NPRR) aligns the Protocols with the Public Utility Commission of Texas (PUCT) Order amending 16 Texas Administrative Code (TAC) § 25.509 in Project No. 54585 (54585 Order), which establishes an Emergency Pricing Program (EPP) for the wholesale electric market as required by Public Utility Regulatory Act (PURA) § 39.160. Additionally, this NPRR, along with the estimated implementation costs identified in the Impact Analysis, provides a framework for automating components of the EPP, specifically the activation and deactivation of the Emergency Offer Cap (ECAP), reporting and external communications, and the Settlement for operating losses.</p> <p>During an ECAP Effective Period, the System-Wide Offer Cap (SWCAP) shall be set to the ECAP, which will have a value equal to the Low System-Wide Offer Cap (LCAP).</p> <p>An ECAP Effective Period initiates when the sum of the Real-Time Market (RTM) System Lambda, Real-Time On-Line Reserve Price Adder, and Real-Time On-Line Reliability Deployment Price Adder is greater than or equal to the High System-Wide Offer Cap (HCAP) for 12 hours (i.e., 48 15-minute Settlement Intervals) within a rolling 24-hour period. An ECAP Effective Period then remains in effect until the later of:</p> <ul style="list-style-type: none">• 24 hours after the initial activation of the EPP; or• 24 hours after ERCOT exits emergency operations, if ERCOT entered into or remained in emergency operations while the EPP was activated. If multiple emergency operations periods occur during a 24-hour period, then the ECAP Effective Period will extend from the latest exit from emergency operations that occurred. <p>For purposes of the EPP, emergency operations is defined as declaration of an Energy Emergency Alert (EEA).</p> <p>In order for a Resource (through its Qualified Scheduling Entity (QSE)) to recover actual marginal costs for an ECAP Effective Period, the QSE must submit a Settlement and billing dispute in accordance with the procedures in Sections 6.8.1 and 9.14.</p> <p>An attestation must be provided affirming that the information submitted is accurate and that fixed costs were not included in any of the costs submitted. In addition, if the marginal costs exceed the HCAP due to fuel costs, the attestation must also indicate that</p>

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marginal costs included in the submission are solely related to the provision of fuel or services directly related to the provision of the purchased fuel, as required by 16 TAC § 25.509(c)(5)(B).

Recovery of actual marginal costs above the ECAP revenues are allocated to QSEs based on Load Ratio Share (LRS), as required by 16 TAC § 25.509(c)(5)(C).

Furthermore, this NPRR proposes using a single SWCAP for each Operating Day in the calculation of the Energy Offer Curve Cost Caps in Section 4.4.9.3.3 and removing the allocation of operating losses payment during an LCAP Effective Period to QSEs that are capacity short and replaces it with the same LRS mechanism to allocate costs during ECAP Effective Period, per Section 6.8.3. This will align the ECAP and LCAP operating losses payment allocations methods, enable definitive settlements for the scenario in which an ECAP and LCAP Effective Period overlap, and reduce the overall impact to ERCOT's Settlements processes.

Finally, this NPRR adds the following provision to clarify that a QSE representing a Generation Resource or a Switchable Generation Resource cannot submit a dispute to recover the same costs under both Section 6.8, Settlement for Operating Losses During an LCAP or ECAP Effective Period, and 9.14.7, Disputes for RUC Make-Whole Payment for Fuel Costs or Section 6.6.12.1, Switchable Generation Make-Whole Payment.

Revised Proposed Protocol Language Revision

2.1 DEFINITIONS

High Ancillary Service Limit (HASL)

A dynamically calculated MW upper limit on a Resource to reserve the part of the Resource's capacity committed for Ancillary Service, calculated as described in Section 6.5.7.2, Resource Limit Calculator. HASL is also included in Section 5.7.4.1.1, Capacity Shortfall Ratio Share, and in the Reliability Unit Commitment (RUC) optimization but is not adjusted for Non-Frequency Responsive Capacity (NFRC) as in Section 6.5.7.2.

[NPRR1013: Delete the above definition "High Ancillary Service Limit (HASL)" upon system implementation of the Real-Time Co-Optimization (RTC) project.]

Emergency Offer Cap (ECAP) Effective Period

The period during which the System-Wide Offer Cap (SWCAP) is set to the ECAP.

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[NPRR1216: Replace the definition “Emergency Offer Cap (ECAP) Effective Period” above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project:]

Emergency Offer Cap (ECAP) Effective Period

The period during which the Day-Ahead System-Wide Offer Cap (DASWCAP) is set to the ECAP.

2.2 ACRONYMS AND ABBREVIATIONS

ECAP Emergency Offer Cap
EPP Emergency Pricing Program

4.4.9.3.3 *Energy Offer Curve Cost Caps*

- (1) The following Energy Offer Curve Cost Caps must be used for the purpose of make-whole Settlements, Real-Time High Dispatch Limit Override Energy Payments, and Voltage Support Service Payments:
 - (a) Nuclear = \$15.00/MWh;
 - (b) Coal and Lignite = \$18.00/MWh;
 - (c) Combined Cycle greater than 90 MW = 9 MMBtu/MWh * ((Percentage of FIP * FIP) + (Percentage of FOP * FOP))/100, as specified in the Energy Offer Curve;
 - (d) Combined Cycle less than or equal to 90 MW = 10 MMBtu/MWh * ((Percentage of FIP * FIP) + (Percentage of FOP * FOP))/100, as specified in the Energy Offer Curve;
 - (e) Gas - Steam Supercritical Boiler = 10.5 MMBtu/MWh * ((Percentage of FIP * FIP) + (Percentage of FOP * FOP))/100, as specified in the Energy Offer Curve;
 - (f) Gas Steam Reheat Boiler = 11.5 MMBtu/MWh * ((Percentage of FIP * FIP) + (Percentage of FOP * FOP))/100, as specified in the Energy Offer Curve;
 - (g) Gas Steam Non-reheat or boiler without air-preheater = 14.5 MMBtu/MWh * ((Percentage of FIP * FIP) + (Percentage of FOP * FOP))/100, as specified in the Energy Offer Curve;
 - (h) Simple Cycle greater than 90 MW = 14 MMBtu/MWh * ((Percentage of FIP * FIP) + (Percentage of FOP * FOP))/100, as specified in the Energy Offer Curve;

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- (i) Simple Cycle less than or equal to 90 MW = $15 \text{ MMBtu/MWh} * ((\text{Percentage of FIP} * \text{FIP}) + (\text{Percentage of FOP} * \text{FOP}))/100$, as specified in the Energy Offer Curve;
- (j) Reciprocating Engines = $16 \text{ MMBtu/MWh} * ((\text{Percentage of FIP} * \text{FIP}) + (\text{Percentage of FOP} * \text{FOP}))/100$, as specified in the Energy Offer Curve;
- (k) Hydro = \$10.00/MWh;
- (l) Other = SWCAP;

[NPRR1008: Replace item (l) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project:]

- (l) Other = DASWCAP or RTSWCAP;

- (m) RMR Resource = SWCAP;

[NPRR1008: Replace item (m) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project:]

- (m) RMR Resource = effective Value of Lost Load (VOLL);

- (n) Wind Generation Resources = \$0.00/MWh; and
 - (o) PhotoVoltaic Generation Resource (PVGR) = \$0.00/MWh.
- (2) ERCOT shall produce an annual report each April that provides the amount of DAM and RUC Make-Whole Payments during the previous calendar year for Resources categorized as Other, per item (1)(l) above, as a percentage of the total amount of DAM and RUC Make-Whole Payments made during the previous calendar year. The report shall be based on final Settlements and include the total number of Resources classified as Other. ERCOT shall present this report annually to the appropriate Technical Advisory Committee (TAC) subcommittee. If there are no Make-Whole Payments for Resources categorized as Other for a given calendar year, then ERCOT will not be required to produce the annual report.
 - (3) Items in paragraphs (1)(c) and (d) above are determined by capacity of largest simple-cycle combustion turbine in the train selected.
 - (4) The FIP and FOP used to calculate the Energy Offer Curve Cap for Make-Whole Payment calculation purposes shall be the FIP or FOP for the Operating Day. In the event the Energy Offer Curve Cap for Make-Whole Payment calculation purposes must be calculated before the FIP or FOP is available for the particular Operating Day, the FIP

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and FOP for the most recent preceding Operating Day shall be used. Once the FIP and FOP are available for a particular Operating Day, those values shall be used in the calculations. If the percentage fuel mix is not specified or if no Energy Offer Curve exists, then the minimum of FIP or FOP shall be used.

- (5) During an ECAP Effective Period, the SWCAP used for purposes of calculating the Energy Offer Curve Cost Caps shall be set to the maximum value of SWCAP that was effective for the Operating Day.

[NPRR1216: Replace paragraph (5) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project:]

- (5) During an ECAP Effective Period, the DASWCAP and VOLL used for purposes of calculating the Energy Offer Curve Cost Caps shall be set to the maximum value of DASWCAP and VOLL, respectively, that was effective for the Operating Day.

4.4.11 System-Wide Offer Caps

- (1) The SWCAP shall be determined in accordance with the Public Utility Commission of Texas (PUCT) rules. The methodology for determining the SWCAP is as follows:
 - (a) The SWCAP shall be set equal to the High System-Wide Offer Cap (HCAP) and maintained at this level until either of the following criteria are met:
 - (i) If the sum of the Real-Time Market (RTM) System Lambda, Real-Time On-Line Reserve Price Adder, and Real-Time On-Line Reliability Deployment Price Adder is greater than or equal to the HCAP for a total of 12 hours within a rolling 24-hour period, ERCOT will activate the Emergency Pricing Program (EPP) and SWCAP will be set to Emergency Offer Cap (ECAP) starting at the beginning of the next Operating Hour ERCOT can implement the change. Security-Constrained Economic Dispatch (SCED)-level data, time-weight averaged to a 15-minute Settlement Interval equivalent, will be used to make this determination. The SWCAP will remain at ECAP until the later of:
 - (A) 24 hours after the initial setting of SWCAP to ECAP; or
 - (B) 24 hours after ERCOT exits Energy Emergency Alert (EEA) conditions, if ERCOT entered into or remained in EEA while ECAP was in effect. If ERCOT reenters EEA conditions within 24 hours, then the ECAP Effective Period will continue for 24 hours after the latest exit from EEA conditions.
 - (ii) If the Peaker Net Margin (PNM) exceeds the PNM threshold per MW-year during a year, on the next Operating Day, the SWCAP shall be set to

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the Low System-Wide Offer Cap (LCAP) for the remainder of that year. At the beginning of the next calendar year, the SWCAP shall be reset to the HCAP. This transition process is further described in Section 4.4.11.1, Scarcity Pricing Mechanism.

- (b) ERCOT shall issue operations notices when the ECAP Effective Period begins and ends. Such notices shall respectively state the date and time of the initiation and cessation of the ECAP Effective Period.

[NPRR1216: Insert paragraph (c) below upon system implementation and renumber accordingly:]

- (c) Additionally, ERCOT will post on the ERCOT website the cumulative number of hours in which the sum of the Real-Time Market (RTM) System Lambda, Real-Time On-Line Reserve Price Adder, and Real-Time On-Line Reliability Deployment Price Adder has been greater than or equal to the SWCAP over a rolling 24-hour period.
- (c) Within ten Business Days of the end of the ECAP Effective Period, ERCOT shall file an initial report with the PUCT providing a summary of the event that triggered the EPP and an analysis of the EPP’s performance.
- (d) Within 90 days of the end of the ECAP Effective Period, ERCOT shall file a final report with the PUCT providing a summary of the event that triggered the EPP, an analysis of the EPP’s performance, and any recommendations to modify or improve the EPP. The report shall also include the number of Resources for which Qualified Scheduling Entities (QSEs) filed for cost recovery and the total dollar amount of costs submitted and costs recovered, including fuel type, MW per hour, and number of Resources associated with the recovered costs.
- (e) For the PNM process described above, ERCOT shall set the PNM threshold at three times the cost of new entry of new generation plants.

The above parameters are defined as follows:

Parameter	Unit	Current Value*
ECAP	\$/MWh	2,000
HCAP	\$/MWh	5,000
LCAP	\$/MWh	2,000
PNM threshold	\$/MW-year	315,000

* The current value for the parameters referenced in this table above will be recommended by TAC and approved by the ERCOT Board. ERCOT shall update parameter values on the first day of the month following ERCOT Board approval unless otherwise directed by the ERCOT Board. ERCOT shall provide a Market Notice prior to implementation of a revised parameter value.

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- (2) Any offers submitted that exceed the current SWCAP shall be rejected by ERCOT.

[NPRR1008: Replace Section 4.4.11 above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project:]

4.4.11 Day-Ahead and Real-Time System-Wide Offer Caps

- (1) The DASWCAP and RTSWCAP shall be determined in accordance with the Public Utility Commission of Texas (PUCT) rules. The methodology for determining the DASWCAP and RTSWCAP is as follows:
- (a) The DASWCAP and RTSWCAP shall be set equal to the respective High System-Wide Offer Cap (HCAP). Additionally, the Value of Lost Load (VOLL) used to determine the ASDCs for DAM and RTM shall be set to the HCAP for DAM. These caps shall be maintained at these levels until either of the following criteria are met:
- (i) If the sum of the Real-Time Energy is greater than or equal to the HCAP for DAM for a total of 12 Market (RTM) System Lambda and Real-Time Reliability Deployment Price Adder for hours within a rolling 24-hour period, ERCOT will activate the Emergency Pricing Program (EPP) and the DASWCAP and VOLL used to determine the ASDCs for DAM and RTM will be set to ECAP starting at the beginning of the next Operating Hour ERCOT can implement the change. Security-Constrained Economic Dispatch (SCED)-level data, time-weight averaged to a 15-minute Settlement Interval equivalent, will be used to make this determination. The EPP will remain active until the later of:
- (A) 24 hours after the initial setting of these values to ECAP; or
- (B) 24 hours after ERCOT exits Energy Emergency Alert (EEA) conditions, if ERCOT entered into or remained in EEA while the EPP was active. If ERCOT reenters EEA conditions within 24 hours, then the ECAP Effective Period will continue for 24 hours after the latest exit from EEA conditions.
- (ii) If the Peaker Net Margin (PNM) exceeds the PNM threshold per MW-year during a year, the DASWCAP and the VOLL used to determine the ASDCs for DAM and RTM shall be set per the schedule in Section 4.4.11.1, Scarcity Pricing Mechanism.
- (b) ERCOT shall issue operations notices when the ECAP Effective Period begins and ends. Such notices shall respectively state the date and time of the initiation and cessation of the ECAP Effective Period.

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- (c) Additionally, ERCOT will post on the ERCOT website the cumulative number of hours in which the sum of the Real-Time Market (RTM) System Lambda and Real-Time Reliability Deployment Price Adder for Energy has been greater than or equal to the DASWCAP over a rolling 24-hour period.
- (d) Within ten Business Days of the end of the ECAP Effective Period, ERCOT shall file an initial report with the PUCT providing a summary of the event that triggered the EPP and an analysis of the EPP's performance.
- (e) Within 90 days of the end of the ECAP Effective Period, ERCOT shall file a final report with the PUCT providing a summary of the event that triggered the EPP, an analysis of the EPP's performance, and any recommendations to modify or improve the EPP. The report shall also include the number of Resources for which Qualified Scheduling Entities (QSEs) filed for cost recovery and the total dollar amount of costs submitted and costs recovered, including fuel type, MW per hour, and number of Resources associated with the recovered costs.
- (f) For the PNM process described above, ERCOT shall set the PNM threshold at three times the cost of new entry of new generation plants.

The above parameters are defined as follows:

Parameter	Unit	Current Value*
ECAP	\$/MWh	2,000
HCAP – DAM (DASWCAP)	\$/MWh	5,000
HCAP – RTM (RTSWCAP)	\$/MWh	2,000
LCAP	\$/MWh	2,000
PNM threshold	\$/MW-year	315,000

* The current value for the parameters referenced in this table above will be recommended by TAC and approved by the ERCOT Board. ERCOT shall update parameter values on the first day of the month following ERCOT Board approval unless otherwise directed by the ERCOT Board. ERCOT shall provide a Market Notice prior to implementation of a revised parameter value.

- (2) Any offers submitted that exceed the current respective DASWCAP or RTSWCAP shall be rejected by ERCOT. The applicable cap will be dependent on the timing of the submission.

[NPRR1008: Insert Section 4.4.12 below upon system implementation of the Real-Time Co-Optimization (RTC) project:]

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4.4.12 *Determination of Ancillary Service Demand Curves for the Day-Ahead Market and Real-Time Market*

- (1) This Section describes the process for determining ASDCs for Regulation Up Service (Reg-Up), Regulation Down Service (Reg-Down), Responsive Reserve (RRS), ERCOT Contingency Reserve Service (ECRS), and Non-Spinning Reserve (Non-Spin) for the Day-Ahead Market (DAM) and Real-Time Market (RTM). This section does not apply to ASDCs used in the Reliability Unit Commitment (RUC) process.
- (2) The DAM shall use the same ASDCs as the RTM, as an initial condition. Specific to the DAM, the ASDCs will be adjusted, as needed, to account for negative Self-Arranged Ancillary Service Quantities.
- (3) For Reg-Down, the ASDC shall be a constant value equal to VOLL for the full range of the Ancillary Service Plan for Reg-Down.
- (4) To determine the individual ASDCs for Reg-Up, RRS, ECRS, and Non-Spin, an Aggregate ORDC (AORDC) will be created and then disaggregated into individual curves for the different Ancillary Services.
- (5) ERCOT shall develop the AORDC from historical data from the period of June 1, 2014 through December 31, 2023 as follows:
 - (a) For all SCED intervals where the sum of RTOLCAP and RTOFFCAP is less than 10,000 MW, use the RTOLCAP and RTOFFCAP values to calculate the AORDC as follows:

$$\begin{aligned}
 \mathbf{AORDC} = & \left(0.5 * \left(1 - \mathbf{pnorm}(\mathbf{RTOLCAP} - 2000, 0.5 * \mu, 0.707 * \sigma) \right) + 0.5 \right. \\
 & * \left(1 - \mathbf{pnorm}(\mathbf{RTOLCAP} + \mathbf{RTOFFCAP} - 2000, \mu, \sigma) \right) \\
 & * \left(\mathbf{VOLL} - \mathbf{min}(\mathbf{System\ Lambda}, 250) \right)
 \end{aligned}$$

The above variables are defined as follows:

Variable	Unit	Definition
RTOLCAP	MWh	<i>Real-Time On-Line Reserve Capacity</i> – The Real-Time reserve capacity of On-Line Resources available for the SCED intervals beginning June 1, 2014 through December 31, 2023
RTOFFCAP	MWh	<i>Real-Time Off-Line Reserve Capacity</i> – The Real-Time reserve capacity of Off-Line Resources available for the SCED intervals beginning June 1, 2014 through December 31, 2023.
μ	None	The mean value of the shifted LOLP distribution as published for Fall 2024
σ	None	The standard deviation of the shifted LOLP distribution as published for Fall 2024

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- (b) Using the results of step (a) above, use regression methods to fit a curve to the average reserve pricing outcomes for the various MW reserve levels.
 - (c) Calculate points on the regression curve in 1 MW increments for any observed reserve level $\geq 2,000$ MW and price $> \$0.01/\text{MWh}$. These points form the AORDC.
- (6) ERCOT shall disaggregate the AORDC developed pursuant to paragraph (5) above into individual ASDCs for each Ancillary Service product as follows:
- (a) The ASDC for all Reg-Up in the Ancillary Service Plan shall use the highest price portion of the AORDC;
 - (b) The ASDC for all RRS in the Ancillary Service Plan shall use the highest price portion of the remaining AORDC after removing the portion of the AORDC that was used for the Reg-Up ASDC;
 - (c) The ASDC for all ECRS in the Ancillary Service Plan shall use the highest price portion of the remaining AORDC after removing the portions of the AORDC that were used for the Reg-Up and RRS ASDCs;
 - (d) The ASDC for Non-Spin shall use the remaining portion of the remaining AORDC after removing the portions of the AORDC that were used for the Reg-Up, RRS, and ECRS ASDCs.
- (7) Each ASDC will be represented by a 100-point linear approximation to the corresponding part of the AORDC. Fewer points may be used for cases where it would not result in decreased accuracy in representing the corresponding part of the AORDC.
- (8) The AORDC used in determining the individual ASDCs will be adjusted to reflect any updates to the value of VOLL, as described in Protocol Sections 4.4.11, Day-Ahead and Real-Time System-Wide Offer Caps, and 4.4.11.1, Scarcity Pricing Mechanism.

6.8 Settlement for Operating Losses During an LCAP or ECAP Effective Period

6.8.1 Determination of Operating Losses During an LCAP or ECAP Effective Period

- (1) In order for a Qualified Scheduling Entity (QSE) that represents a Generation Resource or Energy Storage Resource (ESR) to recover actual marginal costs for operating losses during a Low System-Wide Offer Cap (LCAP) or an Emergency Offer Cap (ECAP) Effective Period, and incurred as calculated in Section 6.8.2, Recovery of Operating Losses During an LCAP or ECAP Effective Period, the QSE shall timely submit a Settlement and billing dispute for each affected Operating Day, consistent with the dispute process described in Section 9.14, Settlement and Billing Dispute Process. The

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QSE shall also submit, through the Settlement and billing dispute process, and within 60 days of the issuance of a Real-Time Market (RTM) Initial Statement for an Operating Day, the following information:

- (a) For a Generation Resource:
 - (i) All fuel purchases used to determine the weighted average fuel price included in the calculation of the actual marginal operating fuel cost component, for the Generation Resource, for the 15-minute Settlement Interval within the Operating Day.
 - (b) For an ESR the average electricity cost incurred to charge the ESR for the amount of discharge during the LCAP or ECAP Effective Period.
 - (c) For Resources that do not have approved verifiable costs, the QSE may submit the actual variable operations and maintenance (O&M) rate incurred during the LCAP or ECAP Effective Period in lieu of the Standard Operations and Maintenance Cost (STOM), defined in Section 6.8.2, Recovery of Operating Losses During an LCAP or ECAP Effective Period, subject to verification and approval by ERCOT.
 - (d) An attestation signed by an officer or executive with authority to bind the QSE stating that the information contained in the Settlement and billing dispute is accurate and that fixed costs (e.g., fees, penalties, and similar non-gas costs) were not included in the calculation of the weighted average fuel price. If the marginal costs exceed the HCAP due to fuel costs, the attestation must also include the following provision with respect to such fuel costs: “All marginal fuel costs included in this submission are solely related to the provision of fuel or services directly related to the provision of the purchased fuel.”
- (2) The calculation of operating losses under Section 6.8.2 applies:
- (a) When the Real-Time Settlement Point Price for the Resource is equal to or exceeds the LCAP or ECAP; and
 - (b) When the Resource’s Energy Offer Curve is at the LCAP or ECAP and the Resource receives a Dispatch Instruction or a Base Point above its Low Sustained Limit (LSL).

[NPRR1216: Replace paragraph (2) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project:]

- (2) The calculation of operating losses under Section 6.8.2 applies:
- (a) When the Real-Time Settlement Point Price for the Resource is equal to or exceeds the LCAP or ECAP; and

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(b) When the Resource's Energy Offer Curve or Energy Bid/Offer Curve is at the LCAP or ECAP and the Resource receives a Dispatch Instruction or a Base Point above its Low Sustained Limit (LSL).

- (3) Fuel prices may include all variable costs associated with the purchase, transportation, and storage of fuel.
- (4) ERCOT will consider the documentation provided by the QSE in order to determine the weighted average fuel price for a Generation Resource or the average fuel cost for an ESR during an LCAP or ECAP Effective Period.
- (5) For purposes of determining operating losses during an LCAP or ECAP Effective Period, ERCOT may request additional information, documentation, or clarification from the QSE. In addition, if the marginal costs exceeds the HCAP due to fuel costs, ERCOT may require copies of relevant fuel purchase contracts. A QSE shall respond to any such request within ten Business Days. Failure to provide such information to ERCOT may result in denial of the reimbursement request.
- (6) Notwithstanding paragraphs (1) through (5) above:
 - (a) A QSE representing a Generation Resource cannot submit a dispute to recover the incremental fuel costs incurred under both Section 9.14.7, Disputes for RUC Make-Whole Payment for Fuel Costs, and Section 6.8.1, Determination of Operating Losses During an LCAP or ECAP Effective Period; and
 - (b) A QSE representing a Switchable Generation Resource that ERCOT directs to switch to the ERCOT Control Area cannot submit a dispute to recover the same incremental fuel and operations costs under both Section 6.6.12.1, Switchable Generation Make-Whole Payment, and Section 6.8.1, Determination of Operating Losses During an LCAP or ECAP Effective Period.

6.8.2 Recovery of Operating Losses During an LCAP or ECAP Effective Period

- (1) ERCOT shall calculate the recovery of operating losses during an LCAP or ECAP Effective Period with the actual marginal costs that exceed LCAP or ECAP revenues in accordance with this Section.
- (2) The actual marginal cost (AMC) and marginal energy production (MEP) used to calculate operating losses (OPL) for a Combined Cycle Train are the AMC and MEP that correspond to the Combined Cycle Generation Resource, within a Combined Cycle Train, that operates in Real-Time for the 15-minute Settlement Interval.
- (3) Payment for operating losses during an LCAP or ECAP Effective Period is calculated as follows:

$$\text{OPLPAMT}_{q,r,i} = (-1) * (\text{OPL}_{q,r,i} + \text{ADJOPL}_{q,r,i})$$

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Where,

For the Generation Resource:

$$OPL_{q,r,i} = \text{Max}(0, (AMC_{q,r,i} - \text{Max}(\text{LCAP}, \text{RTSPP}_{p,i})) * \text{Min}(\text{RTMG}_{q,r,i}, \text{MEP}_{q,r,i}))$$

If ERCOT approved verifiable costs for the Generation Resource:

$$AMC_{q,r,i} = \text{AHR}_{q,r,i} * \text{WAFP}_{q,r,i} + \text{ROM}_{q,r}$$

$$\text{MEP}_{q,r,i} = \text{AMF}_{q,r,i} / \text{AHR}_{q,r,i}$$

Otherwise,

$$AMC_{q,r,i} = \text{PAHR}_{q,r,i} * \text{WAFP}_{q,r,i} + \text{STOM}_{rc}$$

$$\text{MEP}_{q,r,i} = \text{AMF}_{q,r,i} / \text{PAHR}_{q,r,i}$$

For ESRs:

$$OPL_{q,r,i} = \text{Max}(0, (AMC_{q,r,i} - \text{Max}(\text{LCAP}, \text{RTSPP}_{p,i})) * \text{RTMG}_{q,r,i})$$

Where,

$$AMC_{q,r,i} = \text{AFC}_{q,r,i} + \text{STOM}_{rc}$$

The above variables are defined as follows:

Variable	Unit	Definition
OPLPAMT _{q,r,i}	\$	<i>Operating Losses Payment Amount</i> – The operating losses payment to the QSE <i>q</i> , for Resource <i>r</i> , for the 15-minute Settlement Interval <i>i</i> within the Operating Day. Where for a Combined Cycle Train, the Resource <i>r</i> is the Combined Cycle Train.
OPL _{q,r,i}	\$	<i>Operating Losses</i> – The operating losses for Resource <i>r</i> , represented by QSE <i>q</i> , for the 15-minute Settlement Interval <i>i</i> within the Operating Day. Where for a Combined Cycle Train, the Resource <i>r</i> is the Combined Cycle Train.
ADJOPL _{q,r,i}	\$	<i>Operating Losses Adjustment</i> – The adjustment to the operating losses for Resource <i>r</i> , represented by QSE <i>q</i> , for the 15-minute Settlement Interval <i>i</i> within the Operating Day. Where for a Combined Cycle Train, the Resource <i>r</i> is the Combined Cycle Train.
WAFP _{q,r,i}	\$/MMBtu	<i>Weighted Average Fuel Price</i> —The volume-weighted average price of fuel submitted to ERCOT for the LCAP or ECAP Effective Period for a specific Resource <i>r</i> , represented by QSE <i>q</i> , and specific 15-minute Settlement Interval <i>i</i> within the Operating Day. Where for a Combined Cycle Train, the Resource <i>r</i> is a Combined Cycle Generation Resource within the Combined Cycle Train.

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Variable	Unit	Definition
AMC _{q, r, i}	\$/MWh	<i>Actual Marginal Cost</i> – The actual marginal costs for Resource <i>r</i> represented by QSE <i>q</i> for the 15-minute Settlement Interval <i>i</i> within the Operating Day. Where for a Combined Cycle Train, the Resource <i>r</i> is a Combined Cycle Generation Resource within the Combined Cycle Train.
LCAP	\$/MWh	<i>Low System Wide Offer Cap</i> – The value set per paragraph (1) of Section 4.4.11, System-Wide Offer Caps.
ROM _{q, r}	\$/MWh	<i>Raw Verifiable Operations and Maintenance Cost Above LSL</i> – The raw verifiable O&M cost for the Resource <i>r</i> represented by QSE <i>q</i> for operations above Low Sustained Limit (LSL). Where for a Combined Cycle Train, the Resource <i>r</i> is a Combined Cycle Generation Resource within the Combined Cycle Train.
AMF _{q, r, i}	MMBtu	<i>Actual Marginal Fuel per QSE per Resource</i> - The actual marginal purchased and delivered fuel for the Resource <i>r</i> represented by QSE <i>q</i> for the 15-minute Settlement Interval <i>i</i> within the Operating Day. The AMF represents only the fuel used to calculate the weighted average fuel price, WAFF. Where for a Combined Cycle Train, the Resource <i>r</i> is a Combined Cycle Generation Resource within the Combined Cycle Train.
STOM _{rc}	\$/MWh	<p><i>Standard Operations and Maintenance Cost</i> – The standard O&M cost for the Resource category <i>rc</i> for operations above LSL, as described in paragraph (6)(c) of Section 5.6.1, Verifiable Costs. For an ESR, STOM shall be set at \$0.3/MWh.</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>[NPRR1086: Replace the definition above with the following upon system implementation of NPRR1029:]</p> <p><i>Standard Operations and Maintenance Cost</i> – The standard O&M cost for the Resource category <i>rc</i> for operations above LSL, shall be set to the minimum energy variable O&M costs, as described in paragraph (6)(c) of Section 5.6.1, Verifiable Costs. For an ESR, STOM shall be set at \$0.3/MWh and for a DC-Coupled Resource, the value shall be set at \$4.40/MWh.</p> </div>
RTSPP _{p, i}	\$/MWh	<i>Real-Time Settlement Point Price</i> - The Real-Time Settlement Point Price at the Settlement Point <i>p</i> , for the 15-minute Settlement Interval <i>i</i> .
AFC _{q, r, i}	\$/MWh	<i>Average Fuel Cost per Resource</i> —The average electricity cost used to charge the ESR <i>r</i> represented by QSE <i>q</i> applicable to the energy discharge for the 15-minute Settlement Interval <i>i</i> within the Operating Day.
AHR _{q, r, i}	MMBtu / MWh	<i>Average Heat Rate per Resource</i> – The verifiable or actual submitted average heat rate for the Resource <i>r</i> represented by QSE <i>q</i> , for operating levels between LSL and High Sustained Limit (HSL), for the 15-minute Settlement Interval <i>i</i> . Where for a Combined Cycle Train, the Resource <i>r</i> is a Combined Cycle Generation Resource within the Combined Cycle Train.
PAHR _{q, r, i}	MMBtu / MWh	<i>Proxy Average Heat Rate</i> – The proxy or actual submitted average heat rate for the Resource <i>r</i> , represented by QSE <i>q</i> , for the 15-minute Settlement Interval <i>i</i> . Where for a Combined Cycle Train, the Resource <i>r</i> is a Combined Cycle Generation Resource within the Combined Cycle Train.
RTMG _{q, r, i}	MWh	<i>Real-Time Metered Generation per QSE per Resource by Settlement Interval by hour</i> —The Real-Time energy from Resource <i>r</i> represented by QSE <i>q</i> , for the 15-minute Settlement Interval <i>i</i> . Where for a Combined Cycle Train, the Resource <i>r</i> is the Combined Cycle Train.

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Variable	Unit	Definition
$MEP_{q,r,i}$	MWh	<i>Marginal Energy Production per QSE per Resource by Settlement Interval</i> — The calculated marginal generation of Resource r represented by QSE q in Real-Time for the 15-minute Settlement Interval i . Where for a Combined Cycle Train, the Resource r is a Combined Cycle Generation Resource within the Combined Cycle Train.
q	None	A QSE.
r	None	A Generation Resource or ESR.
i	None	A 15-minute Settlement Interval within the Operating Day during an LCAP or ECAP Effective Period.
rc	None	A Resource category

- (2) The total compensation to each QSE for operating losses during an LCAP or ECAP Effective Period for the 15-minute Settlement Interval is calculated as follows:

$$OPLPAMTQSETOT_q = \sum_r OPLPAMT_{q,r,i}$$

The above variables are defined as follows:

Variable	Unit	Definition
$OPLPAMTQSETOT_q$	\$	<i>Total Operating Losses Payment Amount per QSE</i> – The total operating losses payment to the QSE q , for all Resources, for the 15-minute Settlement Interval within the Operating Day.
$OPLPAMT_{q,r,i}$	\$	<i>Operating Losses Payment Amount</i> – The operating losses payment to the QSE q , for Resource r , for the 15-minute Settlement Interval i within the Operating Day. Where for a Combined Cycle Train, the Resource r is the Combined Cycle Train.
q	none	A QSE.
r	none	A Generation Resource or ESR.
i	none	A 15-minute Settlement Interval within the Operating Day during an LCAP or ECAP Effective Period.

6.8.3 Charges for Operating Losses During an LCAP or ECAP Effective Period

- (1) ERCOT shall allocate the total operating losses payment amount to the QSEs representing Loads. The resulting charge to each QSE's Load Ratio Share (LRS) for a 15-minute Settlement Interval is calculated as follows:

$$LALCAPAMT_{q,i} = (-1) * OPLPAMTTOT_i * LRS_{q,i}$$

Where:

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$$\text{OPLPAMTTOT}_i = \sum_q \text{OPLPAMTQSETOT}_{i,q}$$

The above variables are defined as follows:

Variable	Unit	Definition
LALCAPAMT _{q,i}	\$	<i>Load Allocated LCAP or ECAP Effective Period Charge</i> —The amount owed from the QSE <i>q</i> , based on Load Ratio Share, for the 15-minute Settlement Interval <i>i</i> .
OPLPAMTQSETOT _{i,q}	\$	<i>Total Operating Losses Payment Amount per QSE</i> – The total operating losses payment to the QSE <i>q</i> , for all Resources, for the 15-minute Settlement Interval <i>i</i> within the Operating Day.
OPLPAMTTOT _i	\$	<i>Total Operating Losses Payment Amount</i> – The sum of Operating Losses Payments to all QSEs, for the 15-minute Settlement Interval <i>i</i> .
LRS _{q,i}	none	<i>Load Ratio Share</i> – The ratio of Adjusted Metered Load to the total ERCOT Adjusted Metered Load for the 15-minute Settlement Interval. See Section 6.6.2, Load Ratio Share, item (2).
<i>i</i>	none	A 15-minute Settlement Interval.
<i>q</i>	none	A QSE.

6.8.4 *Miscellaneous Invoice for Payments and Charges for an LCAP or ECAP Effective Period*

- (1) ERCOT shall issue one-time miscellaneous Invoices using the most recent available Settlement data at the time the Invoices were issued.
- (2) ERCOT shall issue miscellaneous Invoices to QSEs for payment of operating losses during an LCAP or ECAP Effective Period, as described in Section 6.8.2, Recovery of Operating Losses During an LCAP or ECAP Effective Period.
- (3) ERCOT shall issue miscellaneous Invoices and allocate costs to the impacted QSEs as described in Section 6.8.3, Charges for Operating Losses During an LCAP or ECAP Effective Period.
- (4) ERCOT shall issue a Market Notice in conjunction with the issuance of miscellaneous Invoices for payments or charges for an LCAP or ECAP Effective Period.

[NPRR1216: Delete Section 6.8.4 above upon system implementation.]

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9.5.3 *Real-Time Market Settlement Charge Types*

- (1) ERCOT shall provide, on each RTM Settlement Statement, the dollar amount for each RTM Settlement charge and payment. The RTM Settlement “Charge Types” are:
 - (a) Section 5.7.1, RUC Make-Whole Payment;
 - (b) Section 5.7.2, RUC Clawback Charge;
 - (c) Section 5.7.3, Payment When ERCOT Decommits a QSE-Committed Resource;
 - (d) Section 5.7.4.1, RUC Capacity-Short Charge;
 - (e) Section 5.7.4.2, RUC Make-Whole Uplift Charge;
 - (f) Section 5.7.5, RUC Clawback Payment;
 - (g) Section 5.7.6, RUC Decommitment Charge;
 - (h) Section 6.6.3.1, Real-Time Energy Imbalance Payment or Charge at a Resource Node;
 - (i) Section 6.6.3.2, Real-Time Energy Imbalance Payment or Charge at a Load Zone;
 - (j) Section 6.6.3.3, Real-Time Energy Imbalance Payment or Charge at a Hub;
 - (k) Section 6.6.3.4, Real-Time Energy Payment for DC Tie Import;
 - (l) Section 6.6.3.5, Real-Time Payment for a Block Load Transfer Point;
 - (m) Section 6.6.3.6, Real-Time High Dispatch Limit Override Energy Payment;
 - (n) Section 6.6.3.7, Real-Time High Dispatch Limit Override Energy Charge;
 - (o) Section 6.6.3.8, Real-Time Payment or Charge for Energy from a Settlement Only Distribution Generator (SODG) or a Settlement Only Transmission Generator (SOTG);
 - (p) Section 6.6.4, Real-Time Congestion Payment or Charge for Self-Schedules;
 - (q) Section 6.6.5.1.1.1, Base Point Deviation Charge for Over Generation;
 - (r) Section 6.6.5.1.1.2, Base Point Deviation Charge for Under Generation;
 - (s) Section 6.6.5.2, IRR Generation Resource Base Point Deviation Charge;
 - (t) Section 6.6.5.4, Base Point Deviation Payment;
 - (u) Section 6.6.6.1, RMR Standby Payment;

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- (v) Section 6.6.6.2, RMR Payment for Energy;
- (w) Section 6.6.6.3, RMR Adjustment Charge;
- (x) Section 6.6.6.4, RMR Charge for Unexcused Misconduct;
- (y) Section 6.6.6.5, RMR Service Charge;
- (z) Section 6.6.6.6, Method for Reconciling RMR Actual Eligible Costs, RMR and MRA Contributed Capital Expenditures, and Miscellaneous RMR Incurred Expenses;
- (aa) Paragraph (2) of Section 6.6.7.1, Voltage Support Service Payments;
- (bb) Paragraph (4) of Section 6.6.7.1;
- (cc) Section 6.6.7.2, Voltage Support Charge;
- (dd) Section 6.6.8.1, Black Start Hourly Standby Fee Payment;
- (ee) Section 6.6.8.2, Black Start Capacity Charge;
- (ff) Section 6.6.9.1, Payment for Emergency Power Increase Directed by ERCOT;
- (gg) Section 6.6.9.2, Charge for Emergency Power Increases;
- (hh) Section 6.6.10, Real-Time Revenue Neutrality Allocation;
- (ii) Section 6.6.14.2, Firm Fuel Supply Service Hourly Standby Fee Payment and Fuel Replacement Cost Recovery;
- (jj) Section 6.6.14.3, Firm Fuel Supply Service Capacity Charge;
- (kk) Paragraph (1)(a) of Section 6.7.1, Payments for Ancillary Service Capacity Sold in a Supplemental Ancillary Services Market (SASM) or Reconfiguration Supplemental Ancillary Services Market (RSASM);
- (ll) Paragraph (1)(b) of Section 6.7.1;
- (mm) Paragraph (1)(c) of Section 6.7.1;
- (nn) Paragraph (1)(d) of Section 6.7.1;
- (oo) Paragraph (1)(e) of Section 6.7.1;
- (pp) Paragraph (1)(a) of Section 6.7.2, Payments for Ancillary Service Capacity Assigned in Real-Time Operations;
- (qq) Paragraph (1)(b) of Section 6.7.2;

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- (rr) Paragraph (1)(c) of Section 6.7.2;
- (ss) Paragraph (1)(a) of Section 6.7.2.1, Charges for Infeasible Ancillary Service Capacity Due to Transmission Constraints;
- (tt) Paragraph (1)(b) of Section 6.7.2.1;
- (uu) Paragraph (1)(c) of Section 6.7.2.1;
- (vv) Paragraph (1)(d) of Section 6.7.2.1;
- (ww) Paragraph (1)(e) of Section 6.7.2.1;
- (xx) Paragraph (1)(a) of Section 6.7.3, Charges for Ancillary Service Capacity Replaced Due to Failure to Provide;
- (yy) Paragraph (1)(b) of Section 6.7.3;
- (zz) Paragraph (1)(c) of Section 6.7.3;
- (aaa) Paragraph (1)(d) of Section 6.7.3;
- (bbb) Paragraph (1)(e) of Section 6.7.3;
- (ccc) Paragraph (2) of Section 6.7.4, Adjustments to Cost Allocations for Ancillary Services Procurement;
- (ddd) Paragraph (3) of Section 6.7.4;
- (eee) Paragraph (4) of Section 6.7.4;
- (fff) Paragraph (5) of Section 6.7.4;
- (ggg) Paragraph (6) of Section 6.7.4;
- (hhh) Paragraph (7) of Section 6.7.5, Real-Time Ancillary Service Imbalance Payment or Charge (Real-Time Ancillary Service Imbalance Amount);
- (iii) Paragraph (7) of Section 6.7.5, (Real-Time Reliability Deployment Ancillary Service Imbalance Amount);
- (jjj) Paragraph (8) of Section 6.7.5, (Real-Time RUC Ancillary Service Reserve Amount);
- (kkk) Paragraph (8) of Section 6.7.5, (Real-Time Reliability Deployment RUC Ancillary Service Reserve Amount);

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- (lll) Section 6.7.6, Real-Time Ancillary Service Imbalance Revenue Neutrality Allocation (Load-Allocated Ancillary Service Imbalance Revenue Neutrality Amount);
- (mmm) Section 6.7.6, (Load-Allocated Reliability Deployment Ancillary Service Imbalance Revenue Neutrality Amount);

[NPRR1216: Insert paragraphs (nnn) and (ooo) below upon system implementation and renumber accordingly:]

- (nnn) Section 6.8.2, Recovery of Operating Losses During an LCAP or ECAP Effective Period;
- (ooo) Section 6.8.3, Charges for Operating Losses During an LCAP or ECAP Effective Period;

(nnn) Section 7.9.2.1, Payments and Charges for PTP Obligations Settled in Real-Time; and

(ooo) Section 9.16.1, ERCOT System Administration Fee.

[NPRR841, NPRR885, NPRR963, NPRR995, NPRR1012, and NPRR1014: Replace applicable portions of paragraph (1) above with the following upon system implementation for NPRR841, NPRR885, NPRR963, NPRR995, or NPRR1014; or upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1012:]

- (1) ERCOT shall provide, on each RTM Settlement Statement, the dollar amount for each RTM Settlement charge and payment. The RTM Settlement “Charge Types” are:
 - (a) Section 5.7.1, RUC Make-Whole Payment;
 - (b) Section 5.7.2, RUC Clawback Charge;
 - (c) Section 5.7.3, Payment When ERCOT Decommits a QSE-Committed Resource;
 - (d) Section 5.7.4.1, RUC Capacity-Short Charge;
 - (e) Section 5.7.4.2, RUC Make-Whole Uplift Charge;
 - (f) Section 5.7.5, RUC Clawback Payment;
 - (g) Section 5.7.6, RUC Decommitment Charge;
 - (h) Section 6.6.3.1, Real-Time Energy Imbalance Payment or Charge at a Resource Node;

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- (i) Section 6.6.3.2, Real-Time Energy Imbalance Payment or Charge at a Load Zone;
- (j) Section 6.6.3.3, Real-Time Energy Imbalance Payment or Charge at a Hub;
- (k) Section 6.6.3.4, Real-Time Energy Payment for DC Tie Import;
- (l) Section 6.6.3.5, Real-Time Payment for a Block Load Transfer Point;
- (m) Section 6.6.3.6, Real-Time High Dispatch Limit Override Energy Payment;
- (n) Section 6.6.3.7, Real-Time High Dispatch Limit Override Energy Charge;
- (o) Section 6.6.3.8, Real-Time Payment or Charge for Energy from a Settlement Only Distribution Generator (SODG), Settlement Only Transmission Generator (SOTG), Settlement Only Distribution Energy Storage System (SODESS), or Settlement Only Transmission Energy Storage System (SOTESS);
- (p) Section 6.6.4, Real-Time Congestion Payment or Charge for Self-Schedules;
- (q) Section 6.6.5.2, Set Point Deviation Charge for Over Generation;
- (r) Section 6.6.5.2.1, Set Point Deviation Charge for Under Generation;
- (s) Section 6.6.5.3, Controllable Load Resource Set Point Deviation Charge for Over Consumption;
- (t) Section 6.6.5.3.1, Controllable Load Resource Set Point Deviation Charge for Under Consumption;
- (u) Section 6.6.5.4, IRR Generation Resource Set Point Deviation Charge;
- (v) Section 6.6.5.4, Set Point Deviation Payment;
- (w) Section 6.6.5.5, Energy Storage Resource Set Point Deviation Charge for Over Performance;
- (x) Section 6.6.5.5.1, Energy Storage Resource Set Point Deviation Charge for Under Performance;
- (y) Section 6.6.6.1, RMR Standby Payment;
- (z) Section 6.6.6.2, RMR Payment for Energy;
- (aa) Section 6.6.6.3, RMR Adjustment Charge;
- (bb) Section 6.6.6.4, RMR Charge for Unexcused Misconduct;
- (cc) Section 6.6.6.5, RMR Service Charge;

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- (dd) Section 6.6.6.6, Method for Reconciling RMR Actual Eligible Costs, RMR and MRA Contributed Capital Expenditures, and Miscellaneous RMR Incurred Expenses;
- (ee) Section 6.6.6.7, MRA Standby Payment;
- (ff) Section 6.6.6.8, MRA Contributed Capital Expenditures Payment;
- (gg) Section 6.6.6.9, MRA Payment for Deployment Event;
- (hh) Section 6.6.6.10, MRA Variable Payment for Deployment;
- (ii) Section 6.6.6.11, MRA Charge for Unexcused Misconduct;
- (jj) Section 6.6.6.12, MRA Service Charge;
- (kk) Paragraph (3) of Section 6.6.7.1, Voltage Support Service Payments;
- (ll) Paragraph (5) of Section 6.6.7.1;
- (mm) Section 6.6.7.2, Voltage Support Charge;
- (nn) Section 6.6.8.1, Black Start Hourly Standby Fee Payment;
- (oo) Section 6.6.8.2, Black Start Capacity Charge;
- (pp) Section 6.6.9.1, Payment for Emergency Operations Settlement;
- (qq) Section 6.6.9.2, Charge for Emergency Operations Settlement;
- (rr) Section 6.6.10, Real-Time Revenue Neutrality Allocation;
- (ss) Section 6.6.11.1, Emergency Response Service Capacity Payments;
- (tt) Section 6.6.11.2, Emergency Response Service Capacity Charge;
- (uu) Section 6.6.14.2, Firm Fuel Supply Service Hourly Standby Fee Payment and Fuel Replacement Cost Recovery;
- (vv) Section 6.6.14.3, Firm Fuel Supply Service Capacity Charge;
- (ww) Section 6.7.4, Real-Time Settlement for Updated Day-Ahead Market Ancillary Service Obligations;
- (xx) Section 6.7.5.2, Regulation Up Service Payments and Charges;
- (yy) Section 6.7.5.3, Regulation Down Service Payments and Charges;

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- (zz) Section 6.7.5.4, Responsive Reserve Payments and Charges;
- (aaa) Section 6.7.5.5, Non-Spinning Reserve Service Payments and Charges;
- (bbb) Section 6.7.5.6, ERCOT Contingency Reserve Service Payments and Charges;
- (ccc) Section 6.7.5.7, Real-Time Derated Ancillary Service Capability Payment;
- (ddd) Section 6.7.5.8, Real-Time Derated Ancillary Service Capability Charge;
- (eee) Section 6.7.6, Real-Time Ancillary Service Revenue Neutrality Allocation;
- (fff) Section 6.8.2, Recovery of Operating Losses During an LCAP or ECAP Effective Period;
- (ggg) Section 6.8.3, Charges for Operating Losses During an LCAP or ECAP Effective Period;
- (hhh) Section 7.9.2.1, Payments and Charges for PTP Obligations Settled in Real-Time; and
- (iii) Section 9.16.1, ERCOT System Administration Fee.

- (2) In the event that ERCOT is unable to execute the Day-Ahead Market (DAM), ERCOT shall provide, on each RTM Settlement Statement, the dollar amount for the following RTM Congestion Revenue Right (CRR) Settlement charges and payments:
- (a) Section 7.9.2.4, Payments for FGRs in Real-Time; and
 - (b) Section 7.9.2.5, Payments and Charges for PTP Obligations with Refund in Real-Time.