(2) ERCOT shall conduct an unannounced test of an ERS Resource that has been suspended from participation in ERS pursuant to Section 8.1.3.3. ERCOT will conduct such a test only after the QSE representing the ERS Resource has communicated to ERCOT a request for reinstatement of the suspended ERS Resource.

(3) An ERCOT unannounced test of an ERS Generator must demonstrate injection of energy to the ERCOT System. The use of Load banks is prohibited for ERCOT unannounced tests.

(4) If an ERS Generator is co-located with an ERS Load as specified in Section 8.1.3.1.2, Performance Evaluation for Emergency Response Service Generators, ERCOT shall test both such ERS Resources simultaneously and the following shall apply:

(a) Test performance of the ERS Load and the ERS Generator shall be evaluated jointly and attributed to both if the ERS Load is assigned to a default baseline or is assigned to the alternate baseline and the QSE elected for joint evaluation at the beginning of the ERS Standard Contract Term.

(b) Test performance of the ERS Load and the ERS Generator shall be evaluated separately if the ERS Load is assigned to the alternate baseline and the QSE elected for separate evaluation at the beginning of the ERS Standard Contract Term. If the separately evaluated ERS Load has no obligation greater than 100 kW in any ERS Time Period and does not meet the criteria for a successful test as defined in item (1)(a)(ii) above, the following shall apply:

(i) If the interval data measured by the metering on the output of the generator(s) meets the criteria for a successful test as defined in item (1)(a)(ii) above, for the combined obligation of the ERS Load and the ERS Generator, then both the ERS Load and the ERS Generator will be deemed to have performed successfully for that ERS test.

(ii) Otherwise, the ERS Load will be considered to have not performed successfully for that ERS test.

(5) In order to assist QSEs and ERS Resources in managing environmental compliance, ERCOT shall limit the cumulative duration of Sustained Response Periods of testing of an ERS Resource to a maximum of one hour per ERS Standard Contract Term unless otherwise required to conduct re-testing.

(6) Notwithstanding paragraph (5) above, Weather-Sensitive ERS Resources shall be subject to testing as described in paragraph (1)(c) above.

### 8.1.3.3 Payment Reductions and Suspension of Qualification of Emergency Response Service Resources and/or their Qualified Scheduling Entities

#### *8.1.3.3.1 Suspension of Qualification of Non-Weather-Sensitive Emergency Response*

***Service Resources and/or their Qualified Scheduling Entities***

(1) If a QSE's portfolio-level availability factor and event performance factors as calculated in Section 8.1.3.3.3, Performance Criteria for Qualified Scheduling Entities Representing Non Weather-Sensitive Emergency Response Service Resources, both equal or exceed 0.95, the QSE will be deemed to have met its ERS performance requirements for the ERS Contract Period, and the QSE and its ERS Resources are not subject to suspension.

(2) If a QSE fails to meet its portfolio-level availability and/or event performance requirements as described in Section 8.1.3.3.3, ERCOT shall take the following actions:

(a) If a QSE failure is based only on event performance failure and ERS Resources that comprise 95% or more of the QSE's obligation for each of the events in the ERS Contract Term are deemed to have met their obligations, the QSE shall be deemed to have met its event performance requirements for the ERS Contract Term; otherwise

(b) ERCOT may suspend the QSE from participation in ERS, and the QSE may be subject to administrative penalties imposed by the PUCT. ERCOT may consider mitigating factors such as equipment failures and Force Majeure Events in determining whether to suspend the QSE.

(3) If a QSE's portfolio-level availability factor is less than 0.95 excluding the intervals for Resources that had one or more sites of an ERS Resource disabled or unverifiable due to events on the TDSP side of the meter affecting the supply, delivery or measurement of electricity either during the event or prior that impacts the creation of a credible baseline, ERS Resources in that portfolio that were not disabled or unverifiable due to events on the TDSP side of the meter affecting the supply, delivery or measurement of electricity either during the event or prior that impacts the creation of a credible baseline shall be subject to the following:

(a) If an ERS Resource in the QSE's portfolio achieves an availability factor of 0.85 or greater, the ERS Resource shall not be subject to a reduction of its availability factor;

(b) If an ERS Resource achieves an ERSAFCOMB less than 0.85 for an ERS Standard Contract Term consisting of a single ERS Contract Period, or achieves an ERSAFCOMB lower than the threshold specified in paragraph (4)(d) of Section 8.1.3.1.3.3, Contract Period Availability Calculations for Emergency Response Service Resources, for an ERS Contract Period with a duration that is less than an ERS Standard Contract Term, then the ERS Resource's availability factor shall be squared; and

(c) If the availability factor for one or more ERS Resources is squared pursuant to paragraph (b) above, ERCOT shall compute the QSE's final portfolio-level availability factor using that modified availability factor.

(4) ERCOT shall calculate a QSE's portfolio-level event performance factor and interval performance factor for the first full interval of that event. The portfolio for this purpose shall consist of ERS Resources that did not have any sites that were disabled or unverifiable due to events on the TDSP side of the meter affecting the supply, delivery or measurement of electricity either during the event or prior that impacts the creation of a credible baseline. If either the portfolio-level event performance factor or the interval performance factor for the first full interval of the Sustained Response Period is less than 0.95, ERCOT shall determine final event performance factors for ERS Resources in the portfolio as follows:

(a) If an ERS Load in the QSE's portfolio is not co-located with an ERS Generator or is evaluated separately, as specified in Section 8.1.3.1.2, Performance Evaluation for Emergency Response Service Generators, the final event performance factor for the ERS Load shall be determined as follows:

(i) If the ERS Load achieves an event performance factor of 0.95 or greater and an interval performance factor for the first full interval of the Sustained Response Period of 0.95 or greater, the final event performance factor shall be set equal to the original event performance factor.

(ii) If the ERS Load achieves an event performance factor of less than 0.95 and an interval performance factor for the first full interval of the Sustained Response Period of 0.95 or greater, the baseline for that ERS Load shall be multiplied by a reduction factor that results in the final event performance factor being equal to the square of its original event performance factor.

(iii) If the ERS Load achieves an event performance factor of 0.95 or greater and an interval performance factor for the first full interval of the Sustained Response Period of less than 0.95, the baseline for that ERS Resource shall be multiplied by a reduction factor that results in the final event performance factor being equal to 0.75 times its original event performance factor.

(iv) If the ERS Load achieves an event performance factor of less than 0.95 and an interval performance factor for the first full interval of the Sustained Response Period of less than 0.95, the baseline for that ERS Resource shall be multiplied by a reduction factor that results in the final event performance factor being equal to 0.75 times the square of its original event performance factor.

(b) If an ERS Generator in the QSE's portfolio, is not co-located with an ERS Load, the final event performance factor for the ERS Generator shall be determined as follows:

(i) If the ERS Generator achieves an event performance factor of 0.95 or greater and an interval performance factor for the first full interval of the

Sustained Response Period of 0.95 or greater, the final event performance factor shall be set equal to original event performance factor.

(ii) If the ERS Generator achieves an event performance factor of less than 0.95 and an interval performance factor for the first full interval of the Sustained Response Period of 0.95 or greater, the net energy injected to the ERCOT System by the ERS Generator for each interval of the event shall be multiplied by a reduction factor that results in the final event performance factor being equal to the square of its original event performance factor.

(iii) If the ERS Generator achieves an event performance factor of 0.95 or greater and an interval performance factor for the first full interval of the Sustained Response Period of less than 0.95, the net energy injected to the ERCOT System by the ERS Generator for each interval of the event shall be multiplied by a reduction factor that results in the final event performance factor being equal to 0.75 times its original event performance factor.

(iv) If the ERS Generator achieves an event performance factor of less than 0.95 and an interval performance factor for the first full interval of the Sustained Response Period of less than 0.95, the net energy injected to the ERCOT System by the ERS Generator for each interval of the event shall be multiplied by a reduction factor that results in the final event performance factor being equal to 0.75 times the square of its original event performance factor.

(c) If an ERS Generator in the QSE's portfolio, is co-located with an ERS Load and is evaluated separately, as specified in Section 8.1.3.1.2, the final event performance factor for the ERS Generator shall be determined as follows:

(i) If the ERS Generator achieves an event performance factor of 0.95 or greater and an interval performance factor for the first full interval of the Sustained Response Period of 0.95 or greater, the final event performance factor shall be set equal to original event performance factor.

(ii) If the ERS Generator achieves an event performance factor of less than 0.95 and an interval performance factor for the first full interval of the Sustained Response Period of 0.95 or greater, the energy output by the ERS Generator for each interval of the event shall be multiplied by a reduction factor that results in the final event performance factor being equal to the square of its original event performance factor.

(iii) If the ERS Generator achieves an event performance factor of 0.95 or greater and an interval performance factor for the first full interval of the Sustained Response Period of less than 0.95, the energy output by the ERS Generator for each interval of the event shall be multiplied by a reduction

factor that results in the final event performance factor being equal to 0.75 times its original event performance factor.

(iv) If the ERS Generator achieves an event performance factor of less than 0.95 and an interval performance factor for the first full interval of the Sustained Response Period of less than 0.95, the energy output by the ERS Generator for each interval of the event shall be multiplied by a reduction factor that results in the final event performance factor being equal to 0.75 times the square of its original event performance factor.

(d) If an ERS Load and an ERS Generator in a QSE's portfolio, are co-located and are evaluated jointly, as specified in Section 8.1.3.1.2, the final event performance factor shall be determined as follows:

(i) If the combined performance of the ERS Load and ERS Generator achieves an event performance factor of 0.95 or greater and an interval performance factor for the first full interval of the Sustained Response Period of 0.95 or greater, the final event performance factor for both ERS Resources shall be set equal to original event performance factor.

(ii) If the combined performance of the ERS Load and ERS Generator achieves an event performance factor of less than 0.95 and an interval performance factor for the first full interval of the Sustained Response Period of 0.95 or greater, the net energy injected to the ERCOT System by the ERS Generator for each interval of the event shall be multiplied by a reduction factor that results in the final combined event performance factor being equal to the square of its original combined event performance factor. If a reduction factor of zero results in the combined event performance factor being greater than the square of the original combined event performance factor, the net energy injected to the ERCOT System shall be set to zero for all intervals in the event and the baseline for the ERS Load shall be multiplied by a reduction factor that results in the final combined event performance factor being equal to the square of the original combined event performance factor.

(iii) If the combined performance of the ERS Load and ERS Generator achieves an event performance factor of 0.95 or greater and an interval performance factor for the first full interval of the Sustained Response Period of less than 0.95, the net energy injected to the ERCOT System by the ERS Generator for each interval of the event shall be multiplied by a reduction factor that results in the final combined event performance factor being equal to 0.75 times its original event performance factor. If a reduction factor of zero results in the combined event performance factor being greater than 0.75 times its original event performance factor, the net energy injected to the ERCOT System shall be set to zero for all intervals in the event and the baseline for the ERS Load shall be multiplied by a

reduction factor that results in the final combined event performance factor being equal to 0.75 times its original event performance factor.

(iv) If the combined performance of the ERS Load and ERS Generator achieves an event performance factor of less than 0.95 and an interval performance factor for the first full interval of the Sustained Response Period of less than 0.95, the net energy injected to the ERCOT System by the ERS Generator for each interval of the event shall be multiplied by a reduction factor that results in the final combined event performance factor being equal to 0.75 times the square of its original event performance factor. If a reduction factor of zero results in the combined event performance factor being greater than 0.75 times the square of its original event performance factor, the net energy injected to the ERCOT System shall be set to zero for all intervals in the event and the baseline for the ERS Load shall be multiplied by a reduction factor that results in the final combined event performance factor being equal to 0.75 times the square of its original event performance factor.

(e) If the final event performance factor for one or more ERS Resources in a QSE's portfolio is reduced pursuant to paragraphs (a) through (d) above, ERCOT shall re-compute the QSE's final portfolio-level event performance factor using each ERS Resource's final event performance factor.

(5) If an ERS Resource, in accordance with Section 8.1.3.2, Testing of Emergency Response Service Resources, has failed any two consecutive tests in an ERS Standard Contract Term, or has failed both the first test in an ERS Standard Contract Term and the most recent prior test occurring within 365 days of that first failed test, ERSTESTPF shall be set to the lower of 0.75 or the average of those two test performance factors and shall be used in calculating the payment to the QSE for the ERS Standard Contract Term during which the second failure occurred. Otherwise, ERSTESTPF shall be set to 1.0.

(6) Notwithstanding the provisions of paragraph (5) above, if an ERS Resource, in accordance with Section 8.1.3.2, has failed the most recent three consecutive tests within a 365 day period, then ERSTESTPF for the ERS Standard Contract Term in which the most recent failure has occurred, shall be determined as follows:

(a) If the average of ERSTESTPF for those three tests is equal to 0.90 or greater, ERSTESTPF shall be set to 0.5.

(b) If the average of ERSTESTPF for those three tests is less than 0.90, ERSTESTPF shall be set zero.

(c) If the ERS Resource has failed the most recent four consecutive tests within a 365 day period, then ERSTESTPF for the ERS Standard Contract Term in which the most recent failure has occurred, shall be set to zero.

(7) Notwithstanding the provisions of paragraphs (5) and (6) above, if an ERS Resource, in accordance with Section 8.1.3.1.4, Event Performance Criteria for Emergency Response

Service Resources, successfully deploys in all ERS deployment events in which the ERS Resource has an obligation during that ERS Standard Contract Term, ERSTESTPF shall be set to 1.0 for that ERS Standard Contract Term.

(8) If a Governmental Authority issues a written determination that an ERS Resource is in violation of any environmental law that would preclude the ERS Resource's compliance with its ERS availability or deployment obligations, ERCOT shall treat the ERS Resource as having no availability for the remainder of the Standard Contract Term following the Governmental Authority's determination and shall treat the Resource as having an event performance factor of zero for any deployments in the remaining portion of the ERS Standard Contract Term. ERCOT shall also suspend the ERS Resource's participation in ERS until the ERS Resource's QSE certifies to ERCOT in writing that the violation has been remedied and that the ERS Resource may lawfully participate in ERS.

(9) If a QSE is suspended pursuant to paragraph (2) above, each of the QSE's ERS Resources whose availability or event performance factors was reduced in accordance with paragraphs (3) or (4) above also shall be suspended, and each of the sites in those ERS Resources shall also be suspended. The duration of the suspension for such ERS Resources and sites shall be one ERS Standard Contract Term. ERCOT shall reject offers for ERS Resources that are suspended or that contain one or more suspended sites. Notwithstanding the foregoing, ERCOT may choose not to suspend an ERS Resource if it determines that the reduced availability or event performance factor was attributable to the fault of its QSE or to one or more mitigating factors, such as equipment failures and Force Majeure Events.

(10) The suspension of an ERS Resource or a QSE representing an ERS Resource shall begin on the day following the expiration of the current or most recent ERS obligation.

(11) ERCOT may reinstate an ERS Resource's eligibility to offer into ERS upon the ERS Resource's satisfactory completion of the reinstatement process, including a test conducted by ERCOT, as described in Section 8.1.3.2 and in the ERS technical requirements.

#### *8.1.3.3.2 Payment Reduction and Suspension of Qualification of Weather-Sensitive Emergency Response Service Loads and/or their Qualified Scheduling Entities*

(1) If the QSE portfolio-level event performance factor for the QSE's portfolio of Weather-Sensitive ERS Loads for the ERS Contract Period as calculated in Section 8.1.3.3.4, Performance Criteria for Qualified Scheduling Entities Representing Weather-Sensitive Emergency Response Service Loads, is greater than or equal to 0.90 or if 10% or more sites of an ERS Load were disabled or unverifiable due to events on the TDSP side of the meter affecting the supply, delivery or measurement of electricity either during the event or prior that impacts the creation of a credible baseline, ERCOT shall not impose a payment reduction for any of the those ERS Loads. Otherwise, ERCOT shall compute QSE portfolio-level Demand reduction values for each test and event throughout the ERS

Contract Period as the greater of zero or the portfolio-level baseline estimate for each interval less the portfolio-level actual Load for that interval. The relationship of the Demand reduction values for each ERS Load to actual weather shall be modeled and used to derive a time-period specific Demand reduction value that would be realized under normalized peak weather conditions. If the normalized peak Demand reduction value for each ERS Time Period, summed across all ERS Loads in the portfolio is greater than or equal to 90% of the QSE's total offered MW capacity in that time period, ERCOT shall not impose a payment reduction for any of the ERS Loads in the portfolio.

(2) For an ERS deployment event for a Weather-Sensitive ERS Load with three or more full intervals in the Sustained Response Period, if the ERS Load's EIPF for the first full interval of the Sustained Response Period is less than 75% of the average EIPF for the remaining full intervals of the Sustained Response Period, the baseline used to evaluate the ERS Load shall be reduced to the level at which the ERSEPF for that event or test is equal to 0.75 times the ERSEPF determined by using the initial baseline.

(3) If the provisions of paragraph (1) above are not met, ERCOT shall reduce a QSE's payment for Weather-Sensitive ERS Load as follows:

(a) If the maximum number of sites in the ERS Load during the ERS Standard Contract Term is less than 80% of the number of sites projected by the QSE at the time of offer submission, as described in paragraph (15) of Section 3.14.3.1, Emergency Response Service Procurement, the baseline used to evaluate the Weather-Sensitive ERS Load shall be reduced to the level at which the ERSEPF is equal to the square of the ERSEPF determined by using the initial baseline.

(b) For all events occurring in an ERS Time Period, if, for that ERS Time Period the normalized peak Demand reduction value per site within the Weather-Sensitive ERS Load is less than 90% of the average Demand reduction value per site, based on the QSE's offer for that ERS Time Period, and the ERS Load's ERSEPF for an event in that ERS Time Period is less than 0.90, the baseline used to evaluate the ERS Load for that event shall be reduced to the level at which the ERS Load's ERSEPF is equal to the square of the ERSEPF determined by using the initial baseline.

(c) If either paragraph (3)(a) or (b) above require a payment reduction, but not both, and the normalized peak demand reduction for the resource is greater than or equal to 90% of the QSE's offered MW capacity, no payment reduction for the event shall be imposed.

(d) If the provisions of both paragraphs (3)(a) and (b) above require the ERSEPF to be squared, the baseline used to evaluate the ERS Load shall be reduced to the level at which the ERSEPF for the ERS Load is equal to the cube of the ERSEPF determined by using the initial baseline.

(e) If an ERS Load's obligation is exhausted during an ERS Contract Period, the provisions of paragraphs (3)(a), (b), and (c) above shall not apply.

(f) Baseline reductions required pursuant to paragraphs (3)(a), (b), and (c) above shall be applied to the initial baseline calculated by ERCOT. If a baseline reduction pursuant to paragraph (2) above also is required, that reduction shall be based on the adjusted baseline after applying the reductions provided for in paragraphs (3)(a), (b), and (c) above.

(g) If the final event performance factor for one or more ERS Loads in a QSE's portfolio of Weather-Sensitive ERS Loads is reduced pursuant to paragraphs (2) or (3)(a), (b), or (d) above, ERCOT shall re-compute the QSE's final portfolio-level event performance factor using each ERS Load's adjusted baselines.

#### *8.1.3.3.3 Performance Criteria for Qualified Scheduling Entities Representing Non-Weather-Sensitive Emergency Response Service Resources*

(1) A QSE's ERS performance will be evaluated based on its portfolio's performance for each of the four ERS service types during ERS deployment events and on the overall availability of its portfolio in an ERS Standard Contract Term, as follows:

(a) Availability:

(i) ERCOT shall calculate a portfolio-level availability factor for each QSE's ERS portfolio for each ERS service type for each ERS Time Period in an ERS Contract Period using the methodologies defined in Section 8.1.3.1.3, Availability Criteria for Emergency Response Service Resources, except that the availability factor for each ERS Time Period will be allowed to exceed 1.0. ERCOT shall then calculate a single time- and capacity-weighted availability factor for the QSE portfolio for each ERS service type for the ERS Contract Period using the methodologies defined in Section 8.1.3.1.3.

(ii) ERCOT shall then calculate a single time and capacity-weighted availability factor for the QSE portfolio for the ERS Standard Contract Term and the ERS service type, which will be capped at 1.0.

(A) For an ERS Standard Contract Term with a single ERS Contract Period, the QSE portfolio-level availability factor for each ERS service type for the ERS Standard Contract Term shall be the portfolio-level availability factor for each ERS service type for the ERS Contract Period.

(B) For an ERS Standard Contract Term with multiple ERS Contract Periods, ERCOT shall compute a QSE portfolio-level availability factor for each ERS service type for the ERS Standard Contract Term by averaging the QSE's availability factors across ERS Contract Periods and ERS Time Periods for each ERS service type, weighted according to time and capacity obligations.

(iii) The QSE's portfolio-level availability factor for each ERS service type for the ERS Standard Contract Term will determine both the availability component of the ERS payment to the QSE and whether the QSE has met its ERS availability requirements. If the QSE's portfolio-level availability factor for each ERS service type for the ERS Standard Contract Term equals or exceeds 0.95, the QSE shall be deemed to have met its availability requirements for the ERS Standard Contract Term; otherwise, the QSE shall be deemed to have failed to meet this requirement. If the QSE's portfolio-level availability factor for either ERS service type for the ERS Standard Contract Term is less than 1.0, the QSE's ERS capacity payment shall be reduced according to the formulas in Section 6.6.11.1, Emergency Response Service Capacity Payments.

(b) Event Performance:

(i) QSEs representing ERS Resources must meet performance standards specified in Section 8.1.3.1.4, Event Performance Criteria for Emergency Response Service Resources, as applied on a portfolio-level basis. ERCOT shall determine a QSE's portfolio-level event performance for each ERS service type by calculating a QSE portfolio-level event performance factor for each ERS deployment event. For purposes of evaluating ERS Loads, ERCOT shall establish a baseline representing the portfolio's estimated Load, or, for DRG that has been designated by the QSE to be evaluated by using its native load, calculated 15-minute interval native load data in the absence of the ERS deployment event. For purposes of evaluating ERS Generators, ERCOT shall compute portfolio-level injection of energy to the ERCOT System. Using this data, ERCOT shall calculate a QSE portfolio-level event performance factor for each ERS deployment event for each ERS service type based on the weighted average of the event interval performance factors, weighted by the total obligation and IntFrac.

(ii) ERCOT shall then calculate an $ERSEPF_{qrd}$ for the ERS Standard Contract Term, which will be capped at 1.0. For an ERS Standard Contract Term with no ERS deployment events, the $ERSEPF_{qrd}$ for the ERS Standard Contract Term shall be set to 1.0.

(A) For an ERS Standard Contract Term with a single ERS deployment event, the $ERSEPF_{qrd}$ for the ERS Standard Contract Term shall be the QSE portfolio-level event performance factor for the event.

(B) For an ERS Standard Contract Term with multiple ERS deployment events, ERCOT shall compute the $ERSEPF_{qrd}$ for the ERS Standard Contract Term by averaging the QSE portfolio-level interval performance factors for all of the deployment events for each ERS service type, weighted by the total obligation and IntFrac.

(iii) The $ERSEPF_{qrd}$ for an ERS Standard Contract Term will determine both the event performance component of the ERS payment to the QSE and whether the QSE has met its ERS event performance requirements for that ERS service type. If an $ERSEPF_{qrd}$ for an ERS Standard Contract Term is greater than or equal to 0.95, the QSE will be deemed to have met its event performance requirements for the ERS Standard Contract Term for that ERS service type; otherwise, the QSE shall be deemed to have failed to meet this requirement. If a QSE's $ERSEPF_{qrd}$ is less than 1.0 for the Standard Contract Term, the QSE's ERS capacity payment shall be reduced according to the formulas in Section 6.6.11.1. For purposes of calculating an $ERSEPF_{qrd}$, any ERS Resource that was not subject to Dispatch during the event shall be treated as having met its obligation.

(iv) ERCOT will not include any Resources in the calculation of the $ERSEPF_{qrd}$ if one or more sites of an ERS Resource were disabled or unverifiable due to events on the TDSP side of the meter affecting the supply, delivery or measurement of electricity either during the event or prior that impacts the creation of a credible baseline. QSEs must provide verification of such events from the TDSP or MRE.

(c) Ten-minute Deployment: Within ten minutes of ERCOT's issuance of a VDI to deploy ERS-10, a QSE shall ensure that each ERS Resource participating in ERS-10 in its portfolio deploys in accordance with its obligations. For each ERS-10 deployment event, ERCOT shall assess each QSE's compliance with this requirement by calculating a capacity-weighted QSE portfolio-level interval performance factor for the first full interval of the Sustained Response Period, using the methodologies defined in Section 8.1.3.1.4.

(d) Thirty-minute Deployment: Within 30 minutes of ERCOT's issuance of a VDI to deploy ERS-30, a QSE shall ensure that each ERS Resource participating in its portfolio deploys in accordance with its obligations. For each ERS-30 deployment event, ERCOT shall assess each QSE's compliance with this requirement by calculating a capacity-weighted QSE portfolio-level interval performance factor for the first full interval of the Sustained Response Period, using the methodologies defined in Section 8.1.3.1.4.

The above variables are defined as follows:

| Variable | Unit | Description |
|---|---|---|
| $ERSEPF_{qrd}$ | None | *ERS Event Performance Factor per QSE per ERS Standard Contract Term per ERS Service Type*—Event performance factor for QSE *q* in ERS Standard Contract Term *r* and ERS service type *d* as calculated pursuant to Section 8.1.3.3.1. |
| *q* | None | A QSE. |
| *r* | None | ERS Standard Contract Term. |
| *d* | None | ERS service type (Non-Weather-Sensitive ERS-10 or Non-Weather-Sensitive ERS-30). |

(2) Failure by a QSE portfolio to meet its ERS event performance or availability requirements shall not be cause for revocation of the QSE's Ancillary Services qualification.

#### *8.1.3.3.4 Performance Criteria for Qualified Scheduling Entities Representing Weather-Sensitive Emergency Response Service Loads*

(1) A QSE's ERS performance will be evaluated based on the performance of its portfolio of Weather-Sensitive ERS Loads during ERS deployment events in an ERS Standard Contract Term as follows:

(a) ERCOT shall compute the following quantities at the QSE portfolio level for each interval of a deployment: MW obligation, baseline estimate and actual Demand as the sum of the respective quantities across the ERS Loads, or, for DRG that has been designated by the QSE to be evaluated by using its native load, calculated 15-minute interval native load data in the portfolio with obligations for that interval. In addition, ERCOT shall compute the QSE's portfolio-level prorated total obligations as the weighted sum of the obligations of the deployed ERS Loads weighted by the ratio the number of sites participating in the ERS Load during the event to the maximum number of sites projected by the QSE at the time of offer submission and the prorated interval fraction value (IntFrac) for each interval of a deployment as the average respectively of the interval fractions for each of the ERS Loads within its portfolio weighted by the ERS Load's obligation for that interval multiplied by the ratio of the number of sites participating in the ERS Load during the event to the maximum number of sites projected by the QSE at the time of offer submission.

(b) ERCOT shall compute the QSE's portfolio-level event interval performance factor for each interval of a deployment as specified in Section 8.1.3.1.4, Event Performance Criteria for Emergency Response Service Resources, using the values computed in paragraph (a) above.

(c) ERCOT shall compute the QSE's portfolio-level Weather-Sensitive ERS Load event performance factor (ERSEPF) for each test and event as the weighted average of the event interval performance factors calculated in paragraph (b) above, weighted by the prorated obligation and interval fractions (IntFrac) computed in paragraph (a) above.

(d) ERCOT shall compute the QSE's portfolio-level Weather-Sensitive ERS Load event performance factor for the ERS Contract Period as the average of the event interval performance factors for all tests and events during the ERS Contract Period calculated in paragraph (b) above weighted by the prorated obligation and interval fractions computed in paragraph (a) above.

(e) ERCOT will not include any Weather-Sensitive ERS Loads in the calculation of the ERSEPF if 10% or more sites of an ERS Load were disabled or unverifiable due to events on the TDSP side of the meter affecting the supply, delivery or

measurement of electricity either during the event or prior that impacts the creation of a credible baseline. QSEs must provide verification of such events from the TDSP or MRE.

#### 8.1.3.4 ERCOT Data Collection for Emergency Response Service

(1) ERCOT will collect all data necessary to analyze offers, Self-Provision offers, and all availability and performance obligations of ERS Resources and their QSEs under the Protocols. QSEs and ERS Resources they represent are required to provide any data to ERCOT that ERCOT may require, as specified by ERCOT.

## 8.2 ERCOT Performance Monitoring

(1) ERCOT shall continually assess its operations performance for the following activities:

(a) Coordinating the wholesale electric market transactions;

(b) System-wide transmission planning; and

(c) Network reliability.

(2) The Technical Advisory Committee (TAC), or a subcommittee designated by TAC, shall review ERCOT's performance in controlling the ERCOT Control Area according to requirements and criteria set out in the TAC- and ERCOT Board-approved monitoring program. Assessments and reports include the following ERCOT activities:

(a) Transmission control:

(i) Transmission system availability statistics;

(ii) Outage scheduling statistics for Transmission Facilities Outages (maintenance planning, construction coordination, etc.); and

(iii) Metrics describing performance of the State Estimator;

(b) Resource control:

(i) Outage scheduling statistics for Resource facilities Outages (maintenance planning, construction coordination, etc.);

(ii) Resource control metrics as defined in the Operating Guides;

(iii) Metrics describing Reliability Unit Commitment (RUC) commitments and deployments;

(iv) Metrics describing conflicting instructions to Generation Resources from interval to interval;

(v) Metrics describing the overall Resource response to frequency deviations in the ERCOT Region; and

(vi) Voltage and reactive control performance;

(c) Settlement stability:

(i) Track number of price changes that occur after a Settlement Statement has posted for an Operating Day;

(ii) Track number and types of disputes submitted to ERCOT and their disposition;

(iii) Report on compliance with timeliness of response to disputes;

(iv) Number of resettlements required due to non-price errors pursuant to paragraphs (2) and (4) of Section 9.2.5, DAM Resettlement Statement, and paragraph (2) of Section 9.5.6, RTM Resettlement Statement;

(v) Other Settlement metrics; and

(vi) Availability of Electric Service Identifier (ESI ID) consumption data in conformance with Settlement timeline;

(d) Performance in implementing network model updates;

(e) Network Operations Model validation, by comparison to other appropriate models or other methods;

(f) System and Organization Control (SOC) audit results regarding ERCOT's market Settlements operations;

(g) Net Allocation to Load:

(i) ERCOT shall calculate and report on a quarterly basis all charges allocated to Load for all Qualified Scheduling Entities (QSEs) for each month for the most recent thirteen months expressed in total dollars. ERCOT will sum all charges allocated to Load for all QSEs, and divide that total by the total Real-Time Adjusted Metered Load (AML), showing results in dollars per MWh.

(ii) The Load-Allocated CRR Monthly Revenue Zonal Amount (LACMRZAMT), as calculated in paragraph (5) of Section 7.5.7, Method for Distributing CRR Auction Revenues, will be summed by Congestion Management Zone (CMZ) for each month for the most recent 13 months, and divided by the sum of the Real-Time AML by CMZ for each month, showing results in dollars per MWh per CMZ.

(iii) ERCOT will calculate the total dollars per MWh by CMZ by summing all charges allocated to Load for all QSEs, excluding LACMRZAMT, and dividing that total by the Real-Time AML; this rate will then be added to item (ii) above to calculate the total dollars per MWh by CMZ.

## 8.3 TSP Performance Monitoring and Compliance

(1) ERCOT shall develop a Technical Advisory Committee (TAC)- and ERCOT Board-approved Transmission Service Provider (TSP) monitoring program to be included in the Operating Guides for TSPs, which shall include the following:

(a) Real-Time data:

(i) Telemetry performance; and

(b) Compliance with model update requirements, including provision of network data in Common Informational Model (CIM) compatible format and consistency with the Transmission Element naming convention developed in accordance under Section 3, Management Activities for the ERCOT System.

***[NPRR857: Replace Section 8.3 above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

## 8.3 TSP and DCTO Performance Monitoring and Compliance

(1) ERCOT shall develop a Technical Advisory Committee (TAC)- and ERCOT Board-approved Transmission Service Provider (TSP) and Direct Current Tie Operator (DCTO) monitoring program to be included in the Operating Guides for TSPs and DCTOs, which shall include the following:

(a) Real-Time data:

(i) Telemetry performance; and

(b) Compliance with model update requirements, including provision of network data in Common Informational Model (CIM) compatible format and consistency with the Transmission Element naming convention developed in accordance under Section 3, Management Activities for the ERCOT System.

## 8.4 ERCOT Response to Market Non-Performance

(1) ERCOT may require a Market Participant to develop and implement a corrective action plan to address its failure to meet performance criteria in this Section. The Market Participant must deliver a copy of this plan to ERCOT and must report to ERCOT periodically on the status of the implementation of the corrective action plan.

(2) ERCOT may revoke any or all Ancillary Service qualifications of any Generation Resource or Load Resource for continued material non-performance in providing Ancillary Service capacity or energy.

(3) ERCOT may suspend any Emergency Response Service (ERS) Resource for continued material non-performance in providing ERS.

## 8.5 Primary Frequency Response Requirements and Monitoring

### *8.5.1 Generation Resource, Energy Storage Resource, and QSE Participation*

#### 8.5.1.1 Governor in Service

(1) At all times a Generation Resource, Energy Storage Resource (ESR), Settlement Only Transmission Generator (SOTG), or Settlement Only Transmission Self-Generator (SOTSG) is On-Line, its Governor must remain in service and be allowed to respond to all changes in system frequency except during startup, shutdown, or testing. A Resource Entity may not reduce Primary Frequency Response on an individual Generation Resource, ESR, or Settlement Only Generator (SOG) even during abnormal conditions without ERCOT's consent (conveyed by way of the Resource Entity's Qualified Scheduling Entity (QSE)) unless equipment damage is imminent. All Generation Resources, ESRs, SOTGs, and SOTSGs that have capacity available to either increase output or decrease output in Real-Time must provide Primary Frequency Response, which may make use of that available capacity. Only Generation Resources or ESRs providing Regulation Up (Reg-Up), Regulation Down (Reg-Down), ERCOT Contingency Reserve Service (ECRS), Responsive Reserve (RRS), or Non-Spinning Reserve (Non-Spin) from On-Line Resources, as specified in Section 8.1.1, QSE Ancillary Service Performance Standards, shall be required to reserve capacity that may also be used to provide Primary Frequency Response.

***[NPRR995: Replace paragraph (1) above with the following upon system implementation:]***

(1) At all times a Generation Resource, Energy Storage Resource (ESR), Settlement Only Transmission Generator (SOTG), Settlement Only Transmission Self-Generator (SOTSG), or Settlement Only Transmission Energy Storage System (SOTESS) is On-Line, its Governor must remain in service and be allowed to respond to all changes in system frequency except during startup, shutdown, or testing. A Resource Entity may not reduce Primary Frequency Response on an individual Generation Resource, ESR,

Settlement Only Generator (SOG), or SOTESS even during abnormal conditions without ERCOT's consent (conveyed by way of the Resource Entity's Qualified Scheduling Entity (QSE)) unless equipment damage is imminent. All Generation Resources, ESRs, SOTGs, SOTSGs, and SOTESSs that have capacity available to either increase output or decrease output in Real-Time must provide Primary Frequency Response, which may make use of that available capacity. Only Generation Resources or ESRs providing Responsive Reserve (RRS), Regulation Up (Reg-Up), Regulation Down (Reg-Down), ERCOT Contingency Reserve Service (ECRS), or Non-Spinning Reserve (Non-Spin) from On-Line Resources, as specified in Section 8.1.1, QSE Ancillary Service Performance Standards, shall be required to reserve capacity that may also be used to provide Primary Frequency Response.

***[NPRR863, NPRR989, NPRR995, and NPRR1011: Insert applicable portions of paragraph (2) below upon system implementation for NPRR863, NPRR989, and NPRR995; or upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1011:]***

(2) Generation Resources and ESRs that do not have an RRS or Regulation Service Ancillary Service award shall set their Governor Dead-Band no greater than ±0.036 Hz from nominal frequency of 60 Hz. A Generation Resource or ESR that widens its Governor Dead-Band greater than what is prescribed in Nodal Operating Guide Section 2.2.7, Turbine Speed Governors, must update its Resource Registration data with the new dead-band value.

***[NPRR995: Insert paragraph (3) below upon system implementation:]***

(3) SOTGs, SOTSGs, and SOTESSs shall set their Governor Dead-Band no greater than ±0.036 Hz from nominal frequency of 60 Hz.

### 8.5.1.2 Reporting

(1) Each Resource Entity shall conduct applicable Governor tests on each of its Generation Resources and ESRs as specified in the Operating Guides. The Resource Entity shall provide test results and other relevant information to ERCOT. ERCOT shall make these results available to the Transmission Service Providers (TSPs).

(2) Generation Resource and ESR Governor modeling information required in the ERCOT planning criteria must be determined from actual Generation Resource or ESR testing described in the Operating Guides. Within 30 days of ERCOT's request, the results of the latest test performed must be supplied to ERCOT and the connected TSP.

(3) Each QSE shall inform ERCOT as soon as practical when notified by its On-Line Generation Resource, ESR, SOTG, or SOTSG of the Governor being out-of-service. The QSE shall supply related logs to ERCOT upon request.

*[NPRR995: Replace paragraph (3) above with the following upon system implementation:]*

(3) Each QSE shall inform ERCOT as soon as practical when notified by its On-Line Generation Resource, ESR, SOTG, SOTSG, or SOTESS of the Governor being out-of-service. The QSE shall supply related logs to ERCOT upon request.

(4) If a Generation Resource or ESR trips Off-Line during a disturbance, as defined by the North American Electric Reliability Corporation (NERC), while providing Primary Frequency Response, the QSE shall report the cause of the failure to ERCOT as soon as the cause has been identified.

#### 8.5.1.3 Wind-powered Generation Resource (WGR) Primary Frequency Response

(1) Wind-powered Generation Resources (WGRs) with Standard Generation Interconnection Agreements (SGIAs) signed after January 1, 2010 shall provide Primary Frequency Response to frequency deviations from 60 Hz. The WGR automatic control system design shall have an adjustable dead band that can be set as specified in the Operating Guides. The Primary Frequency Response shall be specified in the Operating Guides. For WGRs with SGIAs executed on or prior to January 1, 2010, those not already equipped with Primary Frequency Response shall by December 1, 2011 acquire that capability. Those WGRs that cannot technically be retrofitted with Primary Frequency Response capability shall submit an attestation to ERCOT by June 1, 2010 explaining the technical infeasibility. At ERCOT's sole discretion, those WGRs for which Primary Frequency Response is technically infeasible may be granted a permanent exemption from the requirement. ERCOT shall make a determination within 180 days of receipt of the attestation. If ERCOT does not grant an exemption, the WGR shall acquire the capability to provide Primary Frequency Response within 24 months of being notified of that determination. If ERCOT grants the exemption, then ERCOT may require the WGR to install alternate measures, such as over-frequency relays, that are technically feasible and would approximate Primary Frequency Response to events above 60.1 Hz.

### *8.5.2 Primary Frequency Response Measurements*

(1) ERCOT, with the assistance of the appropriate Technical Advisory Committee (TAC) subcommittee, shall analyze the performance of Generation Resources, ESRs, SOTGs, SOTSGs, Resources capable of Fast Frequency Response (FFR), and Controllable Load Resources for all Frequency Measurable Events (FMEs) in accordance with the Operating Guides. In support of this analysis, ERCOT shall post the following:

*[NPRR995: Replace paragraph (1) above with the following upon system implementation:]*

(1) ERCOT, with the assistance of the appropriate Technical Advisory Committee (TAC) subcommittee, shall analyze the performance of Generation Resources, ESRs, SOTGs, SOTSGs, SOTESSs, Resources capable of Fast Frequency Response (FFR), and

Controllable Load Resources for all Frequency Measurable Events (FMEs) in accordance with the Operating Guides. In support of this analysis, ERCOT shall post the following:

(a) ERCOT shall post on the ERCOT website the occurrence of an FME within 14 calendar days of occurrence.

(b) ERCOT shall post on the Market Information System (MIS) Certified Area for Performance, Disturbance, Compliance Working Group (PDCWG) analysis, the Primary Frequency Response Unit Performance for each Generation Resource, ESR, SOTG, SOTSG, and Controllable Load Resource that is measured in the FME.

***[NPRR995: Replace paragraph (b) above with the following upon system implementation:]***

(b) ERCOT shall post on the MIS Certified Area for Performance, Disturbance, Compliance Working Group (PDCWG) analysis, the Primary Frequency Response Unit Performance for each Generation Resource, ESR, SOTG, SOTSG, SOTESS, and Controllable Load Resource that is measured in the FME.

(c) ERCOT shall post on the ERCOT website a monthly report that displays the frequency response of the ERCOT System for a rolling average of the last six FMEs.

(d) ERCOT shall post on the ERCOT website an annual report that displays the minimum frequency response computation methodology of the ERCOT System.

(e) ERCOT shall post on the MIS Certified Area the Primary Frequency Response 12-month rolling average for each Generation Resource, ESR, SOTG, SOTSG, Resource capable of FFR, and Controllable Load Resource.

***[NPRR995: Replace paragraph (e) above with the following upon system implementation:]***

(e) ERCOT shall post on the MIS Certified Area the Primary Frequency Response 12-month rolling average for each Generation Resource, ESR, SOTG, SOTSG, SOTESS, Resource capable of FFR, and Controllable Load Resource.

### 8.5.2.1 ERCOT Required Primary Frequency Response

(1) All Generation Resources, ESRs, SOTGs, SOTSGs, and Controllable Load Resources shall provide Primary Frequency Response in accordance with the requirements established in the Operating Guides.

*[NPRR995: Replace paragraph (1) above with the following upon system implementation:]*

(1) All Generation Resources, ESRs, SOTGs, SOTSGs, SOTESSs, and Controllable Load Resources shall provide Primary Frequency Response in accordance with the requirements established in the Operating Guides.

(2) ERCOT shall evaluate, with the assistance of the appropriate TAC subcommittee, Primary Frequency Response during FMEs. The actual Generation Resource or ESR response must be compiled to determine if adequate Primary Frequency Response was provided.

(3) ERCOT and the appropriate TAC subcommittee shall review each FME, verifying the accuracy of data. Data that is in question may be requested from the QSE for comparison or individual Generation Resource or ESR data may be retrieved from ERCOT's database.

*[NPRR963: Replace paragraph (3) above with the following upon system implementation:]*

(3) ERCOT and the appropriate TAC subcommittee shall review each FME, verifying the accuracy of data. Data that is in question may be requested from the QSE for comparison or individual Resource data may be retrieved from ERCOT's database.

#### 8.5.2.2 ERCOT Data Collection

(1) ERCOT shall collect all data necessary to analyze each FME.

# ERCOT Nodal Protocols

# Section 3: Management Activities for the ERCOT System

**May 31, 2024**

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# 3 MANAGEMENT ACTIVITIES FOR THE ERCOT SYSTEM

(1) This section focuses on the management activities, including Outage Coordination, Resource Adequacy, Load forecasting, transmission operations and planning, and contracts for Ancillary Services for the ERCOT System.

## 3.1 Outage Coordination

(1) "Outage Coordination" is the management of Transmission Facilities Outages and Resource Outages in the ERCOT System. Facility owners are solely and directly responsible for the performance of all maintenance, repair, and construction work, whether on energized or de-energized facilities, including all activities related to providing a safe working environment.

### *3.1.1 Role of ERCOT*

(1) ERCOT shall coordinate and use reasonable efforts, consistent with Good Utility Practice, to accept, approve or reject all requested Outage plans for maintenance, repair, and construction of both Transmission Facilities and Resources within the ERCOT System. ERCOT may reject an Outage plan under certain circumstances, as set forth in these Protocols.

(2) ERCOT's responsibilities with respect to Outage Coordination include:

(a) Approving or rejecting requests for Planned Outages and Maintenance Outages of Transmission Facilities for Transmission Service Providers (TSPs) in coordination with and based on information regarding all Entities' Planned Outages and Maintenance Outages;

***[NPRR857: Replace paragraph (a) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(a) Approving or rejecting requests for Planned Outages and Maintenance Outages of Transmission Facilities for Transmission Service Providers (TSPs) and Direct Current Tie Operators (DCTOs) in coordination with and based on information regarding all Entities' Planned Outages and Maintenance Outages;

(b) Assessing the adequacy of available Resources, based on planned and known Resource Outages, relative to forecasts of Load, Ancillary Service requirements, and reserve requirements;

(c) Coordinating all Planned Outage and Maintenance Outage plans and approving or rejecting Outage plans for Planned Outages of Resources;

(d) Coordinating and approving or rejecting Outage plans for Planned Outages of Reliability Must-Run (RMR) Units under the terms of the applicable RMR Agreements;

(e) Coordinating and approving or rejecting Outage plans associated with Black Start Resources under the applicable Black Start Unit Agreements;

(f) Coordinating and approving or rejecting Outage plans affecting Subsynchronous Resonance (SSR) vulnerable Generation Resources that do not have SSR Mitigation in the event of five or six concurrent transmission Outages;

(g) Coordinating and approving or rejecting changes to existing Resource Outage plans;

(h) Monitoring how Planned Outage schedules compare with actual Outages;

(i) Posting all proposed and approved schedules for Planned Outages, Maintenance Outages, and Rescheduled Outages of Transmission Facilities on the Market Information System (MIS) Secure Area under Section 3.1.5.13, Transmission Report;

(j) Creating and posting aggregated MW of Planned Outages for Resources on the MIS Secure Area under Section 3.2.3, Short-Term System Adequacy Reports;

(k) Monitoring Transmission Facilities and Resource Forced Outages and Maintenance Outages of immediate nature and implementing responses to those Outages as provided in these Protocols;

(l) Establishing and implementing communication procedures:

(i) For a TSP to request approval of Transmission Facilities Planned Outage and Maintenance Outage plans; and

***[NPRR857: Replace item (i) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(i) For a TSP or a DCTO to request approval of Transmission Facilities Planned Outage and Maintenance Outage plans; and

(ii) For a Resource Entity's designated Single Point of Contact to submit Outage plans and to coordinate Resource Outages;

(m) Establishing and implementing record-keeping procedures for retaining all requested Planned Outages, Maintenance Outages, Rescheduled Outages, and Forced Outages; and

(n) Planning and analyzing Transmission Facilities Outages.

### *3.1.2 Planned Outage, Maintenance Outage, or Rescheduled Outage Data Reporting*

(1) Each Resource Entity shall use reasonable efforts, consistent with Good Utility Practice, to continually update its Outage plans for all Outages. All information submitted about Planned Outages, Maintenance Outages, or Rescheduled Outages must be submitted by the Resource Entity or the TSP under this Section. If an Outage plan for a Resource is also applicable to the Current Operating Plan (COP), the Qualified Scheduling Entity (QSE) responsible for the Resource shall also update the COP to provide the same information describing the Outage. Each TSP shall use reasonable efforts, consistent with Good Utility Practice, to continually update its Outage plan, including, but not limited to, submitting the actual start and end date and time for Planned Outages of Transmission Facilities in the Outage Scheduler by hour ending 0800 of the current Operating Day for all scheduled work completed prior to hour ending 0600 of the current Operating Day.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) Each Resource Entity shall use reasonable efforts, consistent with Good Utility Practice, to continually update its Outage plans for all Outages. All information submitted about Planned Outages, Maintenance Outages, or Rescheduled Outages must be submitted by the Resource Entity, TSP, or DCTO under this Section. If an Outage plan for a Resource is also applicable to the Current Operating Plan (COP), the Qualified Scheduling Entity (QSE) responsible for the Resource shall also update the COP to provide the same information describing the Outage. Each TSP and DCTO shall use reasonable efforts, consistent with Good Utility Practice, to continually update its Outage plan, including, but not limited to, submitting the actual start and end date and time for Planned Outages of Transmission Facilities in the Outage Scheduler by hour ending 0800 of the current Operating Day for all scheduled work completed prior to hour ending 0600 of the current Operating Day.

### *3.1.3 Rolling 12-Month Outage Planning and Update*

#### 3.1.3.1 Transmission Facilities

(1) Each TSP shall provide to ERCOT a plan for Planned Outages, Maintenance Outages and Rescheduled Outages in an ERCOT-provided format for the next 12 months updated monthly. Planned Outage, Maintenance Outage, and Rescheduled Outage scheduling data for Transmission Facilities must be kept current. Updates must identify all changes to any previously proposed Planned Outages, Maintenance Outages, or Rescheduled Outages and any additional Planned Outages, Maintenance Outages, or Rescheduled Outages anticipated over the next 12 months. ERCOT shall coordinate in-depth reviews of the 12-month plan with each TSP at least twice per year.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) Each TSP and DCTO shall provide to ERCOT a plan for Planned Outages, Maintenance Outages, and Rescheduled Outages in an ERCOT-provided format for the next 12 months updated monthly. Planned Outage, Maintenance Outage, and Rescheduled Outage scheduling data for Transmission Facilities must be kept current. Updates must identify all changes to any previously proposed Planned Outages, Maintenance Outages, or Rescheduled Outages and any additional Planned Outages, Maintenance Outages, or Rescheduled Outages anticipated over the next 12 months. ERCOT shall coordinate in-depth reviews of the 12-month plan with each TSP at least twice per year.

#### 3.1.3.2 Resources

(1) Each Resource Entity shall provide to ERCOT a Planned Outage and Maintenance Outage plan for Generation Resources in an ERCOT-provided format for at least the next 12 months updated monthly. Planned Outage and Maintenance Outage plans must be updated as soon as practicable following any change. Updates, through an electronic interface as specified by ERCOT, must identify any changes to previously proposed Planned Outages or Maintenance Outages and any additional Planned Outages or Maintenance Outages.

(2) ERCOT shall report statistics monthly on how Resource Planned Outages compare with actual Resource Outages, and post those statistics to the MIS Secure Area.

### *3.1.4 Communications Regarding Resource and Transmission Facilities Outages*

#### 3.1.4.1 Single Point of Contact

(1) All communications concerning a Planned Outage, Maintenance Outage, or Rescheduled Outage must be between ERCOT and the designated "Single Point of Contact" for each TSP or Resource Entity. All nonverbal communications concerning Planned Outages or Rescheduled Outages must be conveyed through an electronic interface as specified by ERCOT. The TSP or Resource Entity shall identify, in its initial request or response, the Single Point of Contact, with primary and alternate means of communication. The Resource Entity or TSP shall submit a Notice of Change of Information (NCI) form (Section 23, Form E, Notice of Change of Information) when changes occur to a Single Point of Contact. This identification must be confirmed in all communications with ERCOT regarding Planned Outage, Maintenance Outage, or Rescheduled Outage requests.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) All communications concerning a Planned Outage, Maintenance Outage, or Rescheduled Outage must be between ERCOT and the designated "Single Point of Contact" for each TSP, DCTO, or Resource Entity. All nonverbal communications concerning Planned Outages or Rescheduled Outages must be conveyed through an electronic interface as specified by ERCOT. The TSP, DCTO, or Resource Entity shall identify, in its initial request or response, the Single Point of Contact, with primary and alternate means of communication. The Resource Entity, TSP, or DCTO shall submit a Notice of Change of Information (NCI) form (Section 23, Form E, Notice of Change of Information) when changes occur to a Single Point of Contact. This identification must be confirmed in all communications with ERCOT regarding Planned Outage, Maintenance Outage, or Rescheduled Outage requests.

(2) The Single Point of Contact must be either a person or a position available seven days per week and 24 hours per day for each Resource Entity and TSP. The Resource Entity shall designate its QSE as its Single Point of Contact. The designated Single Point of Contact for a Generation Resource that has been split into two or more Split Generation Resources shall be the Master QSE. The Single Point of Contact for the TSP must be designated under the ERCOT Operating Guides.

***[NPRR857: Replace paragraph (2) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(2) The Single Point of Contact must be either a person or a position available seven days per week and 24 hours per day for each Resource Entity, TSP, or DCTO. The Resource Entity shall designate its QSE as its Single Point of Contact. The designated Single Point of Contact for a Generation Resource that has been split into two or more Split Generation Resources shall be the Master QSE. The Single Point of Contact for each TSP and DCTO must be designated under the ERCOT Operating Guides.

### 3.1.4.2 Method of Communication

(1) ERCOT, each TSP, and each Resource Entity shall communicate according to ERCOT procedures under these Protocols. All submissions, changes, approvals, rejections, and withdrawals regarding Outages must be processed through the ERCOT Outage Scheduler on the ERCOT programmatic interface, except for Forced Outages and Maintenance Level I Outages, which must be communicated to ERCOT immediately via the Current Operating Plan (COP) if submitted for a Resource and using the Outage Scheduler if submitted by a TSP. This does not prohibit any verbal communication when the situation warrants it. ERCOT shall develop guidelines for the types of events that may require verbal communication.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) ERCOT and each TSP, DCTO, and Resource Entity shall communicate according to ERCOT procedures under these Protocols. All submissions, changes, approvals, rejections, and withdrawals regarding Outages must be processed through the ERCOT Outage Scheduler on the ERCOT programmatic interface, except for Forced Outages and Maintenance Level I Outages, which must be communicated to ERCOT immediately via the Current Operating Plan if submitted for a Resource and using the Outage Scheduler if submitted by a TSP or DCTO. This does not prohibit any verbal

communication when the situation warrants it. ERCOT shall develop guidelines for the types of events that may require verbal communication.

### 3.1.4.3 Reporting for Planned Outages, Maintenance Outages, and Rescheduled Outages of Resource and Transmission Facilities

(1) Each Resource Entity and TSP shall submit information regarding proposed Planned Outages, Maintenance Outages, and Rescheduled Outages of Transmission Facilities or Planned Outages and Maintenance Outages of Generation Resources under procedures adopted by ERCOT. The obligation to submit that information applies to each Resource Entity that is responsible to operate or maintain a Generation Resource that is part of or that affects the ERCOT System. The obligation to submit that information applies to each TSP or Resource Entity that is responsible to operate or maintain Transmission Facilities that are part of or affect the ERCOT System. A Resource Entity or TSP is also obligated to submit information for Transmission Facilities or Generation Resources that are not part of the ERCOT System or that do not affect the ERCOT System if that information is required for regional security coordination as determined by ERCOT.

***[NPRR857 and NPRR1014: Replace applicable portions of paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities for NPRR857; and upon system implementation for NPRR1014:]***

(1) Each Resource Entity, TSP, and DCTO shall submit information regarding proposed Planned Outages, Maintenance Outages, and Rescheduled Outages of Transmission Facilities or Planned Outages and Maintenance Outages of Generation Resources or Energy Storage Resources (ESRs) under procedures adopted by ERCOT. The obligation to submit that information applies to each Resource Entity that is responsible to operate or maintain a Generation Resource or ESR that is part of or that affects the ERCOT System. The obligation to submit that information applies to each TSP, DCTO, or Resource Entity that is responsible to operate or maintain Transmission Facilities that are part of or affect the ERCOT System. A Resource Entity, TSP, or DCTO is also obligated to submit information for Transmission Facilities or Generation Resources or ESRs that are not part of the ERCOT System or that do not affect the ERCOT System if that information is required for regional security coordination as determined by ERCOT.

(2) Before taking an RMR or Black Start Resource ("Reliability Resources") out of service for a Planned Outage or Maintenance Outage, the Single Point of Contact for that Reliability Resource must obtain ERCOT's approval of the schedule of the Planned Outage or Maintenance Outage. ERCOT shall review and approve or reject each

proposed Planned Outage or Maintenance Outage Schedule under this Section and the applicable Agreements.

(3) A Firm Fuel Supply Service Resource (FFSSR) shall not schedule or request a Planned Outage that would occur during the period of December 1 through March 1.

### 3.1.4.4 Management of Forced Outages or Maintenance Outages

(1) In the event of a Forced Outage, the Resource Entity or QSE, as appropriate, or TSP must notify ERCOT by:

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) In the event of a Forced Outage, after the affected equipment is removed from service, the Resource Entity or QSE, as appropriate, TSP, or DCTO must notify ERCOT of its action by:

(a) For Resource Outages:

(i) Changing the telemetered Resource Status to the appropriate Off-Line status as soon as practicable but no longer than 15 minutes after the Forced Outage occurs;

(ii) Updating the COP as soon as practicable but no longer than 60 minutes after the Forced Outage occurs; and

(iii) Updating the Outage Scheduler, if necessary.

(b) For Transmission Facilities Forced Outages:

(i) Changing the telemetered status of the affected Transmission Elements; and

(ii) Updating the Outage Scheduler with the expected return-to-service time.

(c) Each TSP and QSE shall timely update telemetry, COP status, and/or the Outage Scheduler, as applicable, in accordance with paragraphs (a) and (b) above unless in the reasonable judgment of the TSP or QSE, such compliance would create an undue threat to safety, undue risk of bodily harm, or undue damage to equipment. The TSP or QSE is excused from updating the telemetered status, COP, and/or

Outage Scheduler only for so long as the undue threat to safety, undue risk of bodily harm, or undue damage to equipment exists. The time for updating the telemetered status, COP, and/or Outage Scheduler begins once the undue threat to safety, undue risk of bodily harm, or undue damage to equipment no longer exists.

(2) Forced Outages may require ERCOT to review and withdraw approval of previously approved or accepted, as applicable, Planned Outage, Maintenance Outage, or Rescheduled Outage schedules to ensure reliability.

(3) For Maintenance Outages, the Resource Entity or QSE, as appropriate, or TSP shall notify ERCOT of any Resource or Transmission Facilities Maintenance Outage according to the Maintenance Outage Levels by updating the COP and Outage Scheduler. ERCOT shall coordinate the removal of facilities from service within the defined timeframes as specified by the TSP, QSE or Resource Entity in its notice to ERCOT.

***[NPRR857: Replace paragraph (3) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(3) For Maintenance Outages, the Resource Entity or QSE, as appropriate, TSP, or DCTO shall notify ERCOT of any Resource or Transmission Facilities Maintenance Outage according to the Maintenance Outage Levels by updating the COP and Outage Scheduler. ERCOT shall coordinate the removal of facilities from service within the defined timeframes as specified by the TSP, DCTO, QSE, or Resource Entity in its notice to ERCOT.

(4) ERCOT may require supporting information describing Forced Outages and Maintenance Outages. ERCOT may reconsider and withdraw approvals of other previously approved Transmission Facilities Outage or an Outage of a Reliability Resource as a result of Forced Outages or Maintenance Outages, if necessary, in ERCOT's determination to protect system reliability. When ERCOT approves a Maintenance Outage, ERCOT shall coordinate timing of the appropriate course of action under these Protocols.

(5) Removal of a Resource or Transmission Facilities from service under Maintenance Outages must be coordinated with ERCOT. To minimize harmful impacts to the system in urgent situations, the equipment may be removed immediately from service, provided notice is given immediately, by the Resource Entity or TSP, to ERCOT of such action.

***[NPRR857: Replace paragraph (5) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an***

***interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(5) Removal of a Resource or Transmission Facilities from service under Maintenance Outages must be coordinated with ERCOT. To minimize harmful impacts to the system in urgent situations, the equipment may be removed immediately from service, provided the Resource Entity, TSP, or DCTO immediately gives notice of such action to ERCOT.

### 3.1.4.5 Notice of Forced Outage or Unavoidable Extension of Planned, Maintenance, or Rescheduled Outage Due to Unforeseen Events

(1) If a Planned, Maintenance, or Rescheduled Outage is not completed within the ERCOT-approved timeframe and the Transmission Facilities or Resources are in such a condition that they cannot be restored at the Outage schedule completion date, the requesting party shall submit to ERCOT a Forced Outage (unavoidable extension) form describing the extension of the Outage and providing a revised return date.

(2) Any transmission Forced Outage that occurs in Real-Time and that is expected to continue for longer than two hours must be entered into the Outage Scheduler as soon as practicable but no longer than 60 minutes after the beginning of the Outage. Any transmission Forced Outage with a duration exceeding two hours must be entered into the Outage Scheduler as soon as practicable but no longer than 150 minutes after the beginning of the transmission Forced Outage, if not already reported in the Outage Scheduler.

(3) Any Resource Forced Outage that occurs in Real-Time must be entered into the Outage Scheduler as soon as practicable but no longer than 60 minutes after the beginning of the Forced Outage.

(4) If the QSE is to receive the exemption described in paragraph (6)(d) of Section 8.1.1.4.1, Regulation Service and Generation Resource/Controllable Load Resource Energy Deployment Performance, and Ancillary Service Capacity Performance Metrics, the QSE will notify ERCOT Operators by voice communication of every Forced Outage, Forced Derate, or Startup Loading Failure within 15 minutes.

(5) For a Startup Loading Failure, the Resource Entity or its designee must enter a Forced Outage in the Outage Scheduler if the Resource was in an Off-Line status prior to the Startup Loading Failure or update the existing Outage for the Resource if the Resource was on Outage prior to the Startup Loading Failure. The Resource Entity or its designee must also provide a text entry in the supporting information field of the Outage Scheduler that includes the following:

(a) A statement that a Startup Loading Failure occurred;

(b) An explanation of the cause of the Startup Loading Failure using the best available information at the time the Outage or update to the existing Outage is entered, which must be updated if more accurate information becomes available; and

(c) The start time and end time of the Startup Loading Failure portion of the Outage. Multiple consecutive startup attempts may be aggregated into a single Startup Loading Failure event with a single start and end time.

### 3.1.4.6 Outage Coordination of Potential Transmission Emergency Conditions

(1) If ERCOT forecasts an inability to meet applicable transmission reliability standards, has exercised all other reasonable options, and there is only one QSE with approved or accepted Resource Outages which could resolve the situation if the start of one or more of the Resource Outages at a single Resource site were delayed or one or more ongoing Resource Outages at a single Resource site were restored early, then ERCOT may contact that QSE and attempt to reach a mutually acceptable solution to delay or reschedule one or more of those Outages. In this case, ERCOT is not obligated to follow the process described in Section 3.1.6.9, Withdrawal of Approval and Rescheduling of Approved Planned Outages of Resource Facilities. ERCOT shall not provide information to the QSE during these contacts which is not directly related to the QSE's Planned Resource Outage(s) and is not otherwise available to all other Market Participants.

(2) If ERCOT and the QSE are unable to reach a mutually agreeable solution to change the Resource Outage, ERCOT may issue an Outage Schedule Adjustment (OSA) to the QSE for the Resource.

***[NPRR930: Insert paragraph (3) below upon system implementation and renumber accordingly:]***

(3) If there are Resources at multiple sites with approved or accepted Resource Outages, whose approval or acceptance could be withdrawn to meet the applicable transmission reliability standards, ERCOT shall utilize the process described in Section 3.1.6.9.

(3) This Section is not intended to restrict ongoing Outage Coordination activities occurring more than seven days in advance of Real-Time.

### 3.1.4.7 Reporting of Forced Derates

(1) If a Generation Resource experiences a Forced Derate in an amount greater than ten MW, and 5% of its Seasonal net maximum sustainable rating, and the Forced Derate lasts longer than 30 minutes, the Resource Entity or its designee must enter the Forced Derate into the Outage Scheduler as soon as practicable but no longer than 60 minutes after the beginning of the Forced Derate.

(2) If a Forced Derate that has already been reported changes by an amount greater than ten MW and 5% of the Generation Resource's Seasonal net maximum sustainable rating, and the change lasts longer than 30 minutes, the Resource Entity or its designee must enter the change as a new Forced Derate into the Outage Scheduler as soon as practicable but no longer than 60 minutes after the beginning of the change.

(3) Notwithstanding paragraphs (1) and (2) above, for any Forced Derate or change to a Forced Derate that meets the reporting criteria specified in paragraph (1) or (2) above and that is caused by ambient temperature or humidity, the Resource Entity or its designee must enter the Forced Derate into the Outage Scheduler as soon as practicable but no longer than eight hours after the beginning of the Force Derate or change.

(4) The QSE must appropriately update the telemetered High Sustained Limit (HSL) and any applicable telemetry as specified in paragraph (2) of Section 6.5.5.2, Operational Data Requirements, based on the Forced Derate, as soon as practicable but no longer than 15 minutes after the beginning of a Forced Derate, if the Forced Derate is greater than ten MW and more than 5% of the Seasonal net maximum sustainable rating of the Resource and its expected or actual duration is greater than 30 minutes. Alternatively for a Forced Derate, a QSE may use the ONHOLD process described in paragraph (2) of Section 6.5.5.1, Changes in Resource Status.

(5) The QSE must update the COP as soon as practicable but no longer than 60 minutes after the beginning of a Forced Derate, if the Forced Derate is greater than 20 MW and its expected duration is greater than 120 minutes.

(6) Each QSE shall timely update the telemetered HSL and COP unless in the reasonable judgment of the QSE, such compliance would create an undue threat to safety, undue risk of bodily harm, or undue damage to equipment. The QSE is excused from updating the telemetered HSL and/or COP only for so long as the undue threat to safety, undue risk of bodily harm, or undue damage to equipment exists. The time for updating the telemetered HSL and/or COP begins once the undue threat to safety, undue risk of bodily harm, or undue damage to equipment no longer exists.

### 3.1.4.8 Resource Forced Outage Report

(1) Three days after each Operating Day, ERCOT shall post to the ERCOT website a report that identifies each Forced Outage, Maintenance Outage, or Forced Derate of a Generation Resource or Energy Storage Resource (ESR) that occurs during, or that extends into, that Operating Day. At a minimum, the report shall contain:

(a) The Resource name;

(b) The Resource unit code;

(c) The Resource's fuel type;

(d) The type of Outage or derate;

(e) The Resource's applicable Seasonal net maximum sustainable rating;

(f) The available MW during the Outage or derate;

(g) The effective MW reduction due to the Outage or derate;

(h) The start date/time and the planned or actual end date/time; and

(i) The entry in the "nature of work" field in the Outage Scheduler for each Outage or derate.

### *3.1.5 Transmission System Outages*

#### 3.1.5.1 ERCOT Evaluation of Planned Outage and Maintenance Outage of Transmission Facilities

(1) A TSP or Resource Entity shall request a Planned Outage or Maintenance Outage when any Transmission Facility that is part of the ERCOT Transmission Grid and defined in the Network Operations Model will be removed from its normal service. For Resource Entities within a Private Use Network, this only includes Transmission Facilities at the Point of Interconnection (POI). For TSP requests, the TSPs shall enter such requests in the Outage Scheduler. For Resource Entity requests, the Resource Entity shall enter such requests in the Outage Scheduler. Planned Outages, Maintenance Outages, or Rescheduled Outages for Electrical Buses will be treated as consequentially outaged Transmission Elements. In those cases where a TSP enters the breaker and switch statuses associated with an Electrical Bus, a downstream topology processor will evaluate the breakers and switches associated with the applicable Electrical Bus to determine if the Electrical Bus is consequentially outaged, and to thereby designate the status of the Electrical Bus. Proposed Transmission Planned Outage or Maintenance Outage information submitted by a TSP or Resource Entity in accordance with this Section constitutes a request for ERCOT's approval of the Outage Schedule associated with the Planned Outage or Maintenance Outage. ERCOT is not deemed to have approved the Outage Schedule associated with the Planned Outage or Maintenance Outage until ERCOT notifies the TSP or Resource Entity of its approval under procedures adopted by ERCOT. ERCOT shall evaluate requests under Section 3.1.5.11, Evaluation of Transmission Facilities Planned Outage or Maintenance Outage Requests.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) A TSP, DCTO, or Resource Entity shall request a Planned Outage or Maintenance Outage when any Transmission Facility that is part of the ERCOT Transmission Grid and defined in the Network Operations Model will be removed from its normal service. For Resource Entities within a Private Use Network, this only includes Transmission Facilities at the Point of Interconnection (POI). For TSP, DCTO, and Resource Entity requests, the requesting Entity shall enter such a request in the Outage Scheduler. Planned Outages, Maintenance Outages, or Rescheduled Outages for Electrical Buses will be treated as consequentially outaged Transmission Elements. In those cases where a TSP or DCTO enters the breaker and switch statuses associated with an Electrical Bus, a downstream topology processor will evaluate the breakers and switches associated with the applicable Electrical Bus to determine if the Electrical Bus is consequentially outaged, and to thereby designate the status of the Electrical Bus. Proposed Transmission Planned Outage or Maintenance Outage information submitted by a TSP, DCTO, or Resource Entity in accordance with this Section constitutes a request for ERCOT's approval of the Outage Schedule associated with the Planned Outage or Maintenance Outage. ERCOT is not deemed to have approved the Outage Schedule associated with the Planned Outage or Maintenance Outage until ERCOT notifies the TSP, DCTO, or Resource Entity of its approval under procedures adopted by ERCOT. ERCOT shall evaluate requests under Section 3.1.5.11, Evaluation of Transmission Facilities Planned Outage or Maintenance Outage Requests.

(2) ERCOT shall review and approve Planned Outages and Maintenance Outages of Transmission Facilities schedules. ERCOT shall transmit its approvals and rejections to TSPs via the ERCOT Outage Scheduler. Once approved, ERCOT may not withdraw its approval except under the conditions described in Section 3.1.5.7, Withdrawal of Approval of Approved Planned Outages, Maintenance Outages, and Rescheduled Outages of Transmission Facilities.

***[NPRR857: Replace paragraph (2) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(2) ERCOT shall review and approve Planned Outages and Maintenance Outages of Transmission Facilities schedules. ERCOT shall transmit its approvals and rejections to TSPs and DCTOs via the ERCOT Outage Scheduler. Once approved, ERCOT may not withdraw its approval except under the conditions described in Section 3.1.5.7, Withdrawal of Approval of Approved Planned Outages, Maintenance Outages, and Rescheduled Outages of Transmission Facilities.

(3) Private Use Network Outage requests submitted pursuant to this Section shall not be publicly posted.

(4) To the extent authorized by its tariff, an External Load Serving Entity (ELSE) or Non-Opt-In Entity (NOIE) that provides retail service to a Resource Entity that owns or operates a Generation Resource may request that the TSP to which the Generation Resource is interconnected disconnect the Generation Resource due to the Resource Entity's failure to comply with the payment requirements in the ELSE's or NOIE's retail tariff.

(5) Within five Business Days after receiving a request from a Load Serving Entity (LSE) to disconnect a Generation Resource due to the Resource Entity's failure to comply with LSE's payment requirements, including a request received pursuant to paragraph (4) above, the interconnecting TSP shall enter a request in the Outage Scheduler for an Outage of any Transmission Facilities interconnecting the Generation Resource to the ERCOT System. Any Outage requested or taken pursuant to this Section shall be treated as a Planned Outage for all purposes under the Protocols. For any such Outage request, the requesting TSP shall enter a start date that it is at least four days after the date the request is submitted in the Outage Scheduler and shall enter an Outage end date that is 14 days from the date of the requested start date. Unless storm or system reliability issues prevent immediate dispatch of personnel, for any LSE request to reconnect a Customer that was disconnected pursuant to this section, the interconnecting TSP shall end the Outage and reconnect the Generation Resource the same Business Day if the request is received by 1200, or the next Business Day if the request is received after 1200. If a reconnect request is not received within four days of the Outage end date, the interconnecting TSP shall enter another request in the Outage Scheduler for an Outage of any Transmission Facilities interconnecting the Generation Resource to the ERCOT System with an Outage end date 14 days beyond the prior Outage end date. At any time, ERCOT may withdraw approval of the Outage and instruct the TSP to reconnect the Generation Resource if it deems cancellation necessary to address reliability concerns.

### 3.1.5.2 Receipt of TSP Requests by ERCOT

(1) ERCOT shall acknowledge each request for approval of a Transmission Planned Outage or Maintenance Outage schedule within two Business Hours of the receipt of the request. ERCOT may request additional information or seek clarification from the TSP regarding the information submitted for a proposed Planned Outage or Maintenance Outage for Transmission Facilities.

***[NPRR857: Replace Section 3.1.5.2 above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

### 3.1.5.2 Receipt of TSP and DCTO Requests by ERCOT

(1) ERCOT shall acknowledge each request for approval of a Transmission Planned Outage or Maintenance Outage schedule within two Business Hours of the receipt of the request. ERCOT may request additional information or seek clarification from the TSP or DCTO regarding the information submitted for a proposed Planned Outage or Maintenance Outage for Transmission Facilities.

### 3.1.5.3 Timelines for Response by ERCOT for TSP Requests

(1) For Transmission Facilities Outages, ERCOT shall approve or reject each request in accordance with the following table:

| **Amount of time between the request for approval of the proposed Outage and the scheduled start date of the proposed Outage:** | **ERCOT shall approve or reject no later than:** |
|---|---|
| Three days | 1800 hours, two days before the start of the proposed Outage |
| Between four and eight days | 1800 hours, three days before the start of the proposed Outage |
| Between nine days and 45 days | Four days before the start of the proposed Outage |
| Between 46 and 90 days | 30 days before the start of the proposed Outage |
| Greater than 90 days | 75 days before the start of the proposed Outage |

(2) For Outages scheduled at least three days before the scheduled start date of the proposed Outage, ERCOT shall make reasonable attempts to accommodate unusual circumstances that support TSP requests for approval earlier than required by the schedule above.

(3) If circumstances prevent adherence to these timetables, ERCOT shall discuss the request status and reason for the delay of the approval with the requesting TSP and make reasonable attempts to mitigate the effect of the delay on the TSP.

(4) When ERCOT rejects a request for an Outage, ERCOT shall provide the TSP, in written or electronic form, suggested amendments to the schedules of a Planned Outage or Maintenance Outage of Transmission Facilities. Any such suggested amendments accepted by the TSP must be processed by ERCOT as a Planned Outage or Maintenance Outage of Transmission Facilities request under this Section.

***[NPRR857: Replace Section 3.1.5.3 above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the***

***interconnection; and (b) The financial security required to fund the interconnection facilities:]***

### 3.1.5.3 Timelines for Response by ERCOT for TSP and DCTO Requests

(1) For Transmission Facilities Outages, ERCOT shall approve or reject each request in accordance with the following table:

| **Amount of time between the request for approval of the proposed Outage and the scheduled start date of the proposed Outage:** | **ERCOT shall approve or reject no later than:** |
|---|---|
| Three days | 1800 hours, two days before the start of the proposed Outage |
| Between four and eight days | 1800 hours, three days before the start of the proposed Outage |
| Between nine days and 45 days | Four days before the start of the proposed Outage |
| Between 46 and 90 days | 30 days before the start of the proposed Outage |
| Greater than 90 days | 75 days before the start of the proposed Outage |

(2) For Outages scheduled at least three days before the scheduled start date of the proposed Outage, ERCOT shall make reasonable attempts to accommodate unusual circumstances that support TSP and DCTO requests for approval earlier than required by the schedule above.

(3) If circumstances prevent adherence to these timetables, ERCOT shall discuss the request status and reason for the delay of the approval with the requesting TSP or DCTO and make reasonable attempts to mitigate the effect of the delay on the TSP or DCTO.

(4) When ERCOT rejects a request for an Outage, ERCOT shall provide the TSP or DCTO, in written or electronic form, suggested amendments to the schedules of a Planned Outage or Maintenance Outage of Transmission Facilities. Any such suggested amendments accepted by the TSP or DCTO must be processed by ERCOT as a Planned Outage or Maintenance Outage of Transmission Facilities request under this Section.

### 3.1.5.4 Delay

(1) ERCOT may delay its approval or rejection of a proposed Planned Outage or Maintenance Outage of a Transmission Facilities schedule if the requesting TSP has not submitted sufficient or complete information within the time frames set forth in these Protocols.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an***

***interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) ERCOT may delay its approval or rejection of a proposed Planned Outage or Maintenance Outage of a Transmission Facilities schedule if the requesting TSP or DCTO has not submitted sufficient or complete information within the time frames set forth in these Protocols.

### 3.1.5.5 Opportunity Outage of Transmission Facilities

(1) Opportunity Outages of Transmission Facilities may be approved under Section 3.1.6.10, Opportunity Outage.

### 3.1.5.6 Rejection Notice

(1) If ERCOT rejects a request, ERCOT shall provide the TSP a written or electronic rejection notice that includes:

(a) Specific concerns causing the rejection;

(b) Possible remedies or transmission schedule revisions, if any that might mitigate the basis for rejection; and

(c) An electronic copy of the ERCOT study case for review by the TSP.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) If ERCOT rejects a request, ERCOT shall provide the TSP or DCTO a written or electronic rejection notice that includes:

(a) Specific concerns causing the rejection;

(b) Possible remedies or transmission schedule revisions, if any that might mitigate the basis for rejection; and

(c) An electronic copy of the ERCOT study case for review by the TSP or DCTO.

(2) ERCOT may reject a Planned Outage or Maintenance Outage of Transmission Facilities only:

(a) To protect system reliability or security;

(b) Due to insufficient information regarding the Outage; or

(c) Due to failure to comply with submittal process requirements, as specified in these Protocols.

(3) When multiple proposed Planned Outages, Maintenance Outages, or Rescheduled Outages cause a reliability or security concern, ERCOT shall:

(a) Communicate with each TSP to see if the TSP will adjust its proposed Planned Outage, Maintenance Outage, or Rescheduled Outage schedule;

(b) Determine if each TSP will agree to an alternative Outage schedule; or

(c) Reject, in ERCOT's sole discretion, one or more proposed Outages, considering order of receipt and impact on the ERCOT Transmission Grid.

***[NPRR857: Replace paragraph (3) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(3) When multiple proposed Planned Outages, Maintenance Outages, or Rescheduled Outages cause a reliability or security concern, ERCOT shall:

(a) Communicate with each TSP and DCTO to see if the TSP or DCTO will adjust its proposed Planned Outage, Maintenance Outage, or Rescheduled Outage schedule;

(b) Determine if each TSP or DCTO will agree to an alternative Outage schedule; or

(c) Reject, in ERCOT's sole discretion, one or more proposed Outages, considering order of receipt and impact on the ERCOT Transmission Grid.

### 3.1.5.7 Withdrawal of Approval of Approved Planned Outages, Maintenance Outages, and Rescheduled Outages of Transmission Facilities

(1) If ERCOT believes it cannot meet the applicable reliability standards and has exercised reasonable options, ERCOT may contact the TSP for more information prior to its

withdrawal of the approval for a Planned Outage, Maintenance Outage, or Rescheduled Outage. ERCOT shall inform the affected TSP both orally and in written or electronic form as soon as ERCOT identifies a situation that may lead to the withdrawal of ERCOT's approval. If ERCOT withdraws its approval, the TSP may submit a new request for approval of the Planned Outage or Maintenance Outage schedule provided the new request meets the submittal requirements for Outage Scheduling.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) If ERCOT believes it cannot meet the applicable reliability standards and has exercised reasonable options, ERCOT may contact the TSP or DCTO for more information prior to its withdrawal of the approval for a Planned Outage, Maintenance Outage, or Rescheduled Outage. ERCOT shall inform the affected TSP or DCTO both orally and in written or electronic form as soon as ERCOT identifies a situation that may lead to the withdrawal of ERCOT's approval. If ERCOT withdraws its approval, the TSP or DCTO may submit a new request for approval of the Planned Outage or Maintenance Outage schedule provided the new request meets the submittal requirements for Outage Scheduling.

(2) In determining whether to withdraw approval, ERCOT shall duly consider whether the Planned Outage, Maintenance Outage, or Rescheduled Outage affects public infrastructure if ERCOT is made aware of such potential impacts by the TSP (e.g., impacts on highways, ports, municipalities, and counties).

***[NPRR857: Replace paragraph (2) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(2) In determining whether to withdraw approval, ERCOT shall duly consider whether the Planned Outage, Maintenance Outage, or Rescheduled Outage affects public infrastructure if ERCOT is made aware of such potential impacts by the TSP or DCTO (e.g., impacts on highways, ports, municipalities, and counties).

(3) Prior to withdrawing the approval of a High Impact Outage (HIO) submitted with greater than 90-days' notice, ERCOT shall coordinate with the TSP and may convert the Planned Outage to a Rescheduled Outage. The Rescheduled Outage shall retain the same priority as the original Planned Outage. ERCOT shall attempt to keep the Outage within the same calendar month.

***[NPRR857: Replace paragraph (3) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(3) Prior to withdrawing the approval of a High Impact Outage (HIO) submitted with greater than 90-days' notice, ERCOT shall coordinate with the TSP or DCTO and may convert the Planned Outage to a Rescheduled Outage. The Rescheduled Outage shall retain the same priority as the original Planned Outage. ERCOT shall attempt to keep the Outage within the same calendar month.

### 3.1.5.8 Priority of Approved Planned, Maintenance, and Rescheduled Outages

(1) In considering TSP requests, ERCOT shall give priority to Planned Outages, Maintenance Outages, and Rescheduled Outages in the order of receipt.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) In considering TSP or DCTO requests, ERCOT shall give priority to Planned Outages, Maintenance Outages, and Rescheduled Outages in the order of receipt.

### 3.1.5.9 Information for Inclusion in Transmission Facilities Outage Requests

(1) Transmission Facilities Outage requests submitted by a TSP must include the following Transmission Facilities-specific information:

(a) The identity of the Transmission Facilities, in the Network Operations Model, including TSP and location;

(b) The nature of the work, by predefined classifications, to be performed during the proposed Transmission Facilities Outage;

(c) The preferred start and finish dates for the proposed Transmission Planned or Maintenance Outage;

(d) The time required to: (i) finish the Transmission Planned Outage or Maintenance Outage and (ii) restore the Transmission Facilities to normal operation;

(e) Primary and alternate telephone numbers for the TSP's Single Point of Contact, as described in Section 3.1.4.1, Single Point of Contact, and the name of the individual submitting the information;

(f) The scheduling flexibility (i.e., the earliest start date and the latest finish date for the Outage);

(g) Any Transmission Facilities that must be out of service to facilitate the TSP's request;

(h) Any remedial actions or special protection systems necessary during the Outage and the contingency that would require the remedial action or relay action; and

(i) Any other relevant information related to the proposed Outage or any unusual risks affecting the schedule.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) Transmission Facilities Outage requests submitted by a TSP or a DCTO must include the following Transmission Facilities-specific information:

(a) The identity of the Transmission Facilities, in the Network Operations Model, including TSP or DCTO and location;

(b) The nature of the work, by predefined classifications, to be performed during the proposed Transmission Facilities Outage;

(c) The preferred start and finish dates for the proposed Transmission Planned or Maintenance Outage;

(d) The time required to: (i) finish the Transmission Planned Outage or Maintenance Outage and (ii) restore the Transmission Facilities to normal operation;

(e) Primary and alternate telephone numbers for the TSP's or DCTO's Single Point of Contact, as described in Section 3.1.4.1, Single Point of Contact, and the name of the individual submitting the information;

(f) The scheduling flexibility (i.e., the earliest start date and the latest finish date for the Outage);

(g) Any Transmission Facilities that must be out of service to facilitate the TSP's or DCTO's request;

(h) Any remedial actions or special protection systems necessary during the Outage and the contingency that would require the remedial action or relay action; and

(i) Any other relevant information related to the proposed Outage or any unusual risks affecting the schedule.

### 3.1.5.10 Additional Information Requests

(1) The requesting TSP shall comply with any ERCOT requests for more information about, or for clarification of, the information submitted by the TSP for a proposed Outage.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) The requesting TSP or DCTO shall comply with any ERCOT requests for more information about, or for clarification of, the information submitted by the TSP or DCTO for a proposed Outage.

### 3.1.5.11 Evaluation of Transmission Facilities Planned Outage or Maintenance Outage Requests

(1) ERCOT shall evaluate requests, approve, or reject Transmission Facilities Planned Outages and Maintenance Outages according to the requirements of this section. ERCOT may approve Outage requests provided the Outage in combination with other proposed Outages does not cause a violation of applicable reliability standards. ERCOT shall reject Outage requests that do not meet the submittal timeline specified in Section 3.1.5.12, Submittal Timeline for Transmission Facility Outage Requests. ERCOT shall consider the following factors in its evaluation:

(a) Forecasted conditions during the time of the Outage;

(b) Outage plans submitted by Resource Entities and TSPs under Section 3.1, Outage Coordination;

***[NPRR857: Replace item (b) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(b) Outage plans submitted by Resource Entities, TSPs, and DCTOs under Section 3.1, Outage Coordination;

(c) Forced Outages of Transmission Facilities;

(d) Potential for the proposed Outages to cause irresolvable transmission overloads or voltage supply concerns based on the indications from contingency analysis software;

(e) Potential for the proposed Outages to cause SSR vulnerability to Generation Resources that do not have SSR Mitigation in the event of five or six concurrent transmission Outages;

(f) Previously approved Planned Outages, Maintenance Outages, and Rescheduled Outages;

(g) Impacts on the transfer capability of Direct Current Ties (DC Ties); and

(h) Good Utility Practice for Transmission Facilities maintenance.

(2) When ERCOT approves a Maintenance Outage, ERCOT shall coordinate the timing of the appropriate course of action with the requesting TSP.

***[NPRR857: Replace paragraph (2) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(2) When ERCOT approves a Maintenance Outage, ERCOT shall coordinate the timing of the appropriate course of action with the requesting TSP or DCTO.

(3) When ERCOT identifies that an HIO has been submitted with 90-days or less notice, ERCOT may coordinate with TSP to make reasonable efforts to minimize the impact.

***[NPRR857: Replace paragraph (3) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(3) When ERCOT identifies that an HIO has been submitted with 90-days or less notice, ERCOT may coordinate with the TSP or DCTO to make reasonable efforts to minimize the impact.

### 3.1.5.12 Submittal Timeline for Transmission Facility Outage Requests


(1) TSPs shall submit all requests for Planned Outages and Maintenance Outages or changes to existing approved Outages of Transmission Elements in the Network Operations Model to ERCOT no later than the minimum amount of time between the submittal of a request to ERCOT for approval of a proposed Outage and the scheduled start date of the proposed Outage, according to the following table:

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) TSPs and DCTOs shall submit all requests for Planned Outages and Maintenance Outages or changes to existing approved Outages of Transmission Elements in the

Network Operations Model to ERCOT no later than the minimum amount of time between the submittal of a request to ERCOT for approval of a proposed Outage and the scheduled start date of the proposed Outage, according to the following table:

| Type of Outage | Minimum amount of time between the Outage request and the scheduled start date of the proposed Outage: | Minimum amount of time between any change to an Outage request and the scheduled end date an existing Outage: |
|---|---|---|
| Forced Outage | Immediate | Immediate |
| Maintenance Outage Level I | Immediate | Immediate |
| Maintenance Outage Level II | Two days [1] | Two days [1] |
| Maintenance Outage Level III | Three days | Three days |
| Planned Outage | Three days | Three days |
| Simple Transmission Outage | One day | One day |

Note:

1. For reliability purposes, ERCOT may reduce to one day on a case-by-case basis.

### 3.1.5.13 Transmission Report

(1) ERCOT shall post on the MIS Secure Area:

(a) Within one hour of receipt by ERCOT, all Transmission Facilities Outages that have been submitted into the ERCOT Outage Scheduler, excluding Private Use Network transmission Outages;

(b) Within one hour of a change of an Outage, all Transmission Facilities Outages, excluding Private Use Network transmission Outages;

(c) Once each day, Outage Scheduler notes related to the coordination of Outages;

(d) At least annually, an updated list of High Impact Transmission Elements (HITEs) pursuant to Section 3.1.8, High Impact Transmission Element (HITE) Identification; and

(e) Once each day, list of HIOs submitted with 90-days or less notice that are accepted or approved.

## *3.1.6 Outages of Resources Other than Reliability Resources*

(1) Resource Entities should submit a request for a Resource Planned Outage as far in advance of the planned start of the Outage as is practicable but no more than 60 months in advance.

(2) ERCOT shall approve or reject all requested Outage plans for a Resource other than a Reliability Resource submitted to ERCOT more than 45 days before the proposed start date of the Outage.

(a) ERCOT shall approve a requested Outage plan for a Resource other than a Reliability Resource if the proposed approval would not cause the aggregate MW of Resource Outages to exceed the Maximum Daily Resource Planned Outage Capacity at any point during the duration of the proposed Resource Outage, taking into consideration all previously approved Resource Outages.

(3) If a Resource Entity plans to start a Planned or Maintenance Outage within 45 days, and the Resource Entity has not previously submitted a Resource Outage plan for the Outage, then the Resource Entity must immediately notify ERCOT and include in its notice whether the Outage is a Maintenance (Level I, II, or III) Outage or Planned Outage. ERCOT's response to this notification must comply with these requirements:

(a) ERCOT shall accept Levels I, II, and III Maintenance Outage plans, and ERCOT shall coordinate the Outages within the time frames specified in these Protocols.

(b) ERCOT shall approve Planned Outage plans, except that:

(i) ERCOT shall reject an Outage plan if the proposed Outage would cause the aggregate MW of Resource Outages to exceed the Maximum Daily Resource Planned Outage Capacity at any point during the duration of the proposed Outage; and

(ii) ERCOT shall reject an Outage plan if it will impair ERCOT's ability to meet applicable reliability standards, taking into consideration all previously approved and accepted Outages, and other solutions cannot be exercised.

(4) The Resource Entity shall not begin a Planned Outage unless it has received approval of its proposed Outage plan.

(5) ERCOT shall accept Forced Outage plans.

(6) Notwithstanding any other provision of this Section, ERCOT shall approve a requested Outage plan for a nuclear Generation Resource.

(7) Notwithstanding any other provision in this Section, ERCOT shall approve an Outage plan for a Generation Resource that is part of an industrial generation facility if the plan states that the Generation Resource is part of an industrial generation facility, as described in subsection (*l*) of the Public Utility Regulatory Act (PURA), TEX. UTIL. CODE ANN. § 39.151 (Vernon 1998 & Supp. 2007), and that the Outage is necessitated by the operational needs of an industrial Load normally served by the Generation Resource, except that ERCOT is not required to approve the Outage plan if ERCOT determines the Outage will impair ERCOT's ability to ensure transmission security.

### 3.1.6.1 Receipt of Resource Requests by ERCOT

(1) ERCOT shall acknowledge each request for approval of a Resource Planned Outage plan within two Business Hours of the receipt of the request. ERCOT may request additional information or seek clarification from the Resource Entity regarding the information submitted for a proposed Planned Outage or Maintenance Outage for Resource Facilities.

### 3.1.6.2 Resource Outage Plan

(1) Resource Outage plans shall include the following information:

(a) The primary and alternate phone number of the Resource Entity's Single Point of Contact for Outage Coordination;

(b) The Resource identified by the name in the Network Operations Model;

(c) The net megawatts of capacity the Resource Entity anticipates will be available during the Outage (if any);

(d) The estimated start and finish dates for each Planned and Maintenance Outage;

(e) An estimate of the acceptable deviation in the Outage schedule (i.e., the earliest start date and the latest finish date for the Outage); and

(f) The nature of work to be performed during the Outage. For a Forced Outage or Forced Derate, the "nature of work" field in the Outage Scheduler shall indicate the best available information about the cause of the Forced Outage or Forced Derate at the time the Outage or derate is entered and shall be updated as soon as more accurate information becomes available.

(2) When ERCOT accepts a Maintenance Outage, ERCOT shall coordinate the timing of the appropriate course of action within the Resource-specified timeframe. The QSE shall notify ERCOT of the Outage and coordinate the time.

### 3.1.6.3 Additional Information Requests

(1) ERCOT may request additional information from a Resource Entity regarding the information submitted as part of a Resource Outage plan. ERCOT may not unnecessarily delay requests for information in terms of the required response time.

### 3.1.6.4 Approval of Changes to a Resource Outage Plan

(1) A Resource Entity should request approval as soon as practicable from ERCOT for all changes to a previously approved Resource Outage plan.

(2) A Resource Entity must request approval from ERCOT for all changes to a previously approved Resource Planned Outage.

(a) ERCOT shall approve requests for changes to Resource Planned Outages and Maintenance Outages, except that:

(i) ERCOT shall reject a Resource Outage plan change request if the proposed approval would cause the aggregate MW of Resource Outages to exceed the Maximum Daily Resource Planned Outage Capacity at any point during the duration of the proposed Resource Outage; and

(ii) ERCOT shall reject a Resource Outage plan change request if the proposed approval will impair ERCOT's ability to meet applicable reliability standards, taking into consideration all previously approved and accepted Outages.

(3) Following approval, where ERCOT determines that the Resource Outage plan is expected to result in a violation of an ERCOT reliability criterion or that may result in a cancellation of a Transmission Facilities Planned Outage, ERCOT may discuss such concerns with the Resource Entity or QSE in an attempt to reach a mutually agreeable resolution, including rescheduling the Outage in a manner agreeable to the Resource Entity. If the Transmission Facilities Planned Outage was submitted after the approval of the Resource Planned Outage, the Resource Entity is not required to reschedule the Resource Outage.

(4) When the scheduled work is complete, any Resource may return from a Planned Outage in accordance with Section 3.1.6.11, Outage Returning Early. ERCOT shall accept this change and, in the event that a Transmission Facilities Outage was scheduled concurrently with the affected Resource(s) Outage, ERCOT shall coordinate between the TSP and the Resource Entity to schedule a time mutually agreeable to both parties for the Resource to be On-Line. If mutual agreement cannot be reached, then ERCOT shall decide, considering expected impact on ERCOT System security, future Outage plans, and participants.

### 3.1.6.5 Evaluation of Proposed Resource Outage

(1) If a proposed Resource Outage, in conjunction with previously accepted Outages, would cause a violation of applicable reliability standards, ERCOT shall:

(a) Communicate with the requesting QSE as required under Section 3.1.6.8, Resource Outage Rejection Notice;

(b) Investigate possible Constraint Management Plans (CMPs) to resolve security violations, based upon security and reliability analysis results and strive to maximize transmission usage consistent with reliable operation; and

(c) Consider modifying the previous acceptance or approval of one or more Transmission Facilities or reliability Resource Outages, considering order of receipt and impact to the ERCOT System.

(2) If transmission security can be maintained using an alternative considered in items (1)(b) and (1)(c) above, then ERCOT may, in its judgment, direct the selected alternatives and approve the proposed Resource Outage.

(3) If ERCOT does not resolve transmission security issues by using the alternatives considered in items (1)(b) and (1)(c) above, then ERCOT shall reject the proposed Resource Outage.

### 3.1.6.6 Timelines for Response by ERCOT for Resource Planned Outages

(1) ERCOT shall approve or reject each request in accordance with the following table:

| **Amount of time between a request for approval of a Planned Outage and the scheduled start of the proposed Outage:** | **Maximum duration of a Planned Outage that may be approved with this lead time:** | **ERCOT shall approve or reject no later than:** |
|---|---|---|
| Three days | Seven days | ERCOT shall approve or reject by 1800 hours, two days before the start of the proposed Outage |
| Between four and eight days | Seven days | ERCOT shall approve or reject by 1800 hours, three days prior to the start of the proposed Outage |
| Between nine and 15 days | 15 days | ERCOT shall approve or reject four days before the start of the requested Outage |
| Between 16 and 45 days | 180 days | ERCOT shall approve or reject within five Business Days after submission |
| Greater than 45 days but less than 60 months | 180 days | ERCOT shall approve or reject within five Business Days after submission |
| Greater than 60 months | 180 days | ERCOT shall approve or reject within five Business Days once the Outage start dates are within the 60-month window |

(2) If circumstances prevent adherence to these timetables, ERCOT shall discuss the request status and reason for the delay of decision with the QSE and make reasonable attempts to mitigate the effect of the delay. Furthermore, in its sole discretion, ERCOT may approve Planned Outage durations that exceed the maximum durations prescribed in the table above.

(3) The maximum duration of Planned Outages does not apply for Resource Outages under a Notification of Suspension of Operations (NSO) pursuant to Section 3.14.1.1, Notification of Suspension of Operations.

### 3.1.6.7 Delay

(1) ERCOT may delay its approval or rejection of a proposed Planned Outage plan if the requesting Resource Entity has not submitted sufficient or complete information within the time frames set forth in this Section 3.1.6, Outages of Resources Other than Reliability Resources. Review periods for Planned Outage consideration do not commence until sufficient and complete information is submitted to ERCOT as described in Section 3.1.6.2, Resource Outage Plan.

### 3.1.6.8 Resource Outage Rejection Notice

(1) If ERCOT rejects a request for a Planned Outage, ERCOT shall provide the QSE a written or electronic rejection notice that includes:

(a) Specific reasons causing the rejection; or

(b) Possible remedies or Resource schedule revisions, if any, that might mitigate the basis for rejection.

(2) ERCOT may reject a Planned Outage of Resource facilities only:

(a) To protect the reliability or security of the ERCOT System;

(b) Due to insufficient information regarding the Outage;

(c) Due to failure to comply with submittal process requirements, as specified in these Protocols;

(d) To stay within the Maximum Daily Resource Planned Outage Capacity; or

(e) As specified elsewhere in these Protocols.

(3) When multiple proposed Planned Outages or Maintenance Outages cause a known capacity conflict, ERCOT shall:

(a) Communicate with each QSE to see if the QSE will adjust its proposed Planned Outage schedule;

(b) Determine if each QSE will agree to an alternative Outage schedule; or

(c) Reject, in ERCOT's sole discretion, one or more proposed Outages, considering order of receipt and impact to the ERCOT System.

### 3.1.6.9 Withdrawal of Approval and Rescheduling of Approved Planned Outages of Resource Facilities

(1) If ERCOT believes it cannot meet applicable reliability standards and has exercised all other reasonable options, and any actions taken pursuant to Section 3.1.4.6, Outage Coordination of Potential Transmission Emergency Conditions, have not resolved the situation, then ERCOT shall conduct a preliminary Outage Adjustment Evaluation (OAE) and issue an Advance Action Notice (AAN) pursuant to Section 6.5.9.3.1.1, Advance Action Notice.

(a) The AAN shall describe the reliability problem, the date and time that the possible Emergency Condition would begin, the date and time that the possible Emergency Condition would end, and a summary of the actions ERCOT believes it might take, including, if applicable, the amount of capacity it would seek from one or more OSAs based on the preliminary OAE. The AAN must state the earliest time at which ERCOT will issue OSAs, if an OSA is deemed necessary.

(b) ERCOT shall issue the AAN a minimum of 24 hours prior to issuing any OSA. Additionally, unless impracticable pursuant to paragraph (3)(f) below, OSAs should not be issued until eight Business Hours have elapsed following issuance of the AAN. ERCOT shall not issue an OSA under this Section unless it has first completed an updated OAE after these time periods have passed.

(c) Following the AAN, ERCOT may communicate with Market Participants about the reliability problem, however, ERCOT may not provide information about market conditions to a subset of Market Participants that is not generally available to all Market Participants.

(d) As conditions change, ERCOT shall, to the extent practicable, update the AAN in order to provide simultaneous notice to Market Participants.

(e) This section does not limit Transmission and/or Distribution Service Provider (TDSP) access to ERCOT data and communications.

(2) Before the time stated in the AAN when ERCOT will issue any OSAs, each QSE shall:

(a) Update its Resource COPs and the Outage Scheduler to the best of its ability to reflect any decisions to voluntarily delay or cancel any Outage so as to remove the Outage from updated OAE and OSA consideration;

(b) Notify ERCOT if a specific Resource cannot be considered for an OSA, for all or part of the period covered by the AAN, due to Resource reliability, compliance with contractual warranty obligations, or other reasons beyond the Resource's control; and

(c) Notify ERCOT of any Resource that is currently on Outage that the QSE agrees could be returned to service, upon receipt of an OSA, for all or part of the period covered by the AAN.

(3) If, after the earliest OSA issuance time has passed as noted in paragraph (1)(b) above, ERCOT continues to forecast an inability to meet applicable reliability standards after the updates to the Resource COPs and Outage Schedules, ERCOT may issue one or more OSAs.

(a) ERCOT may contact QSEs representing Resources for more information prior to conducting any updated OAE or issuing an OSA.

(b) ERCOT may not consider nuclear-powered Generation Resources for an OSA.

(c) ERCOT will not consider any Resource for an OSA if the Resource's QSE notified ERCOT prior to the earliest issuance time of any OSA stated in the AAN that the Resource cannot be considered for an OSA for the reasons specified in paragraph (2)(b) above.

(d) In order to determine which Outages to delay, ERCOT shall first consider the Outage duration, dividing the Outages in categories of zero to two days, two to four days, four to seven days, or more than seven days, then withdraw approval on a last in, first out basis within that duration category, so that shorter Outages are delayed first, and the timing of Outage submissions is considered within that category.

(e) After the earliest issuance time of the OSAs stated in the AAN, if the updated OAE shows that one or more OSAs is still necessary, ERCOT shall post a message to the ERCOT website stating that it will issue one or more OSAs and shall provide verbal notice to TSPs and QSEs via the Hotline. Subsequent to this notification, and for the entire period identified in the AAN, the QSE may not voluntarily modify the Resource's Outage, but is subject to the issuance of an OSA.

(f) ERCOT may only issue an OSA to the QSE for a Resource that has a Resource Outage in the Outage Scheduler during the timeframe of the forecasted Emergency Condition described above in this section.

(g) If the Resource Outage for which the OSA would be issued is scheduled to begin before eight Business Hours have elapsed following issuance of the AAN, ERCOT may issue the OSA prior to the beginning of the Resource Outage after the end of the 24-hour notice period.

(h) Following the receipt of an OSA, for the OSA Period:

(i) The QSE for the Resource may choose to show the Resource as OFF in the COP or may elect to leave the Resource On-Line due to equipment or reliability concerns or if the Resource Category is coal or lignite. If the QSE for the Resource intends to leave the Resource On-Line, it must communicate to the ERCOT control room the anticipated start and end time of the On-Line period. ERCOT will issue one or multiple RUC instructions to the QSE of the Resource for the anticipated On-Line period

within the OSA Period for each Operating Day. While On-Line, the Resource must utilize a status of ONRUC and cannot opt out of RUC Settlement;

(ii) If the Resource remains On-Line pursuant to paragraph (i) above, it must remain at Low Sustained Limit (LSL) unless deployed above LSL by Security-Constrained Economic Dispatch (SCED);

(iii) If the Resource has a COP Resource Status of OFF at any point during the OSA Period, and ERCOT requires the Resource to be On-Line, or if ERCOT requires a Resource with a planned derate to maintain its capacity, ERCOT will issue a RUC instruction to the Resource's QSE for the required commitment period. While On-Line, the Resource must utilize a status of ONRUC and cannot opt out of RUC Settlement;

(iv) The QSE must update the Resource's Energy Offer Curve to $4,500/MWh for all MW levels from 0 MW to the HSL when the High System-Wide Offer Cap (HCAP) is in effect. If the Low-System Wide Offer Cap (LCAP) is in effect, the QSE must update the Resource's Energy Offer Curve equal to LCAP for all MW levels from 0 MW to HSL; and

***[NPRR930: Replace paragraph (iv) above with the following upon system implementation:]***

(iv) ERCOT shall create proxy Energy Offer Curves for the Resource under paragraph (4)(d)(iii) of Section 6.5.7.3, Security Constrained Economic Dispatch; and

(v) The QSE for the Resource cannot submit a Three Part Supply Offer into the Day-Ahead Market (DAM) for any Operating Day during the OSA Period.

(4) ERCOT shall work in good faith with the QSEs to reschedule any delayed or canceled Outages resulting from an AAN under paragraph (1) above, regardless of whether the Resource took voluntary actions or received an OSA. The Outage must be rescheduled so that it is completed within 120 days of the end of the OSA Period. ERCOT, in its sole discretion, may approve any Outage that is rescheduled due to an AAN or OSA even if it would cause the aggregate MW of approved Resource Outages to exceed the Maximum Daily Resource Planned Outage Capacity.

(a) If ERCOT issues an OSA, the QSE may submit a new request for approval of the Planned Outage schedule, however the new Outage may not begin prior to the end time of the OSA Period.

(b) If a transmission Outage was scheduled in coordination with a Resource Outage that is delayed, ERCOT shall also delay that transmission Outage when necessary.

(5) If insufficient capacity to meet the need described in the AAN is made available through the processes described in paragraphs (2) and (3) above, ERCOT may contact QSEs with Resources that are currently on Outage in the Outage Scheduler and that the QSE has agreed could be returned to service upon receipt of an OSA. ERCOT may issue an OSA to the QSE for any Resource that the QSE agrees can feasibly be returned to service during the period of the possible Emergency Condition described in the AAN.

(6) If system conditions change such that the need described in the AAN increases, ERCOT shall update the AAN and may repeat the process described in this section. For any subsequent iterations of this process, ERCOT shall issue the updated AAN with as much lead time as is practical prior to starting any subsequent OAE, but with a minimum of two hours' notice.

(7) The preliminary OAE may not assume total renewable production lower than the sum of the selected Wind-powered Generation Resource Production Potential (WGRPP) and PhotoVoltaic Generation Resource Production Potential (PVGRPP) forecasts for each hour less any reasonably expected severe weather impacts. The available capacity in ERCOT's planning assessment must include targeted reserve levels and include forecasted capacity available through DC Tie imports or curtailment of DC Tie exports, forecasted capacity provided from Settlement Only Distributed Generators (SODGs) and Settlement Only Transmission Generators (SOTGs), and forecasted capacity from price-responsive Demand based on information reported to ERCOT in accordance with Section 3.10.7.2.1, Reporting of Demand Response. ERCOT must post the following inputs to the preliminary OAE to the ERCOT website within an hour of issuing an AAN, including but not limited to:

(a) The Load forecast;

(b) Load forecast vendor selection;

(c) Wind forecast;

(d) Wind forecast vendor selection;

(e) Solar forecast;

(f) Solar forecast vendor selection;

(g) Expected severe weather impacts forecast;

(h) Targeted reserve levels;

(i) DC Tie import forecast;

(j) DC Tie export curtailment forecast;

(k) SODG and SOTG forecasts;

(l) The forecast of capacity provided by price-responsive Demand;

(m) Any aggregate derating of Resource(s) and/or Forced Outage assumptions in total MWs; and

(n) Any aggregate fuel derating assumptions in total MWs.

***[NPRR995: Replace paragraph (7) above with the following upon system implementation:]***

(7) The preliminary OAE may not assume total renewable production lower than the sum of the selected Wind-powered Generation Resource Production Potential (WGRPP) and PhotoVoltaic Generation Resource Production Potential (PVGRPP) forecasts for each hour less any reasonably expected severe weather impacts. The available capacity in ERCOT's preliminary OAE must include targeted reserve levels and include forecasted capacity available through DC Tie imports or curtailment of DC Tie exports, forecasted capacity provided from Settlement Only Distributed Generators (SODGs), Settlement Only Transmission Generators (SOTGs), Settlement Only Distribution Energy Storage Systems (SODESSs), and Settlement Only Transmission Energy Storage Systems (SOTESSs), and forecasted capacity from price-responsive Demand based on information reported to ERCOT in accordance with Section 3.10.7.2.1, Reporting of Demand Response. ERCOT must post the following inputs to the preliminary OAE to the ERCOT website within an hour of issuing an AAN, including but not limited to:

(a) The Load forecast;

(b) Load forecast vendor selection;

(c) Wind forecast;

(d) Wind forecast vendor selection;

(e) Solar forecast;

(f) Solar forecast vendor selection;

(g) Expected severe weather impacts forecast;

(h) Targeted reserve levels;

(i) DC Tie import forecast;

(j) DC Tie export curtailment forecast;

(k) SODG, SOTG, SODESS, and SOTESS forecasts;

(l) The forecast of capacity provided by price-responsive Demand;

(m) Any aggregate derating of Resource(s) and/or Forced Outage assumptions in total MWs; and

(n) Any aggregate fuel derating assumptions in total MWs.

(8) Notwithstanding anything in this Section, ERCOT need not comply with any other requirement in this Section if the occurrence of an unforeseen Real-Time condition requires that ERCOT withdraw approval of one or more Resource Outages in order to meet applicable reliability standards. The unforeseen Real-Time condition cannot be the result of changes that Ancillary Services are procured to address. In exercising its discretion under this paragraph, ERCOT is not required to issue an AAN or OAE before issuing an OSA, but shall:

(a) Issue the OSA to the QSE of the Resource for the purpose of make whole compensation; and

(b) Present the justification for the out of market action to the Technical Advisory Committee (TAC) at its next meeting that is at least 14 Business Days after the OSA.

### 3.1.6.10 Opportunity Outage

(1) Opportunity Outages for Resources are a special category of Planned Outages that may be approved by ERCOT when a specific Resource has been forced Off-Line due to a Forced Outage and the Resource has been previously approved for a Planned Outage during the next two days.

(2) When a Forced Outage occurs on a Resource that has an approved Outage scheduled within the following two days, the Resource may remain Off-Line and start the approved Outage earlier than scheduled. The QSE must give as much notice as practicable to ERCOT.

(3) Opportunity Outages of Transmission Facilities may be approved by ERCOT when a specific Resource is Off-Line due to a Forced, Planned or Maintenance Outage. A TSP may request an Opportunity Outage at any time.

(4) When an Outage occurs on a Resource that has an approved Transmission Facilities Opportunity Outage request on file, the TSP may start the approved Outage as soon as practical after receiving authorization to proceed by ERCOT. ERCOT must give as much notice as practicable to the TSP.

### 3.1.6.11 Outage Returning Early

(1) A Resource that completes a Planned Outage early and wants to resume operation shall notify ERCOT of the early return prior to resuming service by making appropriate entries

in the COP or Outage Scheduler if applicable as much in advance as practicable, but not later than at least two hours prior to beginning startup. Within two hours of receiving such request, ERCOT shall either:

(a) Approve the request unless, as a result of complying with the request, ERCOT cannot maintain system reliability or security with the Resource injection. In such a case, ERCOT shall issue a Verbal Dispatch Instruction (VDI) to the Resource's QSE to stay Off-Line; or

(b) Coordinate between the TSP and Resource Entity to schedule a time agreeable to both parties for the Resource to be Off-Line in the event if that a Transmission Facilities Outage requires the affected Resource to be Off-Line. If mutual agreement is not reached, then ERCOT shall decide on the appropriate time, after considering expected impacts on system security, future Outage plans, and participants and issue a VDI to the Resource's QSE to stay Off-Line.

(2) Before an early return from an Outage, a Resource Entity or QSE may inquire of ERCOT whether the Resource is expected to be decommitted by ERCOT upon its early return. If a Resource Entity or QSE is notified by ERCOT that the Resource will be decommitted if it returns early and the Resource Entity or QSE starts the Resource within the previously accepted or approved Outage period, then the QSE representing the Resource will not be paid any decommitment compensation as otherwise would be provided for in Section 5.7, Settlement for RUC Process.

### 3.1.6.12 Resource Coming On-Line

(1) Before start-up and synchronizing On-Line, a Resource Entity or QSE may inquire of ERCOT whether the Resource is expected to be decommitted by ERCOT upon its coming On-Line. If a Resource Entity or QSE is notified by ERCOT that the Resource will be decommitted if the Resource comes On-Line and the Resource Entity or QSE starts the Resource, then the QSE representing the Resource will not be paid any decommitment compensation as otherwise would be provided for in Section 5.7.3, Payment When ERCOT Decommits a QSE-Committed Resource.

### 3.1.6.13 Maximum Daily Resource Planned Outage Capacity

(1) ERCOT shall calculate a maximum capacity of Resource Planned Outages, excluding Outages of nuclear-powered generation facilities and Outages of QFs that are subject to the exemption in paragraph (7) of Section 3.1.6, Outages of Resources Other than Reliability Resources, that should be allowed on each day of the next 60 months.

(a) For days more than seven days ahead of the Operating Day, the calculation of this Maximum Daily Resource Planned Outage Capacity will be based on seasonal assumptions, planned Resources that have met the criteria in Planning Guide Section 6.9, Addition of Proposed Generation to the Planning Models, Planned Outages of nuclear Generation Resources, Planned Outages of QFs that are

subject to the exemption in paragraph (7) of Section 3.1.6, and the long-term Load forecast. ERCOT shall update the calculation of the Maximum Daily Resource Planned Outage Capacity for the next 60 months twice per month.

(b) For days that are seven days or less prior to the Operating Day, the calculation of this Maximum Daily Resource Planned Outage Capacity will be based on the inputs used for the planning assessment for an OAE described in Section 3.1.6.9, Withdrawal of Approval and Rescheduling of Approved Planned Outages of Resource Facilities. ERCOT shall update the calculation of the Maximum Daily Resource Planned Outage Capacity for each hour of the next seven days on a rolling daily basis.

(c) ERCOT shall post the Maximum Daily Resource Planned Outage Capacity and aggregate MW of approved Resource Planned Outages at least twice per day on the ERCOT website for each day of the next 60 months.

(d) ERCOT shall post the Maximum Daily Resource Planned Outage Capacity and aggregate MW of approved Resource Planned Outages hourly on the ERCOT website for each hour of the next seven days.

(2) ERCOT may adjust the Maximum Daily Resource Planned Outage Capacity if, at any point in time, the actual aggregate Forced Outages and Maintenance Outages exceed the amount that is used in the assessment of the Maximum Daily Resource Planned Outage Capacity.

(3) ERCOT shall post on the ERCOT website the methodology it uses to calculate the Maximum Daily Resource Planned Outage Capacity in accordance with the parameters established by paragraphs (1) and (2) above. The methodology and any revisions thereto shall be approved by the ERCOT Board of Directors. ERCOT shall issue a Market Notice describing any revision and the justification for such revision and shall provide at least 14 days for stakeholder comment on the proposed revision unless ERCOT determines that, due to an actual or anticipated Emergency Condition, a shorter comment period is warranted. Upon adopting a change to the methodology, ERCOT shall post the revised methodology on the ERCOT website and issue a Market Notice announcing the posting.

### 3.1.6.14 Distribution Facility Outages Impacting Distribution Generation Resources and Distribution Energy Storage Resources

(1) A Distribution Service Provider (DSP) must notify the party designated by the Distribution Generation Resource (DGR) or Distribution Energy Storage Resource (DESR) (Resource Entity or QSE) if the DSP plans to take an outage on any distribution facility that will impact the operation of a DGR or DESR. The Resource Entity for the DGR or DESR shall submit a Planned or Maintenance Resource Outage, as appropriate, to reflect the unavailability of the Resource due to the DSP outage. ERCOT may not reject a DGR or DESR Outage taken due to a DSP system outage, nor may ERCOT

require the DSP to reschedule the outage. However, ERCOT may consult with the DSP about rescheduling the outage.

### *3.1.7 Reliability Resource Outages*

(1) ERCOT shall evaluate requests for approval of an Outage of a Reliability Resource to determine if any one or a combination of proposed Outages may cause ERCOT to violate applicable reliability standards or exceed the Maximum Daily Resource Planned Outage Capacity. ERCOT's evaluations shall take into consideration factors including the following:

(a) Load forecast;

(b) All other known Outages; and

(c) Potential for the proposed Outages to cause irresolvable transmission overloads or voltage supply concerns based on the indications from contingency analysis software.

#### 3.1.7.1 Timelines for Response by ERCOT on Reliability Resource Outages

(1) ERCOT shall approve requests for Planned Outages of Reliability Resources unless, in ERCOT's determination, the requested Planned Outage would cause ERCOT to violate applicable reliability standards or exceed the Maximum Daily Resource Planned Outage Capacity. ERCOT shall approve or reject each request in accordance with the following table:

| **Amount of time between a Request for approval of a proposed Planned Outage and the scheduled start date of the proposed Outage:** | **ERCOT shall approve or reject no later than:** |
|---|---|
| No less than 30 days | Five Business Days after submission |
| Greater than 45 days | Five Business Days after submission |

(2) ERCOT shall approve requests for Outages, other than Forced Outages or Level I Maintenance Outages, of Reliability Resources unless, in ERCOT's determination, the requested Outage would cause ERCOT to violate applicable reliability standards or exceed the Maximum Daily Resource Planned Outage Capacity. ERCOT shall approve or reject Maintenance Outages on Reliability Resources as follows:

| **Amount of time between a Request for approval of a proposed Outage and the scheduled start date of the proposed Outage:** | **ERCOT shall approve or reject no later than:** |
|---|---|
| Between three and eight days | 0000 hours, two days before the start of the proposed Outage |
| Between nine and 30 days | Four days before the start of the proposed Outage |

(3) ERCOT shall not be deemed to have approved the Outage request associated with the Planned Outage until ERCOT notifies the Single Point of Contact of its approval. ERCOT shall transmit approvals electronically.

(4) ERCOT, at its sole discretion, may relax the submission timing requirements in this Section.

#### 3.1.7.2 Changes to an Approved Reliability Resource Outage Plan

(1) Once ERCOT has approved a Reliability Resource Planned Outage, the Resource Entity for the Reliability Resource may submit to ERCOT a change request by entering the change in the Outage Scheduler no later than 30 days before the scheduled start date of the approved Outage. ERCOT shall approve or reject the proposed change within 15 days of receiving the change request form. ERCOT may, at its discretion, relax the 30 day Notice requirement.

### *3.1.8 High Impact Transmission Element (HITE) Identification*

(1) ERCOT, with input from Market Participants, shall develop a list of HITEs for review and approval at least annually by the TAC.

## 3.2 Analysis of Resource Adequacy

### *3.2.1 Calculation of Aggregate Resource Capacity*

(1) ERCOT shall use Outages in the Outage Scheduler and, when applicable, the Resource Status from the Current Operating Plan (COP) to calculate the aggregate capacity from Generation Resources and Load Resources projected to be available in the ERCOT Region and in Forecast Zones in ERCOT. "Forecast Zones" have the same boundaries as the 2003 ERCOT Congestion Management Zones (CMZs). Each Resource will be mapped to a Forecast Zone during the registration process.

***[NPRR1014 and NPRR1029: Replace applicable portions of paragraph (1) above with the following upon system implementation:]***

(1) ERCOT shall use Outages in the Outage Scheduler and, when applicable, the Resource Status from the Current Operating Plan (COP) to calculate the aggregate capacity from Generation Resources, Energy Storage Resources (ESRs), and Load Resources projected to be available in the ERCOT Region and in Forecast Zones in ERCOT. "Forecast Zones" have the same boundaries as the 2003 ERCOT Congestion Management Zones (CMZs). Each Resource will be mapped to a Forecast Zone during the registration process.

(2) On a rolling hourly basis, ERCOT shall calculate the aggregate hourly Generation Resource capacity and Load Resource capacity in the ERCOT Region and Forecast Zones projected to be available during each hour for the following seven days.

***[NPRR1014 and NPRR1029: Replace applicable portions of paragraph (2) above with the following upon system implementation:]***

(2) On a rolling hourly basis, ERCOT shall calculate the aggregate hourly Generation Resource capacity, ESR capacity, and Load Resource capacity in the ERCOT Region and Forecast Zones projected to be available during each hour for the following seven days.

(3) Projections of Generation Resource capacity from Intermittent Renewable Resources (IRRs) shall be consistent with capacity availability estimates, such as the effective Load carrying capability of wind, developed jointly between ERCOT and the appropriate Technical Advisory Committee (TAC) subcommittee and approved by the ERCOT Board or typical production expectations consistent with expected wind profiles as appropriate for the scenario being studied.

***[NPRR1029: Replace paragraph (3) above with the following upon system implementation:]***

(3) Projections of generation capacity from Intermittent Renewable Resources (IRRs) and the intermittent renewable generation components of DC-Coupled Resources shall be consistent with capacity availability estimates, such as the effective Load carrying capability of wind, developed jointly between ERCOT and the appropriate Technical Advisory Committee (TAC) subcommittee and approved by the ERCOT Board or typical production expectations consistent with expected wind profiles as appropriate for the scenario being studied.

(4) ERCOT shall publish procedures describing the IRR forecasting process on the ERCOT website.

### *3.2.2 Demand Forecasts*

(1) Monthly, ERCOT shall develop the weekly peak hour Demand forecast for the ERCOT Region and for the Forecast Zones based on the 36-Month Load Forecast as described in Section 3.12, Load Forecasting, for the following 36 months, starting with the second week. During the development of this forecast, ERCOT may consult with Qualified Scheduling Entities (QSEs), Transmission Service Providers (TSPs), and other Market Participants that may have knowledge of potential Load growth.

(2) ERCOT may, at its discretion, publish on the MIS Secure Area, additional peak Demand analyses for periods beyond 36 months.

(3) ERCOT shall develop and publish hourly on the ERCOT website, peak Demand forecasts by Forecast Zone for each hour of the next seven days using the Seven-Day Load Forecast as described in Section 3.12.

(4) For purposes of Demand forecasting, ERCOT may choose to use the same forecast as that used for the Load forecast.

(5) ERCOT shall publish procedures describing the forecasting process on the ERCOT website.

### *3.2.3 Short-Term System Adequacy Reports*

(1) ERCOT shall generate and post short-term adequacy reports on the ERCOT website. ERCOT shall update these reports hourly following updates to the Seven-Day Load Forecast, except where noted otherwise. The short-term adequacy reports will provide:

(a) For Generation Resources, the available On-Line Resource capacity for each hour, aggregated by Forecast Zone, using the COP for the first seven days and considering Resources with a COP Resource Status listed in paragraph (5)(b)(i) of Section 3.9.1, Current Operating Plan (COP) Criteria;

(b) The total system-wide capacity of Resource Outages as reflected in the Outage Scheduler that are accepted or approved. The Resource Outage capacity amount shall be based from each Resource's current Seasonal High Sustained Limit (HSL) and posted each hour for the top of each Operating Hour for the next 168 hours. This posted information will exclude specific Resource information and Outages related to Mothballed or Decommissioned Generation Resources, and will be aggregated on a Forecast Zone basis in three categories:

(i) IRRs with an Outage Scheduler nature of work other than "New Equipment Energization";

(ii) Other Resources with an Outage Scheduler nature of work other than "New Equipment Energization"; and

(iii) Resources with an Outage Scheduler nature of work "New Equipment Energization";

(c) For Load Resources, the available capacity for each hour aggregated by Forecast Zone, using the COP for the first seven days and considering Resources with a COP Resource Status of ONRGL, ONCLR, or ONRL;

(d) Forecast Demand for each hour described in Section 3.2.2, Demand Forecasts;

(e) For Generation Resources, the available Off-Line Resource capacity that can be started for each hour, aggregated by Forecast Zone, using the COP for the first

seven days and considering Resources with a COP Resource Status of OFF or OFFNS and temporal constraints; and

(f) Following each Hourly Reliability Unit Commitment (HRUC), the available On-Line capacity from Generation Resources, aggregated by Forecast Zone, based on Real-Time telemetry, for which the COP Resource Status is OFF, OUT, or EMR for all hours within the HRUC Study Period. The available On-Line capacity will consider those Resources with a Real-Time Resource Status listed in paragraph (5)(b)(i) of Section 3.9.1 excluding SHUTDOWN.

(g) The available capacity for each hour for the next seven days. For day one, and for day two following the execution of the Day-Ahead Reliability Unit Commitment (DRUC) on day one, the available capacity will be the sum of the values calculated in paragraphs (a) and (e) above, except that for IRRs the forecasted output will be used instead of COP values, and Direct Current Tie (DC Tie) exports will be subtracted. For the remaining hours of the seven days, the available capacity will be calculated as the sum of the Seasonal HSLs for non-IRR Generation Resources including seasonal Private Use Network capacity and the forecasted output for IRRs minus the total capacity of accepted or approved Resource Outages.

(h) The available capacity for reserves for each hour, which will be the available capacity calculated in paragraph (g) above minus the forecasted Demand for that hour.

***[NPRR962, NPRR1007, and NPRR1029: Replace applicable portions of Section 3.2.3 above with the following upon system implementation for NPRR962 or NPRR1029; or upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007:]***

### *3.2.3 Short-Term System Adequacy Reports*

(1) ERCOT shall generate and post short-term adequacy reports on the ERCOT website. ERCOT shall update these reports hourly following updates to the Seven-Day Load Forecast, except where noted otherwise. The short-term adequacy reports will provide:

(a) For Generation Resources, the available On-Line Resource capacity for each hour, aggregated by Forecast Zone, using the COP for the first seven days and considering Resources with a COP Resource Status listed in paragraph (5)(b)(i) of Section 3.9.1, Current Operating Plan (COP) Criteria;

(b) The total system-wide capacity of Resource Outages as reflected in the Outage Scheduler that are accepted or approved. The Resource Outage capacity amount shall be based from each Resource's current Seasonal High Sustained Limit (HSL) and posted each hour for the top of each Operating Hour for the next 168 hours. This posted information will exclude specific Resource

information and Outages related to Mothballed or Decommissioned Generation Resources, and will be aggregated on a Forecast Zone basis in three categories:

(i) IRRs and the intermittent renewable generation component of each DC-Coupled Resource with an Outage Scheduler nature of work other than "New Equipment Energization";

(ii) Other Resources with an Outage Scheduler nature of work other than "New Equipment Energization"; and

(iii) Resources with an Outage Scheduler nature of work "New Equipment Energization";

(c) For Load Resources, the available capacity for each hour aggregated by Forecast Zone, using the COP for the first seven days and considering Resources with a COP Resource Status of ONL;

(d) The total capability of Resources available to provide the following Ancillary Service combinations, using COPs submitted by QSEs for the first seven days and capped by the COP limits for individual Resources. A Resource's capability shall only be included in the sums below if the Resource Status allows the Resource to provide at least one of the Ancillary Services within the sum:

(i) Capacity to provide Reg-Up, irrespective of whether it is capable of providing any other Ancillary Service;

(ii) Capacity to provide RRS, irrespective of whether it is capable of providing any other Ancillary Service;

(iii) Capacity to provide ECRS, irrespective of whether it is capable of providing any other Ancillary Service;

(iv) Capacity to provide Non-Spin, irrespective of whether it is capable of providing any other Ancillary Service;

(v) Capacity to provide Reg-Up, RRS, or both, irrespective of whether it is capable of providing ECRS or Non-Spin;

(vi) Capacity to provide Reg-Up, RRS, ECRS, or any combination, irrespective of whether it is capable of providing Non-Spin;

(vii) Capacity to provide Reg-Up, RRS, ECRS, Non-Spin, or any combination; and

(viii) Capacity to provide Reg-Down;

(e) Forecast Demand for each hour described in Section 3.2.2, Demand Forecasts;

(f) For Generation Resources, the available Off-Line Resource capacity that can be started for each hour, aggregated by Forecast Zone, using the COP for the first seven days and considering Resources with a COP Resource Status of OFF and temporal constraints; and

(g) Following each Hourly Reliability Unit Commitment (HRUC), the available On-Line capacity from Generation Resources, aggregated by Forecast Zone, based on Real-Time telemetry, for which the COP Resource Status is OFF, OUT, or EMR for all hours within the HRUC Study Period. The available On-Line capacity will consider those Resources with a Real-Time Resource Status listed in paragraph (5)(b)(i) of Section 3.9.1 excluding SHUTDOWN.

(h) For each Direct Current Tie (DC Tie), the sum of any ERCOT-approved DC Tie Schedules for each 15-minute interval for the first seven days. The sum shall be displayed as an absolute value and classified as a net import or net export.

(i) The available capacity for each hour for the next seven days. For day one, and for day two following the execution of the Day-Ahead Reliability Unit Commitment (DRUC) on day one, the available capacity will be the sum of the values calculated in paragraphs (a) and (f) above, except that for IRRs the forecasted output will be used instead of COP values, and DC Tie exports will be subtracted. For the remaining hours of the seven days, the available capacity will be calculated as the sum of the Seasonal HSLs for non-IRR Generation Resources including seasonal Private Use Network capacity and the forecasted output for IRRs minus the total capacity of accepted or approved Resource Outages.

(j) The available capacity for reserves for each hour, which will be the available capacity calculated in paragraph (i) above minus the forecasted Demand for that hour.

### *3.2.4 [RESERVED]*

### *3.2.5 Publication of Resource and Load Information*

(1) Two days after the applicable Operating Day, ERCOT shall post on the ERCOT website for the ERCOT System and, if applicable, for each Disclosure Area, the information derived from the first complete execution of Security-Constrained Economic Dispatch (SCED) in each 15-minute Settlement Interval. The Disclosure Area is the 2003 ERCOT CMZs. Posting requirements will be applicable to Generation Resources and Controllable Load Resources physically located in the defined Disclosure Area. This information shall not be posted if the posting of the information would reveal any

individual Market Participant's Protected Information. The information posted by ERCOT shall include:

***[NPRR1007 and NPRR1014: Replace applicable portions of paragraph (1) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014:]***

(1) Two days after the applicable Operating Day, ERCOT shall post on the ERCOT website for the ERCOT System and, if applicable, for each Disclosure Area, the information derived from each execution of SCED. The Disclosure Area is the 2003 ERCOT CMZs. Posting requirements will be applicable to Generation Resources, ESRs, and Controllable Load Resources physically located in the defined Disclosure Area. This information shall not be posted if the posting of the information would reveal any individual Market Participant's Protected Information. The information posted by ERCOT shall include:

(a) An aggregate energy supply curve based on non-IRR Generation Resources with Energy Offer Curves that are available to SCED. The energy supply curves will be calculated beginning at the sum of the Low Sustained Limits (LSLs) and ending at the sum of the HSLs for non-IRR Generation Resources with Energy Offer Curves, with the dispatch for each Generation Resource constrained between the Generation Resource's LSL and HSL. The result will represent the ERCOT System energy supply curve economic dispatch of the non-IRR Generation Resources with Energy Offer Curves at various pricing points, not taking into consideration any physical limitations of the ERCOT System;

(b) An aggregate energy supply curve based on Wind-powered Generation Resources (WGRs) with Energy Offer Curves that are available to SCED. The energy supply curves will be calculated beginning at the sum of the LSLs and ending at the sum of the HSLs for WGRs with Energy Offer Curves, with the dispatch for each WGR constrained between the WGR's LSL and HSL. The result will represent the ERCOT System energy supply curve economic dispatch of the WGRs with Energy Offer Curves at various pricing points, not taking into consideration any physical limitations of the ERCOT System;

(c) An aggregate energy supply curve based on PhotoVoltaic Generation Resources (PVGRs) with Energy Offer Curves that are available to SCED. The energy supply curves will be calculated beginning at the sum of the LSLs and ending at the sum of the HSLs for PVGRs with Energy Offer Curves, with the dispatch for each PVGR constrained between the PVGR's LSL and HSL. The result will represent the ERCOT System energy supply curve economic dispatch of the PVGRs with Energy Offer Curves at various pricing points, not taking into consideration any physical limitations of the ERCOT System;

***[NPRR1014: Insert paragraph (d) below upon system implementation and renumber accordingly:]***

(d) An aggregated energy supply and demand curve based on Energy Bid/Offer Curves that are available to SCED. The curves will be calculated beginning at the sum of the LSLs and ending at the sum of the HSLs for the Energy Bid/Offer Curves, with the dispatch for each Resource constrained between the Resource's LSL and HSL. The result will represent the ERCOT System energy supply and demand curve economic dispatch of the ESRs with Energy Bid/Offer Curves at various pricing points, not taking into consideration any physical limitations of the ERCOT System;

(d) The sum of LSLs, sum of Output Schedules, and sum of HSLs for Generation Resources without Energy Offer Curves;

***[NPRR1014: Replace paragraph (d) above with the following upon system implementation:]***

(e) The sum of LSLs, sum of Output Schedules, and sum of HSLs for Generation Resources without Energy Offer Curves and ESRs without Energy Bid/Offer Curves;

(e) The sum of the Base Points, High Ancillary Service Limit (HASL) and Low Ancillary Service Limit (LASL) of non-IRR Generation Resources with Energy Offer Curves, sum of the Base Points, HASL and LASL of WGRs with Energy Offer Curves, sum of the Base Points, HASL and LASL of PVGRs with Energy Offer Curves, and the sum of the Base Points, HASL and LASL of all remaining Generation Resources dispatched in SCED;

***[NPRR1007 and NPRR1014: Replace applicable portions of paragraph (e) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014:]***

(f) The sum of the Base Points of non-IRR Generation Resources with Energy Offer Curves, sum of the Base Points of WGRs with Energy Offer Curves, sum of the Base Points of PVGRs with Energy Offer Curves, sum of the Base Points of ESRs with Energy Bid/Offer Curves, and the sum of the Base Points of all remaining Resources dispatched in SCED;

(f) The sum of the telemetered Generation Resource net output used in SCED; and

(g) An aggregate energy Demand curve based on the Real-Time Market (RTM) Energy Bid curves available to SCED. The energy Demand curve will be calculated beginning at the sum of the Low Power Consumptions (LPCs) and

ending at the sum of the Maximum Power Consumptions (MPCs) for Controllable Load Resources with RTM Energy Bids, with the dispatch for each Controllable Load Resource constrained between the Controllable Load Resource's LPC and MPC. The result will represent the ERCOT System Demand response capability available to SCED of the Controllable Load Resources with RTM Energy Bids at various pricing points, not taking into consideration any physical limitations of the ERCOT System.

***[NPRR1014: Replace paragraph (g) above with the following upon system implementation:]***

(h) An aggregate energy Demand curve based on the Real-Time Market (RTM) Energy Bid curves available to SCED. The energy Demand curve will be calculated beginning at the sum of the Low Power Consumptions (LPCs) and ending at the sum of the Maximum Power Consumptions (MPCs), with the dispatch for each Controllable Load Resource constrained between the Controllable Load Resource's LPC and MPC. The result will represent the ERCOT System Demand response capability available to SCED of the Controllable Load Resources with RTM Energy Bids at various pricing points, not taking into consideration any physical limitations of the ERCOT System;

***[NPRR1007 and NPRR1014: Insert applicable portions of paragraphs (i)-(k) below upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014:]***

(i) The aggregate Ancillary Service Offers (prices and quantities) in the RTM, for each type of Ancillary Service. For Responsive Reserve (RRS) and ERCOT Contingency Reserve Service (ECRS), ERCOT shall separately post aggregated offers from Generation Resources, Energy Storage Resources (ESRs), Controllable Load Resources, and Load Resources other than Controllable Load Resources. Linked Ancillary Service Offers will be included as non-linked Ancillary Service Offers;

(j) The sum of the Base Points of ESRs in discharge mode; and

(k) The sum of the Base Points of ESRs in charge mode.

(2) Two days after the applicable Operating Day, ERCOT shall post on the ERCOT website for the ERCOT System the following information derived from the first complete execution of SCED in each 15-minute Settlement Interval:

***[NPRR1007 and NPRR1014: Replace applicable portions of paragraph (2) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014:]***

(2) Two days after the applicable Operating Day, ERCOT shall post on the ERCOT website for the ERCOT System the following information derived from each execution of SCED:

(a) Each telemetered Dynamically Scheduled Resource (DSR) Load, and the telemetered DSR net output(s) associated with each DSR Load; and

***[NPRR1000: Delete paragraph (a) above upon system implementation and renumber accordingly.]***

(b) The actual ERCOT Load as determined by subtracting the DC Tie Resource actual telemetry from the sum of the telemetered Generation Resource net output as used in SCED.

(3) Two days after the applicable Operating Day, ERCOT shall post on the ERCOT website the following information for the ERCOT System and, if applicable, for each Disclosure Area from the Day-Ahead Market (DAM) for each hourly Settlement Interval:

(a) An aggregate energy supply curve based on all energy offers that are available to the DAM, not taking into consideration Resource Startup Offer or Minimum-Energy Offer or any physical limitations of the ERCOT System. The result will represent the energy supply curve at various pricing points for energy offers available in the DAM;

(b) Aggregate minimum energy supply curves based on all Minimum-Energy Offers that are available to the DAM;

(c) An aggregate energy Demand curve based on the DAM Energy Bid curves available to the DAM, not taking into consideration any physical limitations of the ERCOT System;

(d) The aggregate amount of cleared energy bids and offers including cleared Minimum-Energy Offer quantities;

(e) The aggregate Ancillary Service Offers (prices and quantities) in the DAM, for each type of Ancillary Service regardless of a Resource's On-Line or Off-Line status. For Responsive Reserve (RRS), ERCOT shall separately post aggregated offers from Resources providing Primary Frequency Response, Fast Frequency Response (FFR), and Load Resources controlled by high-set under-frequency relays. For ERCOT Contingency Reserve Service (ECRS), ERCOT shall separately post aggregated offers from Resources that are SCED-dispatchable and

those that are manually dispatched. Linked Ancillary Service Offers will be included as non-linked Ancillary Service Offers;

(f) The aggregate Self-Arranged Ancillary Service Quantity, for each type of service, by hour. For RRS, ERCOT shall separately post aggregated Self-Arranged Ancillary Service Quantities from Resources providing Primary Frequency Response, FFR, and Load Resources controlled by high-set under-frequency relays. For ECRS, ERCOT shall separately post aggregated Self-Arranged Ancillary Service Quantities from Resources that are SCED-dispatchable and those that are manually dispatched;

(g) The aggregate amount of cleared Ancillary Service Offers. For RRS, ERCOT shall separately post aggregated Ancillary Service Offers from Resources providing Primary Frequency Response, FFR, and Load Resources controlled by high-set under-frequency relays. For ECRS, ERCOT shall separately post aggregated Ancillary Service Offers from Resources that are SCED-dispatchable and those that are manually dispatched; and

(h) The aggregate Point-to-Point (PTP) Obligation bids (not-to-exceed price and quantities) for the ERCOT System and the aggregate PTP Obligation bids that sink in the Disclosure Area for each Disclosure Area.

***[NPRR1007 and NPRR1014: Replace applicable portions of paragraph (3) above with the following upon system implementation for NPRR1014; or upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007:]***

(3) Two days after the applicable Operating Day, ERCOT shall post on the ERCOT website the following information for the ERCOT System and, if applicable, for each Disclosure Area from the DAM for each hourly Settlement Interval:

(a) An aggregate energy supply curve based on all energy offers that are available to the DAM, including the offer portion of Energy Bid/Offer Curves submitted for ESRs, not taking into consideration Resource Startup Offer or Minimum-Energy Offer or any physical limitations of the ERCOT System. The result will represent the energy supply curve at various pricing points for energy offers available in the DAM;

(b) Aggregate minimum energy supply curves based on all Minimum-Energy Offers that are available to the DAM;

(c) An aggregate energy Demand curve based on the DAM Energy Bid curves and including the bid portion of Energy Bid/Offer Curves available to the DAM, not taking into consideration any physical limitations of the ERCOT System;

(d) The aggregate amount of cleared energy bids and offers including cleared Minimum-Energy Offer quantities;

(e) The aggregate Ancillary Service Offers (prices and quantities) in the DAM, for each type of Ancillary Service regardless of a Resource's On-Line or Off-Line status and including Ancillary Service Only Offers. For RRS, ERCOT shall separately post aggregated offers from Resources providing Primary Frequency Response (including Ancillary Service Only Offers), Fast Frequency Response (FFR), and Load Resources controlled by high-set under-frequency relays. For ERCOT Contingency Reserve Service (ECRS), ERCOT shall separately post aggregated offers from Resources that are SCED-dispatchable (including Ancillary Service Only Offers) and those that are manually dispatched. Linked Ancillary Service Offers will be included as non-linked Ancillary Service Offers;

(f) The aggregate Self-Arranged Ancillary Service Quantity, for each type of service, by hour. For RRS, ERCOT shall separately post aggregated Self-Arranged Ancillary Service Quantities from Resources providing Primary Frequency Response, FFR, and Load Resources controlled by high-set under-frequency relays. For ECRS, ERCOT shall separately post aggregated Self-Arranged Ancillary Service Quantities from Resources that are SCED-dispatchable and those that are manually dispatched;

(g) The aggregate amount of cleared Resource-specific Ancillary Service Offers and Ancillary Service Only Offers. For RRS, ERCOT shall separately post aggregated Ancillary Service Offers from Resources providing Primary Frequency Response (including Ancillary Service Only Offers), FFR, and Load Resources controlled by high-set under-frequency relays. For ECRS, ERCOT shall separately post aggregated Ancillary Service Offers from Resources that are SCED-dispatchable (including Ancillary Service Only Offers) and those that are manually dispatched; and

(h) The aggregate Point-to-Point (PTP) Obligation bids (not-to-exceed price and quantities) for the ERCOT System and the aggregate PTP Obligation bids that sink in the Disclosure Area for each Disclosure Area.

(4) ERCOT shall post on the ERCOT website the following information for each Resource for each 15-minute Settlement Interval 60 days prior to the current Operating Day:

***[NPRR1007 and NPRR1014: Replace applicable portions of paragraph (4) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014:]***

(4) ERCOT shall post on the ERCOT website the following information for each Resource for each execution of SCED 60 days prior to the current Operating Day:

(a) The Generation Resource name and the Generation Resource's Energy Offer Curve (prices and quantities):

(i) As submitted;

(ii) As submitted and extended (or truncated) with proxy Energy Offer Curve logic by ERCOT to fit to the operational HSL and LSL values that are available for dispatch by SCED; and

(iii) As mitigated and extended for use in SCED, including the Incremental and Decremental Energy Offer Curves for DSRs;

***[NPRR1000: Replace paragraph (iii) above with the following upon system implementation:]***

(iii) As mitigated and extended for use in SCED;

***[NPRR1007 and NPRR1014: Insert applicable portions of paragraph (b) below upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014; and renumber accordingly:]***

(b) The Resource name and the Resource's Ancillary Service Offer Curve (prices and quantities) for each type of Ancillary Service:

(i) As submitted; and

(ii) As submitted and extended with proxy Ancillary Service Offer Curve logic by ERCOT.

(b) The Load Resource name and the Load Resource's bid to buy (prices and quantities);

(c) The Generation Resource name and the Generation Resource's Output Schedule;

(d) For a DSR, the DSR Load and associated DSR name and DSR net output;

***[NPRR1000: Delete paragraph (d) above upon system implementation and renumber accordingly.]***

(e) The Generation Resource name and actual metered Generation Resource net output;

(f) The self-arranged Ancillary Service by service for each QSE;

(g) The following Generation Resource data using a single snapshot during the first SCED execution in each Settlement Interval:

(i) The Generation Resource name;

(ii) The Generation Resource status;

(iii) The Generation Resource HSL, LSL, HASL, LASL, High Dispatch Limit (HDL), and Low Dispatch Limit (LDL);

(iv) The Generation Resource Base Point from SCED;

(v) The telemetered Generation Resource net output used in SCED;

(vi) The Ancillary Service Resource Responsibility for each Ancillary Service;

(vii) The Generation Resource Startup Cost and minimum energy cost used in the Reliability Unit Commitment (RUC); and

***[NPRR1007 and NPRR1014: Replace applicable portions of paragraph (g) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014:]***

(h) The following Generation Resource data using a snapshot from each execution of SCED:

(i) The Generation Resource name;

(ii) The Generation Resource status;

(iii) The Generation Resource HSL, LSL, High Dispatch Limit (HDL), and Low Dispatch Limit (LDL);

(iv) The Generation Resource Base Point from SCED;

(v) The telemetered Generation Resource net output used in SCED;

(vi) The Ancillary Service Resource awards for each Ancillary Service;

(vii) The Generation Resource Startup Cost and minimum energy cost used in the Reliability Unit Commitment (RUC);

(viii) The telemetered Normal Ramp Rates;

(ix) The telemetered Ancillary Service capabilities; and

(h) The following Load Resource data using a single snapshot during the first SCED execution in each Settlement Interval:

(i) The Load Resource name;

(ii) The Load Resource status;

(iii) The MPC for a Load Resource;

(iv) The LPC for a Load Resource;

(v) The Load Resource HASL, LASL, HDL, and LDL, for a Controllable Load Resource that has a Resource Status of ONRGL or ONCLR for the interval snapshot;

(vi) The Load Resource Base Point from SCED, for a Controllable Load Resource that has a Resource Status of ONRGL or ONCLR for the interval snapshot;

(vii) The telemetered real power consumption; and

(viii) The Ancillary Service Resource Responsibility for each Ancillary Service.

***[NPRR1007, NPRR1014, and NPRR1204: Replace applicable portions of paragraph (h) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007 and NPRR1204; or upon system implementation for NPRR1014:]***

(i) The following Load Resource data using a snapshot from each execution of SCED:

(i) The Load Resource name;

(ii) The Load Resource status;

(iii) The MPC for a Load Resource;

(iv) The LPC for a Load Resource;

(v) The Load Resource HDL and LDL, for a Controllable Load Resource that has a Resource Status of ONL;

(vi) The Load Resource Base Point from SCED, for a Controllable Load Resource that has a Resource Status of ONL;

(vii) The telemetered real power consumption;

(viii) The Ancillary Service Resource awards for each Ancillary Service;

(ix) The telemetered self-provided Ancillary Service amount for each Ancillary Service;

(x) The telemetered Normal Ramp Rates;

(xi) The telemetered Ancillary Service capabilities; and

(j) The ESR name and the ESR's Energy Bid/Offer Curve (prices and quantities):

(i) As submitted; and

(ii) As submitted and extended with proxy Energy Offer Curve logic by ERCOT to fit to the operational HSL and LSL values that are available for dispatch by SCED;

(k) The following ESR data using a snapshot from each execution of SCED:

(i) The ESR name;

(ii) The ESR status;

(iii) The ESR HSL, LSL, High Dispatch Limit (HDL), and Low Dispatch Limit (LDL);

(iv) The ESR Base Point from SCED;

(v) The telemetered ESR net output used in SCED;

(vi) The Ancillary Service Resource awards for each Ancillary Service;

(vii) The telemetered Normal Ramp Rates;

(viii) The telemetered Ancillary Service capabilities;

(ix) The telemetered State of Charge in MWh;

(x) The telemetered Minimum State of Charge (MinSOC) in MWh; and

(xi) The telemetered Maximum State of Charge (MaxSOC) in MWh.

***[NPRR1007 and NPRR1058: Insert applicable portions of paragraph (5) below upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1058; and renumber accordingly:]***

(5) ERCOT shall post on the ERCOT website for each Resource for each Operating Hour 60 days prior to the current Operating Day a count of the number of times for each Ancillary Service that the Resource's Ancillary Service Offer quantity or price was updated within the Operating Period. ERCOT shall post on the ERCOT website for each Resource for each Operating Hour 60 days prior to the current Operating Day, a

count of the number of times a Resource's Energy Offer quantity or price was updated within the Operating Hour, including any reason accompanying the update.

(5) If any Real-Time Locational Marginal Price (LMP) exceeds 50 times the Fuel Index Price (FIP) during any 15-minute Settlement Interval for the applicable Operating Day, ERCOT shall post on the ERCOT website the portion of any Generation Resource's as-submitted and as-mitigated and extended Energy Offer Curve that is at or above 50 times the FIP for each 15-minute Settlement Interval seven days after the applicable Operating Day.

***[NPRR1007 and NPRR1014: Replace applicable portions of paragraph (5) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014:]***

(6) If any Real-Time Locational Marginal Price (LMP) exceeds 50 times the Fuel Index Price (FIP) during any SCED interval for the applicable Operating Day, ERCOT shall post on the ERCOT website the portion of any Generation Resource's as-submitted and as-mitigated and extended Energy Offer Curve or any ESR's as-submitted and as-mitigated and extended Energy Bid/Offer Curve that is at or above 50 times the FIP for that SCED interval seven days after the applicable Operating Day.

(6) If any Market Clearing Price for Capacity (MCPC) for an Ancillary Service exceeds 50 times the FIP for any Operating Hour in a DAM or Supplemental Ancillary Services Market (SASM) for the applicable Operating Day, ERCOT shall post on the ERCOT website the portion on any Resource's Ancillary Service Offer that is at or above 50 times the FIP for that Ancillary Service for each Operating Hour seven days after the applicable Operating Day.

***[NPRR1007 and NPRR1014: Replace applicable portions of paragraph (6) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014:]***

(7) If any Market Clearing Price for Capacity (MCPC) for an Ancillary Service exceeds 50 times the FIP for any Operating Hour in a DAM or any SCED interval in the RTM for the applicable Operating Day, ERCOT shall post on the ERCOT website the portion on any Resource's Ancillary Service Offer that is at or above 50 times the FIP for that Ancillary Service for that Operating Hour for the DAM or SCED interval for the RTM seven days after the applicable Operating Day.

(7) ERCOT shall post on the ERCOT website the offer price and the name of the Entity submitting the offer for the highest-priced offer selected or Dispatched by SCED three days after the end of the applicable Operating Day. If multiple Entities submitted the highest-priced offers selected, all Entities shall be identified on the ERCOT website.

(8) ERCOT shall post on the ERCOT website the bid price and the name of the Entity submitting the bid for the highest-priced bid selected or Dispatched by SCED three days after the end of the applicable Operating Day. If multiple Entities submitted the highest-priced bids selected, all Entities shall be identified on the ERCOT website.

(9) ERCOT shall post on the ERCOT website the offer price and the name of the Entity submitting the offer for the highest-priced Ancillary Service Offer selected in the DAM for each Ancillary Service three days after the end of the applicable Operating Day. This same report shall also include the highest-priced Ancillary Service Offer selected for any SASMs cleared for that same Operating Day. If multiple Entities submitted the highest-priced offers selected, all Entities shall be identified on the ERCOT website. The report shall specify whether the Ancillary Service Offer was selected in a DAM or a SASM.

***[NPRR1007 and NPRR1014: Replace applicable portions of paragraph (9) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014:]***

(10) ERCOT shall post on the ERCOT website the offer price and the name of the Entity submitting the offer for the highest-priced Ancillary Service Offer selected in the DAM or RTM for each Ancillary Service three days after the end of the applicable Operating Day. If multiple Entities submitted the highest-priced offers selected, all Entities shall be identified on the ERCOT website. The report shall specify whether the Ancillary Service Offer was selected in a DAM or RTM.

(10) ERCOT shall post on the ERCOT website for each Operating Day the following information for each Resource:

(a) The Resource name;

(b) The name of the Resource Entity;

(c) Except for Load Resources that are not SCED qualified, the name of the Decision Making Entity (DME) controlling the Resource, as reflected in the Managed Capacity Declaration submitted by the Resource Entity in accordance with Section 3.6.2, Decision Making Entity for a Resource; and

(d) Flag for Reliability Must-Run (RMR) Resources.

(11) ERCOT shall post on the ERCOT website the following information from the DAM for each hourly Settlement Interval for the applicable Operating Day 60 days prior to the current Operating Day:

(a) The Generation Resource name and the Generation Resource's Three-Part Supply Offer (prices and quantities), including Startup Offer and Minimum-Energy Offer, available for the DAM;

(b) For each Settlement Point, individual DAM Energy-Only Offer Curves available for the DAM and the name of the QSE submitting the offer;

(c) The Resource name and the Resource's Ancillary Service Offers available for the DAM;

***[NPRR1007 and NPRR1014: Insert applicable portions of paragraph (d) below upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1007; or upon system implementation for NPRR1014; and renumber accordingly:]***

(d) The Ancillary Service Only Offer for each Ancillary Service and the name of the QSE submitting the offer;

(d) For each Settlement Point, individual DAM Energy Bids available for the DAM and the name of the QSE submitting the bid;

(e) For each Settlement Point, individual PTP Obligation bids available to the DAM that sink at the Settlement Point and the QSE submitting the bid;

(f) The awards for each Ancillary Service from DAM for each Generation Resource;

(g) The awards for each Ancillary Service from DAM for each Load Resource;

(h) The award of each Three-Part Supply Offer from the DAM and the name of the QSE receiving the award;

(i) For each Settlement Point, the award of each DAM Energy-Only Offer from the DAM and the name of the QSE receiving the award;

(j) For each Settlement Point, the award of each DAM Energy Bid from the DAM and the name of the QSE receiving the award; and

(k) For each Settlement Point, the award of each PTP Obligation bid from the DAM that sinks at the Settlement Point, including whether or not the PTP Obligation bid was linked to an Option, and the QSE submitting the bid.

***[NPRR1014: Insert items (m)-(o) below upon system implementation:]***

(m) The ESR name and the ESR's Energy Bid/Offer Curve (prices and quantities), available for the DAM;

(n) The awards for each Ancillary Service from the DAM for each ESR; and

(o) The award of each Energy Bid/Offer Curve from the DAM and the name of the QSE receiving the award.

(12) ERCOT shall post on the ERCOT website the following information from any applicable SASMs for each hourly Settlement Interval for the applicable Operating Day 60 days prior to the current Operating Day:

(a) The Resource name and the Resource's Ancillary Service Offers available for any applicable SASMs;

(b) The awards for each Ancillary Service from any applicable SASMs for each Generation Resource; and

(c) The awards for each Ancillary Service from any applicable SASMs for each Load Resource.

***[NPRR1007: Delete paragraph (12) above upon system implementation of the Real-Time Co-Optimization (RTC) project.]***

### 3.2.5.1 Unregistered Distributed Generation Reporting Requirements for Non Opt-In Entities

(1) This Section describes the data that shall be submitted to ERCOT for the unregistered Distributed Generation (DG) behind Non-Opt-In Entity (NOIE) boundary metering points.

(2) Within ten Business Days after the end of each quarter, each NOIE shall submit to ERCOT electronically the required data described below as of the last day of the prior quarter by submitting the designated form provided on the ERCOT website. NOIEs that have an unregistered DG capacity of more than two MW, based upon the aggregate capacity of all sites that are less than 50 kW, shall report the total of all unregistered DG MW capacity, inclusive of systems used to support self-serve Load. All other NOIEs shall report the aggregate unregistered DG capacity of only those sites greater than or equal to 50 kW, inclusive of systems used to support self-serve Load. NOIEs shall report their capacity by Load Zone and by primary fuel type as follows:

(a) Solar;

(b) Wind;

(c) Other renewable; and

(d) Other non-renewable.

(3) NOIEs not reporting DG MW capacity less than 50 kW on a quarterly basis as described in paragraph (2) above shall submit to ERCOT by March 1 of each year their annual aggregate unregistered DG MW capacity, inclusive of systems used to support self-serve Load, for the preceding calendar year. NOIEs shall report their capacity by Load Zone and by primary fuel type as follows:

(a) Solar;

(b) Wind;

(c) Other renewable; and

(d) Other non-renewable.

(4) Each of the above reports is required to include only the capacity known to the NOIE at the time that its report is being prepared, and shall not require the NOIE to conduct new survey activities for its service territory to identify unknown unregistered DG installations. Any NOIE may obtain a reporting exemption for the annual report required in 2020 by notifying ERCOT of the exemption claim in writing on or before March 1, 2020.

### 3.2.5.2 Unregistered Distributed Generation Reporting Requirements for Competitive Areas

(1) The data for competitive areas will be compiled from the reports submitted to ERCOT as found in the Load Profiling Guide, Appendix D, Load Profiling Decision Tree, DG Tab.

### 3.2.5.3 Unregistered Distributed Generation Reporting Requirements for ERCOT

(1) Within 30 days after the end of each quarter, ERCOT shall publish the unregistered DG report on the ERCOT website. This report shall include the aggregated data compiled for NOIE and competitive areas. This report shall include the total unregistered DG MW capacity, as provided in accordance with Section 3.2.5.1, Unregistered Distributed Generation Reporting Requirements for Non Opt-In Entities, and Section 3.2.5.2, Unregistered Distributed Generation Reporting Requirements for Competitive Areas, above, by Load Zone and by primary fuel type as follows:

(a) Solar;

(b) Wind;

(c) Other renewable; and

(d) Other non-renewable.

(2) ERCOT shall update the appropriate TAC subcommittee on an as needed basis on the unregistered DG report.

### *3.2.6 ERCOT Planning Reserve Margin*

(1) ERCOT shall calculate the Planning Reserve Margin (PRM) for each Peak Load Season as follows:

$$\mathbf{PRM}_{s,i} = \mathbf{(TOTCAP}_{s,i} \mathbf{- FIRMPKLD}_{s,i}\mathbf{) / FIRMPKLD}_{s,i}$$

The above variables are defined as follows:

| Variable | Unit | Definition |
|---|---|---|
| $PRM_{s,i}$ | % | *Planning Reserve Margin*—The Planning Reserve Margin for the Peak Load Season *s* for year *i*. |
| $TOTCAP_{s,i}$ | MW | *Total Capacity*—Total Capacity available during the Peak Load Season *s* for the year *i*. |
| $FIRMPKLD_{s,i}$ | MW | *Firm Peak Load*—Firm Peak Load for the Peak Load Season *s* for the year *i*. |
| *i* | None | Year. |
| *s* | None | Peak Load Season. |

#### 3.2.6.1 Minimum ERCOT Planning Reserve Margin Criterion

(1) The minimum ERCOT PRM criterion is approved by the ERCOT Board. ERCOT shall periodically review and recommend to the ERCOT Board any changes to the minimum ERCOT PRM to help ensure adequate reliability of the ERCOT System. ERCOT shall update the minimum PRM on the first day of the month following ERCOT Board approval unless otherwise directed by the ERCOT Board. ERCOT shall post the revised minimum PRM to the ERCOT website prior to implementation.

#### 3.2.6.2 ERCOT Planning Reserve Margin Calculation Methodology

(1) ERCOT shall prepare and publish on the ERCOT website, at least annually, the Report on Capacity, Demand and Reserves in the ERCOT Region containing an estimate of the PRM for the current Peak Load Seasons as well as a minimum of ten future summer and winter peak Load periods. The format and content of this report shall be developed by ERCOT, and subject to TAC approval. The estimate of the PRM shall be based on the methodology in Section 3.2.6.2.1, Peak Load Estimate, and Section 3.2.6.2.2, Total Capacity Estimate.

(2) ERCOT shall prepare and publish on the ERCOT website, no later than 60 days after the end of each summer and winter Peak Load Season, updates to the variable WINDPEAKPCT, defined in Section 3.2.6.2.2. The published information will also include the following inputs and associated formulas used in the variable calculations:

(a) The date, hour, and associated Load for the 20 highest system-wide peak Load hours by region, season and year;

(b) The wind capacity for the 20 highest system-wide peak Load hours by region, season and year; and

(c) The installed wind capacity by region and year.

### *3.2.6.2.1 Peak Load Estimate*

(1) ERCOT shall prepare, at least annually, a forecast of the total peak Load for both summer and winter Peak Load Seasons for the current year and a minimum of ten future years using an econometric forecast, taking into account econometric inputs, weather conditions, demographic data and other variables as deemed appropriate by ERCOT. The firm Peak Load Season estimate shall be determined by the following equation:

$$\mathbf{FIRMPKLD}_{s,i} = \mathbf{TOTPKLD}_{s,i} - \mathbf{LRRRS}_{s,i} - \mathbf{LRECRS}_{s,i} - \mathbf{LRNSRS}_{s,i} - \mathbf{ERS}_{s,i} - \mathbf{CLR}_{s,i} - \mathbf{ENERGYEFF}_{s,i}$$

The above variables are defined as follows:

<table>
<tr><th>Variable</th><th>Unit</th><th>Definition</th></tr>
<tr><td>FIRMPKLD $_{s, i}$</td><td>MW</td><td>Firm Peak Load Estimate—The Firm Peak Load Estimate for the Peak Load Season s for the year i.</td></tr>
<tr><td>TOTPKLD $_{s, i}$</td><td>MW</td><td>Total Peak Load Estimate—The Total Peak Load Estimate for the Peak Load Season s for the year i.</td></tr>
<tr><td>LRRRS $_{s, i}$</td><td>MW</td><td>Load Resource providing RRS—The amount of RRS a Load Resource is providing for the Peak Load Season s for the year i.</td></tr>
<tr><td>LRECRS $_{s, i}$</td><td>MW</td><td>Load Resource providing ECRS—The amount of ECRS a Load Resource is providing for the Peak Load Season s for the year i.</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td>LRNSRS $_{s, i}$</td><td>MW</td><td>Load Resource providing Non-Spinning Reserve (Non-Spin)—The estimated amount of Non-Spin that Load Resources are providing for the Peak Load Season s for the year i.</td></tr>
<tr><td>ERS $_{s, i}$</td><td>MW</td><td>Emergency Response Service (ERS)—The estimated amount of ERS for the Peak Load Season s for the year i calculated as follows:
<table>
<tr><th>Year (i)</th><th>Winter Peak Load</th><th>Summer Peak Load</th></tr>
<tr><td>Current Year (i = 1)</td><td>The simple average of the amount of ERS procured by ERCOT for the current year Standard Contract Term of December 1 to March 31 for the ERS Time Periods covering all or any part of Hour Ending 0600 and Hour Ending 1800.</td><td>The amount of ERS procured by ERCOT for the current year Standard Contract Term of June 1 through September 30 for an ERS Time Period covering all or any part of Hour Ending 1800.</td></tr>
<tr><td>Second Year (i = 2)</td><td>The current year Winter Peak Load ERS amount escalated by the compound annual growth rate of the three Winter Peak</td><td>The current year Summer Peak Load ERS amount escalated by the compound annual growth rate of the</td></tr>
</table></td></tr>
</table>

| | | | | |
|---|---|---|---|---|
| | | | Load ERS amounts preceding the current year. | three Summer Peak Load ERS amounts preceding the current period. |
| | | Third Year (i = 3) | The second year Winter Peak Load ERS amount escalated by the compound annual growth rate of the three Winter Peak Load ERS amounts preceding the current year. | The second year Summer Peak Load ERS amount escalated by the compound annual growth rate of the three Summer Peak Load ERS amounts preceding the current year. |
| | | Years after Third Year (i > 3) | Equal to third year amount. | Equal to third year amount. |
| CLR $_{s, i}$ | MW | *Amount of Controllable Load Resource*—Estimated amount of Controllable Load Resource that is available for Dispatch by ERCOT during the current year *i* for the Peak Load Season *s* not already included in LRRRS, LRECRS, or LRNSRS. This value does not include Wholesale Storage Load (WSL). | | |
| ENERGYEFF $_{s, i}$ | MW | *Amount of Energy Efficiency Programs Procured*—Estimated amount of energy efficiency programs procured by Transmission and/or Distribution Service Providers (TDSPs) pursuant to P.U.C. SUBST. R. 25.181, Energy Efficiency Goal, for the Peak Load Season *s* for the year *i*. ERCOT may also consider any energy efficiency and/or Demand response initiatives reported by NOIEs. | | |
| *i* | None | Year. | | |
| *s* | None | Peak Load Season. | | |

### *3.2.6.2.2 Total Capacity Estimate*

(1) The total capacity estimate shall be determined based on the following equation:

$$\mathbf{TOTCAP}_{s,i} = \mathbf{INSTCAP}_{s,i} + \mathbf{PUNCAP}_{s,i} + \mathbf{WINDCAP}_{s,i,r} + \mathbf{HYDROCAP}_{s,i} + \mathbf{SOLARCAP}_{s,i} + \mathbf{RMRCAP}_{s,i} + \mathbf{DCTIECAP}_{s} + \mathbf{PLANDCTIECAP}_{s} + \mathbf{SWITCHCAP}_{s,i} + \mathbf{MOTHCAP}_{s,i} + \mathbf{PLANNON}_{s,i} + \mathbf{PLANIRR}_{s,i,r} - \mathbf{LTOUTAGE}_{s,i} - \mathbf{UNSWITCH}_{s,i} - \mathbf{RETCAP}_{s,i}$$

The above variables are defined as follows:

| Variable | Unit | Definition |
|---|---|---|
| TOTCAP $_{s, i}$ | MW | *Total Capacity*—Estimated total capacity available during the Peak Load Season *s* for the year *i*. |
| INSTCAP $_{s, i}$ | MW | *Seasonal Net Max Sustainable Rating*—The Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource Registration process for each operating Generation Resource for the year *i* excluding WGRs, hydro Generation Resource capacity, solar unit capacity, Resources operating under RMR Agreements, and Generation Resources capable of "switching" from the ERCOT Region to a non-ERCOT Region. |

| Variable | Unit | Definition |
|---|---|---|
| PUNCAP $_{s, i}$ | MW | *Private Use Network Capacity*—The forecasted generation capacity available to the ERCOT Transmission Grid, net of self-serve load, from Generation Resources and Settlement Only Generators (SOGs) in Private Use Networks for Peak Load Season *s* and year *i*. The capacity forecasts are developed as follows. First, a base capacity forecast, determined from Settlement data, is calculated as the average net generation capacity available to the ERCOT Transmission Grid during the 20 highest system-wide peak Load hours for each preceding three-year period for Peak Load Season *s* and year *i*. The base capacity forecast is then adjusted by adding the aggregated incremental forecasted annual changes in net generation capacity as of the start of the summer Peak Load Season *s* for forecast year *i* reported for Private Use Networks pursuant to Section 10.3.2.4, Reporting of Net Generation Capacity. This calculation is limited to Generation Resources and SOGs in Private Use Networks (1) with a Resource Commissioning Date that occurs no later than the start of the most current Peak Load Season used for the calculation, and (2) that have not been permanently retired by the start of the most current Peak Load Season used for the calculation. |
| WINDPEAKPCT $_{s, r}$ | % | *Seasonal Peak Average Wind Capacity as a Percent of Installed Capacity*—The average WGR capacity available for the summer and winter Peak Load Seasons *s* and region *r*, divided by the installed capacity for region *r*, expressed as a percentage. The Seasonal Peak Average, derived from Settlement data, is first calculated as the average capacity during the 20 highest system-wide peak Load hours for a given year's summer and winter Peak Load Seasons. The final value is the weighted average of the previous ten eligible years of Seasonal Peak Average values where each year is weighted by its installed capacity. Eligible years include 2009 through the most recent year for which COP data is available for the summer and winter Peak Load Seasons. If the number of eligible years is less than ten, the average shall be based on the number of eligible years available. This calculation is limited to WGRs (1) with a Resource Commissioning Date that occurs no later than the start of the most current Peak Load Season used for the calculation, and (2) that have not been permanently retired by the start of the most current Peak Load Season used for the calculation. |
| WINDCAP $_{s, i, r}$ | MW | *Existing WGR Capacity*—The capacity available for all existing WGRs for the summer and winter Peak Load Seasons *s,* year *i*, and region *r*, multiplied by WINDPEAKPCT for summer and winter Peak Load Seasons *s* and region *r*. |
| HYDROCAP $_{s, i}$ | MW | *Hydro Unit Capacity*—The average hydro Generation Resource capacity available, as determined from the COP, during the highest 20 peak Load hours for each preceding three-year period for Peak Load Season *s* and year *i*. This calculation is limited to hydro Generation Resources (1) with a Resource Commissioning Date that occurs no later than the start of the most current Peak Load Season used for the calculation, and (2) that have not been permanently retired by the start of the most current Peak Load Season used for the calculation. |
| SOLARPEAKPCT $_{s}$ | % | *Seasonal Peak Average Solar Capacity as a Percent of Installed Capacity*—The average PVGR capacity available for the summer and winter Peak Load Seasons *s*, divided by the installed capacity, expressed as a percentage. The Seasonal Peak Average, derived from Settlement data, is first calculated as the average capacity during the 20 highest system-wide peak Load hours for a given year's summer and winter Peak Load Seasons. The final value is the weighted average of the previous three years of Seasonal Peak Average values where each year is weighted by its installed capacity. This calculation is limited to PVGRs (1) with a Resource Commissioning Date that occurs no later than the start of the most current Peak Load Season used for the calculation, and (2) that have not been permanently retired by the start of the most current Peak Load Season used for the calculation. |

| Variable | Unit | Definition |
|---|---|---|
| SOLARCAP $_{s, i}$ | MW | *Existing PVGR Capacity*—The capacity available for all existing PVGRs for the summer and winter Peak Load Season *s* and year *i*, multiplied by SOLARPEAKPCT for summer and winter Peak Load Seasons *s*. |
| RMRCAP $_{s, i}$ | MW | *Seasonal Net Max Sustainable Rating for Generation Resource providing RMR Service*—The Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource Registration process for each Generation Resource providing RMR Service for the year *i* until the approved exit strategy for the RMR Resource is expected to be completed. |
| DCTIEPEAKPCT $_{s}$ | % | *Seasonal Peak Average Capacity for existing DC Tie Resources as a Percent of Installed DC Tie Capacity*—The average net emergency DC Tie imports for the summer and winter Peak Load Seasons *s*, divided by the total installed DC Tie capacity for Peak Load Seasons *s*, expressed as a percentage. The average net emergency DC Tie imports is calculated for the SCED intervals during which ERCOT declared an Energy Emergency Alert (EEA). This calculation is limited to the most recent single summer and winter Peak Load Seasons in which an EEA was declared. The total installed DC Tie capacity is the capacity amount at the start of the Peak Load Seasons used for calculating the net DC Tie imports. |
| DCTIECAP $_{s}$ | MW | *Expected Existing DC Tie Capacity Available under Emergency Conditions*—DCTIEPEAKPCT $_{s}$ multiplied by the installed DC Tie capacity available for the summer and winter Peak Load Seasons *s*, adjusted for any known capacity transfer limitations. |
| PLANDCTIECAP $_{s}$ | MW | *Expected Planned DC Tie Capacity Available under Emergency Conditions*—DCTIEPEAKPCT $_{s}$ multiplied by the maximum peak import capacity of planned DC Tie projects included in the most recent Steady State Working Group (SSWG) base cases, for the summer and winter Peak Load Seasons *s*. The import capacity may be adjusted to reflect known capacity transfer limitations indicated by transmission studies. |
| SWITCHCAP $_{s, i}$ | MW | *Seasonal Net Max Sustainable Rating for Switchable Generation Resource*—The Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource Registration process for each Generation Resource for the year *i* that can electrically connect (i.e., "switch") from the ERCOT Region to another power region. |
| MOTHCAP $_{s, i}$ | MW | *Seasonal Net Max Sustainable Rating for Mothballed Generation Resource*—The Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource Registration process for each Mothballed Generation Resource for the year *i* based on the lead time and probability information furnished by the owners of Mothballed Generation Resources pursuant to Section 3.14.1.9, Generation Resource Status Updates. If the value furnished by the owner of a Mothballed Generation Resource pursuant to Section 3.14.1.9 is greater than or equal to 50%, then use the Seasonal net max sustainable rating for the Peak Load Season *s* as reported in the approved Resource registration process for the Mothballed Generation Resource for the year *i*. If the value furnished by the owner of a Mothballed Generation Resource pursuant to Section 3.14.1.9 is less than 50%, then exclude that Resource from the Total Capacity Estimate. |

| Variable | Unit | Definition |
|---|---|---|
| PLANNON $_{s, i}$ | MW | *New, non-IRR Generating Capacity*—The amount of new, non-IRR generating capacity available by July 1 and December 1 for the summer and winter Peak Load Seasons *s*, respectively, and year *i* that: (a) has a Texas Commission on Environmental Quality (TCEQ)-approved air permit, (b) has a federal Greenhouse Gas permit, if required, (c) has obtained water rights, contracts or groundwater supplies sufficient for the generation of electricity at the Resource, and (d) has a signed Standard Generation Interconnection Agreement (SGIA), or a public, financially-binding agreement between the Resource owner and TSP under which generation interconnection facilities would be constructed; or for a Municipally Owned Utility (MOU) or Electric Cooperative (EC), a public commitment letter to construct a new Resource. New, non-IRR generating capacity is excluded if the Generation Interconnection or Change Request (GINR) project status in the online Resource Integration and Ongoing Operations (RIOO) interconnection services system is set to "Cancelled" or "Inactive" or if the Resource was previously mothballed or retired and does not have an owner that intends to operate it. For the purposes of this section, ownership of a mothballed or retired Resource for which a new generation interconnection is sought can only be satisfied by proof of site control as described in paragraph (1)(a), (b), or (d) of Planning Guide Section 5.3.2.1, Proof of Site Control. |
| PLANIRR $_{s, i, r}$ | MW | *New IRR Capacity*—For new WGRs, the capacity available by July 1 and December 1 for the summer and winter Peak Load Seasons *s,* respectively, year *i*, and region *r*, multiplied by WINDPEAKPCT for summer and winter Load Season *s* and region *r*. For new PVGRs, the capacity available for the summer and winter Peak Load Seasons *s* and year *i*, multiplied by SOLARPEAKPCT for summer and winter Load Seasons *s*. New IRRs must have an SGIA or other public, financially binding agreement between the Resource owner and TSP under which generation interconnection facilities would be constructed or, for a MOU or EC, a public commitment letter to construct a new IRR. New IRR capacity is excluded if the GINR project status in the online RIOO interconnection services system is set to "Cancelled," or "Inactive." |
| LTOUTAGE $_{s, i}$ | MW | *Forced Outage Capacity Reported in a Notification of Suspension of Operations*—For non-IRRs whose operation has been suspended due to a Forced Outage as reported in a Notification of Suspension of Operations (NSO), the sum of Seasonal net max sustainable ratings for Peak Load Seasons *s* for year *i*, as reported in the NSO forms. For IRRs, use the PLANIRR $_{s, i, r}$ calculated for each IRR. |
| UNSWITCH $_{s, i}$ | MW | *Capacity of Unavailable Switchable Generation Resource*—The amount of capacity reported by the owners of a switchable Generation Resource that will be unavailable to ERCOT during the Peak Load Season *s* and year *i* pursuant to paragraph (2) of Section 16.5.4, Maintaining and Updating Resource Entity Information. |
| RETCAP $_{s, i}$ | MW | *Capacity Pending Retirement*—The amount of capacity in Peak Load Season *s* of year *i* that is pending retirement based on information submitted on an NSO form (Section 22, Attachment E, Notification of Suspension of Operations) pursuant to Section 3.14.1.11, Budgeting Eligible Costs, but is under review by ERCOT pursuant to Section 3.14.1.2, ERCOT Evaluation Process, that has not otherwise been considered in any of the above defined categories. For Generation Resources and SOGs within Private Use Networks, the retired capacity amount is the peak average capacity contribution included in PUNCAP. For reporting of individual Generation Resources and SOGs in the Report on the Capacity, Demand and Reserves in the ERCOT Region, only the summer net max sustainable rating included in the NSO shall be disclosed. |

| Variable | Unit | Definition |
|---|---|---|
| *i* | None | Year. |
| *s* | None | Summer and winter Peak Load Seasons for year *i*. |
| *r* | None | Coastal, Panhandle, and Other wind regions. WGRs are classified into regions based on the county that contains their Point of Interconnection Bus (POIB). The Coastal region is defined as the following counties: Aransas, Brazoria, Calhoun, Cameron, Kenedy, Kleberg, Matagorda, Nueces, Refugio, San Patricio, and Willacy. The Panhandle region is defined as the following counties: Armstrong, Bailey, Briscoe, Carson, Castro, Childress, Cochran, Collingsworth, Crosby, Dallam, Deaf Smith, Dickens, Donley, Floyd, Gray, Hale, Hall, Hansford, Hartley, Hemphill, Hockley, Hutchinson, Lamb, Lipscomb, Lubbock, Moore, Motley, Ochiltree, Oldham, Parmer, Potter, Randall, Roberts, Sherman, Swisher, and Wheeler. The Other region consists of all other counties in the ERCOT Region. |

## 3.3 Management of Changes to ERCOT Transmission Grid

(1) Additions and changes to the ERCOT System must be coordinated with ERCOT to accurately represent the ERCOT Transmission Grid.

### *3.3.1 ERCOT Approval of New or Relocated Facilities*

(1) Before energizing and placing into service any new or relocated facility connected to the ERCOT Transmission Grid, a Transmission Service Provider (TSP), Qualified Scheduling Entity (QSE), or Resource Entity shall enter appropriate information in the Outage Scheduler and coordinate with, and receive written notice of approval from, ERCOT.

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) Before energizing and placing into service any new or relocated facility connected to the ERCOT Transmission Grid, a Transmission Service Provider (TSP), Direct Current Tie Operator (DCTO), Qualified Scheduling Entity (QSE), or Resource Entity shall enter appropriate information in the Outage Scheduler and coordinate with, and receive written notice of approval from, ERCOT.

### *3.3.2 Types of Work Requiring ERCOT Approval*

(1) Each TSP, QSE and Resource Entity shall coordinate with ERCOT the requirements of Section 3.10, Network Operations Modeling and Telemetry, the following types of work for any addition to, replacement of, or change to or removal from the ERCOT Transmission Grid:

***[NPRR857: Replace paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(1) Each TSP, DCTO, QSE, and Resource Entity shall coordinate with ERCOT the requirements of Section 3.10, Network Operations Modeling and Telemetry, the following types of work for any addition to, replacement of, or change to or removal from the ERCOT Transmission Grid:

(a) Transmission lines;

(b) Equipment including circuit breakers, transformers, disconnects, and reactive devices;

(c) Resource interconnections; and

(d) Protection and control schemes, including changes to Remedial Action Plans (RAPs), Supervisory Control and Data Acquisition (SCADA) systems, Energy Management Systems (EMSs), Automatic Generation Control (AGC), Remedial Action Schemes (RASs), or Automatic Mitigation Plans (AMPs).

#### 3.3.2.1 Information to Be Provided to ERCOT

(1) The energization or removal of a Transmission Facility or Generation Resource in the Network Operations Model requires an entry into the Outage Scheduler by a TSP or Resource Entity. For TSP requests, the TSPs shall enter such requests in the Outage Scheduler. For Resource Entity requests, the Resource Entity shall enter such requests in the Outage Scheduler. If any changes in system topology or telemetry are expected, then the TSP or Resource Entity shall notify ERCOT in accordance with the schedule in Section 3.3.1, ERCOT Approval of New or Relocated Facilities. Information submitted pursuant to this subsection for Transmission Facilities within a Private Use Network shall not be publicly posted.

***[NPRR857 and NPRR1014: Replace applicable portions of paragraph (1) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities for NPRR857; and upon system implementation for NPRR1014:]***

(1) The energization or removal of a Transmission Facility, Generation Resource, or Energy Storage Resource (ESR) in the Network Operations Model requires an entry into the Outage Scheduler by a TSP, DCTO, or Resource Entity. For any TSP or DCTO request, the TSP or DCTO shall enter the request in the Outage Scheduler. For any Resource Entity request, the Resource Entity shall enter the request in the Outage Scheduler. If any changes in system topology or telemetry are expected, then the TSP, DCTO, or Resource Entity shall notify ERCOT in accordance with the schedule in Section 3.3.1, ERCOT Approval of New or Relocated Facilities. Information submitted pursuant to this subsection for Transmission Facilities within a Private Use Network shall not be publicly posted.

(2) If a Resource Entity within a Private Use Network is adding or removing a Transmission Facility at the Point of Interconnection (POI), it shall inform and determine with ERCOT whether any corresponding Network Operations Model updates are necessary. If ERCOT and the Resource Entity determine that updates are needed, the process set forth in paragraph (1) above shall be used to incorporate the update into the Network Operations Model. Information submitted pursuant to paragraph (1) above shall not be publicly posted.

(3) TSPs and Resource Entities shall submit any changes in system topology or telemetry in accordance with the Network Operations Model Change Request (NOMCR) process or other ERCOT-prescribed process applicable to Resource Entities and according to the requirements of Section 3.10.1, Time Line for Network Operations Model Changes. The submittal shall include the following:

(a) Proposed energize date;

(b) TSPs or Resource Entities performing work;

(c) TSPs or Resource Entities responsible for rating affected Transmission Element(s);

(d) For Resource Entities, data and information required by Section 16.5, Registration of a Resource Entity;

(e) Station identification code;

(f) Identification of existing Transmission Facilities involved and new Transmission Facilities (if any) being added or existing Transmission Facilities being permanently removed from service;

(g) Ratings of existing Transmission Facilities involved and new Transmission Facilities (if any) being added;

(h) Outages required (clearly identify each Outage if multiple Outages are required), including sequence of Outage and estimate of Outage duration;

(i) General statement of work to be completed with intermediate progress dates and events identified;

(j) SCADA modification work, including descriptions of the telemetry points or changes to existing telemetry, providing information on equipment being installed, changed, or monitored;

(k) Additional data determined by ERCOT and TSPs, or Resource Entities as needed to complete the ERCOT model representation of existing Transmission Facilities involved and new Transmission Facilities (if any) being added;

(l) Statement of completion, including:

(i) Statement to be made at the completion of each intermediate stage of project; and

(ii) Statement to be made at completion of total project.

(m) Drawings, including:

(i) Existing status;

(ii) Each intermediate stage; and

(iii) Proposed final configuration.

***[NPRR857: Replace paragraph (3) above with the following upon system implementation and satisfying the following conditions: (1) Southern Cross provides ERCOT with funds to cover the entire estimated cost of the project; and (2) Southern Cross has signed an interconnection agreement with a TSP and the TSP gives ERCOT written notice that Southern Cross has provided it with: (a) Notice to proceed with the construction of the interconnection; and (b) The financial security required to fund the interconnection facilities:]***

(3) Each TSP, DCTO, and Resource Entity shall submit any changes in system topology or telemetry in accordance with the Network Operations Model Change Request (NOMCR) process or other ERCOT-prescribed process applicable to Resource Entities

and according to the requirements of Section 3.10.1, Time Line for Network Operations Model Changes. The submittal shall include the following:

(a) Proposed energize date;

(b) TSPs, DCTOs, or Resource Entities performing work;

(c) TSPs, DCTOs, or Resource Entities responsible for rating affected Transmission Element(s);

(d) For Resource Entities, data and information required by Section 16.5, Registration of a Resource Entity;

(e) Station identification code;

(f) Identification of existing Transmission Facilities involved and new Transmission Facilities (if any) being added or existing Transmission Facilities being permanently removed from service;

(g) Ratings of existing Transmission Facilities involved and new Transmission Facilities (if any) being added;

(h) Outages required (clearly identify each Outage if multiple Outages are required), including sequence of Outage and estimate of Outage duration;

(i) General statement of work to be completed with intermediate progress dates and events identified;

(j) SCADA modification work, including descriptions of the telemetry points or changes to existing telemetry, providing information on equipment being installed, changed, or monitored;

(k) Additional data determined by ERCOT, TSPs, DCTOs, or Resource Entities as needed to complete the ERCOT model representation of existing Transmission Facilities involved and new Transmission Facilities (if any) being added;

(l) Statement of completion, including:

  (i) Statement to be made at the completion of each intermediate stage of project; and

  (ii) Statement to be made at completion of total project.

(m) Drawings, including:

  (i) Existing status;

  (ii) Each intermediate stage; and

(iii) Proposed final configuration.

#### 3.3.2.2 Record of Approved Work

(1) ERCOT shall maintain a record of all work approved in accordance with Section 3.3, Management of Changes to ERCOT Transmission Grid, and shall publish, and update monthly, information on the MIS Secure Area regarding each new Transmission Element to be installed on the ERCOT Transmission Grid.

## 3.4 Load Zones

(1) ERCOT shall assign every power flow bus to a Load Zone for Day-Ahead Market (DAM) and Congestion Revenue Right (CRR) Settlement purposes. ERCOT shall calculate a Settlement Point Price for each Load Zone using the Load-weighted aggregated Shift Factors of the applicable energized power flow buses for each constraint. The Load-weighting must be determined using the Load distribution factors.

(2) ERCOT shall assign every Electrical Bus to a Load Zone for Real-Time Market (RTM) Settlement purposes. ERCOT shall calculate a Settlement Point Price for each Load Zone as the Load-weighted average of the Locational Marginal Prices (LMPs) at all Electrical Buses assigned to that Load Zone. The Load-weighting must be determined using the Load, if any, from the State Estimator at each Electrical Bus.

### *3.4.1 Load Zone Types*

(1) The Load Zone types are:

(a) The Competitive Load Zones;

(b) The Non-Opt-In Entity (NOIE) Load Zones created pursuant to Section 3.4.3, NOIE Load Zones; and

(c) The Direct Current Tie (DC Tie) Load Zones as defined in Section 3.4.4, DC Tie Load Zones.

(2) The Competitive Load Zones are the four zones in effect during the 2003 ERCOT market unless they are changed pursuant to Section 3.4.2, Load Zone Modifications, less any Electrical Buses that are assigned to a NOIE Load Zone or a DC Tie Load Zone.

### *3.4.2 Load Zone Modifications*

(1) Competitive Load Zones and NOIE Load Zones may be added, deleted, or changed, only when approved by the ERCOT Board, with the exception of paragraph (1)(c) of Section 3.4.3, NOIE Load Zones. Approved additions, deletions, or changes go into effect 48