**9.0 Emergency Response Service (ERS) [NP 6.6. 11]**

ERS is an emergency service designed to decrease the likelihood of the need for firm Load shedding. ERCOT procures ERS capacity three times annually for four-month Standard Contract Terms (SCT). October to January; February to May; and June to September. In each SCT, ERCOT procures ERS according to two different response times—thirty minutes ("ERS-30") and ten minutes ("ERS-10"). In addition, there are 4 ERS service types: (Weather-Sensitive ERS-10, Non-Weather-Sensitive ERS-10, Weather-Sensitive ERS-30, or Non-Weather-Sensitive ERS-30.) Only Final and True-up settlements for these charge types. The charge is uplifted on a LRS basis for an ERS service type and ERS Contract Period based on the LRS of each QSE during each ERS Time Period in an ERS Contract Period. Payments and charges for a SCT appear on a Settlement Statement for a single Operating Day. A Market Notice precedes settlement of ERS.

**9.1 Emergency Response Service Capacity Payment [NP 6.6. 11.1]**

**Description**

Each Contract Period, ERCOT pays the QSE representing ERS Resources, using a two-pass process for each of the 4 ERS service types. Payment is a single value for the Contract Period.

**Calculations**

$

**Self-Procured Amount**

**SPAMT *qc(tp)d***

**$**

**Competitive Amount**

**COMPAMT *qc(tp)d***

**$**

**Emergency Response Capacity Payment**

**ERSPAMT *qc(tp)d***

**= +**

$

**ERS Payment QSE Total per QSE**

**ERSPAMTQSETOT*qcd***

**=** 

$

**Emergency Response Capacity Payment**

**ERSPAMT *qc(tp)d***

$

**ERS Payment Amount Total per ERS Contract Period per Time Period per Service Type**

**ERSPAMTTTOT*c(tp)d***

**=** 

$

**Emergency Response Capacity Payment**

**ERSPAMT *qc(tp)d***

The above variables are defined as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Unit | Description | Interval Frequency | Extract Source | Shadow |
| ERSPAMT *qc(tp)d* | $ | *ERS Payment Amount per QSE per ERS Contract Period per ERS Time Period per ERS Service Type*—ERS total payment to QSE *q* for ERS Contract Period *c,* and ERS Time Period *tp* and ERS service type *d*. | Contract Period |  | Yes |
| COMPAMT *qc(tp)d* | $ | *Competitive Amount per QSE per ERS Contract Period per ERS Time Period per ERS Service Type*—ERS total payment to QSE *q* for all competitively procured ERS Resources delivered for ERS Contract Period *c*, and ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| SPAMT *qc(tp)d* | $ | *Self-Procured Amount* *per QSE per ERS Contract Period per ERS Time Period per ERS Service Type*—ERS total payment to QSE *q* for its self-provided ERS Resources for ERS Contract Period *c*, ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| ERSPAMTQSETOT *q* | $ | *ERS Payment QSE Total per QSE*—The total ERS total payments to QSE *q*. |  |  |  |
| ERSPAMTTOT *c(tp)d* | $ | *ERS Payment Amount Total per ERS Contract Period per ERS Time Period per ERS Service Type*—Total of all ERS payments for ERS Contract Period *c*, ERS Time Period *tp* and ERS service type *d*. |  | Market Notice |  |
| ERSPRICE *qc(tp)d* | $/MW per hour | *Price of the Highest Offer Cleared per QSE per ERS Contract Period per ERS Time Period per ERS Service Type*—Contracted clearing price for QSE *q* for ERS Contract Period *c*, ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| COMPDELMW *qce(tp)d* | MW | *Competitive Delivered MW per QSE per ERS Contract Period per ERS Resource per ERS Time Period per ERS Service Type*—ERS capacity delivered by the QSE *q* for ERS Contract Period *c,* competitive ERS Resource *e*, ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| TPH *c(tp)d* | Hours | Hours in ERS Time Period *tp* for ERS Contract Period *c*, and ERS service type *d*.  For ERS Resources *e* whose obligation is not exhausted in an ERS Contract Period *c,* the number of hours in that ERS Time Period *tp* in that ERS Contract Period *c*.  For ERS Resources *e* whose obligation is exhausted in an ERS Contract Period *c*, the number of hours in that ERS Time Period *tp* from the beginning of the ERS Contract Period *c* to the end of the ERS Standard Contract Term. |  |  |  |
| ERSTESTPF *qred* | None | *ERS Test Performance Factor per QSE per ERS Standard Contract Term per ERS Resource per ERS Service Type*—Test performance factor for QSE *q* in ERS Standard Contract Term *r* for ERS Resource *e* and ERS service type *d* as calculated pursuant to Section 8.1.3.3.1, Suspension of Qualification of Non-Weather-Sensitive Emergency Response Service Resources and/or their Qualified Scheduling Entities. |  |  |  |
| SPDELMW *qc(tp)d* | MW | *Self-Provided Delivered MW* *per QSE per ERS Contract Period per ERS Resource per ERS Time Period per ERS Service Type*—Total ERS capacity self-provided and delivered by QSE *q* for ERS Contract Period *c,* ERS Resource *e*, ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| COMPDELQSEMW *qc(tp)d* | MW | *Competitive Delivered MW Total per QSE per ERS Contract Period per ERS Time Period per ERS service type*—Total ERS competitive capacity delivered by QSE *q* for ERS Contract Period *c* and ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| COMPDELMWTOT *c(tp)d* | MW | *Competitive Delivered MW Total per ERS Contract Period per ERS Time Period per ERS Service Type*—Total ERS competitive capacity delivered by all QSEs for ERS Contract Period *c*, ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| SPDELQSEMW *qc(tp)d* | MW | *Self-Provision Delivered Total MW per QSE per ERS Contract Period per ERS Time Period per ERS Service Type*—Total ERS self-provision capacity delivered by QSE *q* for ERS Contract Period *c* and ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| SPDELMWTOT *c(tp)d* | MW | *Self-Provision Delivered Total MW per ERS Contract Period per ERS Time Period per ERS Service Type*—Total ERS self-provision capacity delivered by all QSE *q* for ERS Contract Period *c* and ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| COMPOFFERMW *qce(tp)d* | MW | *Competitive Offered MW Total per QSE per ERS Contract Period per ERS Resource per ERS Time Period per ERS Service Type*—ERS capacity offered by QSE *q* for ERS Contract Period *c*, competitive ERS Resource *e* and ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| ERSAFWT*qcd* | None | *Availability Settlement weighting factor per QSE per ERS Contract Period per ERS Service Type*—The weighting factor for QSE *q* for ERS Contract Period *c*, and ERS service type *d* to apply for Settlement as calculated pursuant to Section 8.1.3.1.3.3, Contract Period Availability Calculations for Emergency Response Service Resources. |  |  |  |
| ERSAFCOMB *qrd* | None | *Time- and Capacity-Weighted ERS Availability Factor per QSE per ERS Standard Contract Term per ERS Service Type*—The availability factor for QSE *q* for ERS Standard Contract Term *r* and ERS service type *d,* as calculated pursuant to Section 8.1.3.3, Payment Reductions and Suspension of Qualification of Emergency Response Service Resources and/or their Qualified Scheduling Entities. |  |  |  |
| 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. |  |  |  |
| SPCUL *qc(tp)d* | MW | *Self-Provision Capacity Upper Limit per QSE per ERS Contract Period per ERS Time Period per ERS Service Type*—The ERS Self-Provision Capacity Upper Limit calculated by ERCOT for a self-providing QSE for ERS Contract Period *c* and ERS Time Period *tp* by simultaneously solving for all QSEs’ obligations with the constraint that each QSE’s ERS Self-Provision Capacity Upper Limit does not exceed its obligation. |  |  |  |
| SPOFFERMW *qce(tp)d* | MW | *Self-Provision Offer MW per QSE per ERS Contract Period per ERS Resource per ERS Time Period per ERS Service Type*—ERS capacity offered as self-provision by QSE *q* for ERS Contract Period *c*, ERS Resource *e*, ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| ERSLRS *qc(tp)* | None | *ERS Load Ratio Share per QSE per ERS Contract Period per ERS Time Period per ERS Service Type*—ERS LRS for QSE *q* for ERS Contract Period *c*, ERS Time Period *tp* and ERS service type *d,* calculated starting with the first hour of the ERS Contract Period and ending with the earlier of the last hour of the ERS Contract Period or the hour containing the recall instruction in an ERS deployment event that results in the exhaustion of a QSE portfolio’s ERS obligation. If the resultant QSE-level share is negative, the QSE’s share will be set to zero and all other QSE shares will be adjusted on a pro rata basis such that the sum of all shares is equal to one. |  |  |  |
| *q* | None | A QSE. |  |  |  |
| *c* | None | ERS Contract Period. |  |  |  |
| *r* | None | ERS Standard Contract Term. |  |  |  |
| *tp* | None | Hours in an ERS Time Period. |  |  |  |
| *e* | None | An ERS Resource procured from a QSE for an ERS Contract Period. |  |  |  |
| *co* | None | The number of competitive ERS Resources procured from a QSE for an ERS Contract Period. |  |  |  |
| *s* | None | The number of self-provided ERS Resources procured from a QSE for an ERS Contract Period. |  |  |  |
| *n* | None | The number of QSEs for an ERS Contract Period. |  |  |  |
| *d* | None | ERS service type (Weather-Sensitive ERS-10, Non-Weather-Sensitive ERS-10, Weather-Sensitive ERS-30, or Non-Weather-Sensitive ERS-30). |  |  |  |

**9.2 Emergency Response Service Capacity Charge [NP 6.6.11.2]**

**Description**

Uplift costs for an ERS service type and ERS Contract Period are based on the LRS of each QSE during each ERS Time Period in an ERS Contract Period. A QSE’s LRS for an ERS Time Period shall be the QSE’s total Load for the ERS Time Period divided by the total ERCOT Load in the ERS Time Period. LRS will use the latest Settlement Load for each Operating Day and the resettlement will use the True-Up Load for each Operating Day in the ERS Contract Period.

**Calculations**

%

**ERS Load Ratio Share per QSE per Contract Period per Time Period for Service Type**

**ERSLRS*qc(tp)d***

$

**Load-Allocated ERS Amount per QSE ERS Contract Period per Time Period per Service Type**

**LAERSAMT *qc(tp)d***

$

**ERS Payment Amount Total per ERS Contract Period per Time Period per Service Type**

**ERSPAMTTTOT*c(tp)d***

**= X**

= 

$

**Load-Allocated ERS Amount per QSE ERS Contract Period per Time Period per Service Type**

**LAERSAMT *qc(tp)d***

$

**Load-Allocated ERS Amount per QSE TOTAL**

**LAERSAMTQSETOT *q***

The above variables are defined as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variable | Unit | Description | Frequency | Extract | Shadow |
| ERSPAMTTOT *c(tp)d* | $ | *ERS Payment Amount Total per ERS Contract Period per ERS Time Period per ERS Service Type*—Total of all ERS payments for ERS Contract Period *c,* ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| ERSLRS *qc(tp)d* | None | *ERS Load Ratio Share per QSE per ERS Contract Period per ERS Time Period per ERS Service Type*—ERS LRS for QSE *q* for ERS Contract Period *c,* ERS Time Period *tp* and ERS service type *d,* calculated starting with the first hour of the ERS Contract Period and ending with the earlier of the last hour of the ERS Contract Period or the hour containing the recall instruction in an ERS deployment event that results in the exhaustion of a QSE portfolio’s ERS obligation. If the resultant QSE-level share is negative, the QSE’s share will be set to zero and all other QSE shares will be adjusted on a pro rata basis such that the sum of all shares is equal to one. |  |  |  |
| LAERSAMT *qc(tp)d* | $ | *Load-Allocated ERS Amount* *per QSE per ERS Contract Period per ERS Time Period per ERS Service Type*—ERS charge for QSE *q* for ERS Contract Period *c,* ERS Time Period *tp* and ERS service type *d*. |  |  |  |
| LAERSAMTQSETOT *q* | $ | *Load-Allocated ERS Amount QSE Total per QSE*—The total ERS charge for QSE *q*. |  |  |  |
| *q* | None | A QSE. |  |  |  |
| *c* | None | ERS Contract Period. |  |  |  |
| *tp* | None | An ERS Time Period. |  |  |  |
| *d* | None | ERS service type (Weather-Sensitive ERS-10, Non-Weather-Sensitive ERS-10, Weather-Sensitive ERS-30, or Non-Weather-Sensitive ERS-30). |  |  |  |