|  |  |  |  |
| --- | --- | --- | --- |
| NPRR Number | [1238](https://www.ercot.com/mktrules/issues/NPRR1238) | NPRR Title | Voluntary Registration of Loads with Curtailable Load Capabilities |
| Date of Decision | June 12, 2025 |
| Action | Recommended Approval |
| Timeline  | Normal |
| Estimated Impacts | Cost/Budgetary: Between $700k and $1.0MProject Duration: 10 to 14 months |
| Proposed Effective Date | Upon system implementation |
| Priority and Rank Assigned | Priority – 2026; Rank – 4535  |
| Nodal Protocol Sections Requiring Revision  | 2.1, Definitions2.2, Acronyms and Abbreviations6.5.7.3.1, Determination of Real-Time On-Line Reliability Deployment Price Adder6.5.9.4.1, General Procedures Prior to EEA Operations16.20, Designation of a Qualified Scheduling Entity by a Voluntary Early Curtailment Load (new)23, Form T, Voluntary Early Curtailment Load Designation Form (new) |
| Related Documents Requiring Revision/Related Revision Requests | Nodal Operating Guide Revision Request (NOGRR) 265, Related to NPRR1238, Voluntary Registration of Loads with Curtailable Load Capabilities |
| Revision Description | This Nodal Protocol Revision Request (NPRR) introduces a new category of Voluntary Early Curtailment Load (VECL) and establishes a process by which Loads may operate as a VECL so that they can be accounted for differently in Load shed tables than other Loads. |
| Reason for Revision |  [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 1 – Be an industry leader for grid reliability and resilience [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 2 - Enhance the ERCOT region’s economic competitiveness with respect to trends in wholesale power rates and retail electricity prices to consumers [Strategic Plan](https://www.ercot.com/files/docs/2023/08/25/ERCOT-Strategic-Plan-2024-2028.pdf) Objective 3 - Advance ERCOT, Inc. as an independent leading industry expert and an employer of choice by fostering innovation, investing in our people, and emphasizing the importance of our mission General system and/or process improvement(s) Regulatory requirements ERCOT Board/PUCT Directive*(please select ONLY ONE – if more than one apply, please select the ONE that is most relevant)* |
| Justification of Reason for Revision and Market Impacts | This NPRR establishes a process by which Loads may inform ERCOT that the Load consumer is willing to curtail in the event of a Physical Responsive Capability (PRC) shortfall as defined in Section 6.5.9.4.1 in order to help utilities and ERCOT properly account for Load shed obligations.This process is necessary so that utilities with large Loads that will be Off-Line during emergency operations don’t impact that utility’s expected Load shed obligations.  For example, a utility that typically has 200 MW of Demand may have a new Customer that is adding 800 MW of Demand.  If they are expected to shed 5% of their Load during an emergency, then the Load shed obligation would increase from 10 MW to 50 MW. If the new 800 MW customer will actually be Off-Line, then it should have no incremental impact on the utility’s Load shed obligation. |
| PRS Decision | On 7/18/24, PRS voted unanimously to table NPRR1238 and refer the issue to ROS and WMS. All Market Segments participated in the vote.On 3/12/25, PRS voted to recommend approval of NPRR1238 as amended by the 2/25/25 Oncor comments. There was one opposing vote from the Independent REP (IREP) (Just Energy) Market Segment, and one abstention from the Consumer (Occidental) Market Segment. All Market Segments participated in the vote.On 4/9/25, PRS voted unanimously to table NPRR1238. All Market Segments participated in the vote.On 5/14/25, PRS voted to endorse and forward to TAC the 4/9/25 PRS Report as amended by the 5/7/25 ERCOT comments and 5/13/25 Impact Analysis for NPRR1238 with a recommended priority of 2026 and rank of 4535. There were two abstentions from the Consumer (Occidental) and Independent Generator (Eolian) Market Segments. All Market Segments participated in the vote.  |
| Summary of PRS Discussion | On 7/18/24, the sponsor provided an overview of NPRR1238 and confirmed that there was no longer a need for urgency. Participants requested that NPRR1238 be tabled and referred to ROS and WMS for further review by Operations Working Group (OWG) and Wholesale Market Working Group (WMWG), respectively.On 3/12/25, participants reviewed the 2/25/25 Oncor comments. The sponsor cited continued economic and compliance risk while NPRR1238 remains pending; requested that PRS recommend approval in effort to reach the May 28, 2025 TAC meeting; and expressed willingness to withdraw NPRR1238 should Senate Bill 6 (SB6) resolve the compliance issue, once finalized. Some participants debated SB6’s anticipated effect on NPRR1238 and questioned the merit of spending limited ERCOT resources developing an Impact Analysis when SB6 might ultimately negate NPRR1238’s concept.On 4/9/25, PRS reviewed the 3/31/25 ERCOT comments. Some participants expressed concern that further delay will prevent NPRR1238 from being approved in time for the 2025 winter season.On 5/14/25, PRS reviewed the 5/7/25 ERCOT comments and 5/13/25 Impact Analysis. The sponsor emphasized shared compliance risks if NPRR1238 is not approved and cited issues remaining in SB6’s development. Participants discussed the cost benefit of NPRR1238; and whether it should be tabled pending SB6 resolution. The priority and rank and continued evaluation of NPRR1238’s impacts were discussed.  |
| TAC Decision | On 5/28/25, TAC voted unanimously to table NPRR1238. All Market Segments participated in the vote.On 6/12/25, TAC voted unanimously to recommend approval of NPRR1238 as recommended by PRS in the 5/14/25 PRS Report as amended by the 6/5/25 TIEC comments and the 5/27/25 Revised Impact Analysis. All Market Segments participated in the vote. |
| Summary of TAC Discussion | On 5/28/25, TAC reviewed the items below. ERCOT cited potential discrepancy between NPRR1238 and SB6 language regarding ERCOT’s right to curtail large Loads ahead of Energy Emergency Alert (EEA) and stated their preference that TAC not recommend approval of NPRR1238 to the ERCOT Board until SB6 language is finalized per procedural norms. PUCT Staff expressed support of the 5/27/25 ERCOT comments. Participants acknowledged likely market impacts pending finalization of SB6 large Load language. Some participants debated whether NPRR1238 applies exclusively to flexible loads, citing a need for explicit language settling the fact. The sponsor reiterated urgency, requesting to implement NPRR1238 in time for 2026 summer season. The TAC Chair committed to holding a Special TAC meeting in order to consider latest SB6 language and determine further NPRR1238 action ahead of the June 24, 2025 ERCOT Board meeting.On 6/12/25, TAC reviewed the 6/5/25 TIEC comments, 6/10/25 GSEC comments, and the 6/11/25 ERCOT comments. |
| TAC Review/Justification of Recommendation |  Revision Request ties to Reason for Revision as explained in Justification  Impact Analysis reviewed and impacts are justified as explained in Justification Opinions were reviewed and discussed Comments were reviewed and discussed (if applicable) Other: (explain) |

|  |
| --- |
| **Opinions** |
| **Credit Review** | ERCOT Credit Staff and the Credit Finance Sub Group (CFSG) have reviewed NPRR1238 and do not believe that it requires changes to credit monitoring activity or the calculation of liability. |
| **Independent Market Monitor Opinion** | IMM has no opinion on NPRR1238. |
| **ERCOT Opinion** | ERCOT supports approval of NPRR1238. |
| **ERCOT Market Impact Statement** | ERCOT Staff has reviewed NPRR1238 and believes that it provides improvements by introducing a new category of VECL and establishing a process by which Loads may operate as a VECL so that they can be accounted for differently in Load shed tables than other Loads. |

|  |
| --- |
| Sponsor |
| Name | Joe Dan Wilson |
| E-mail Address | jwilson@gsec.coop |
| Company | GSEC |
| Phone Number | 806-349-5210 |
| Cell Number | 806-340-1214 |
| Market Segment | Cooperative |

|  |
| --- |
| **Market Rules Staff Contact** |
| **Name** | Jordan Troublefield |
| **E-Mail Address** | Jordan.Troublefield@ercot.com  |
| **Phone Number** | 512-248-6521 |

|  |
| --- |
| **Comments Received** |
| **Comment Author** | **Comment Summary** |
| ROS 071124 | Requested PRS table NPRR1238 for further review by OWG |
| ROS 080124 | Requested PRS continue to table NPRR1238 for further review by the OWG  |
| WMS 080724 | Requested PRS continue to table NPRR1238 for further review by the WMWG  |
| Oncor 081424 | Proposed edits regarding the Transmission Operator (TO) roles associated with VECLs  |
| ERCOT Steel Mills 103124 | Proposed edits excluding Emergency Response Service (ERS) providers from the definition of VECL as ERS providers are deployed separately in other sections of NPRR1238 |
| ERCOT 020625 | Proposed clarifying edits to NPRR1238 including removal and addition of various requirements |
| WMS 020725 | Advised PRS that WMS has concluded discussion of NPRR1238 and has no recommendation at this time |
| Oncor 022525 | Added TO as an entity from which written consent should be obtained if a Customer seeks to terminate its ECL registration |
| ROS 030625 | Endorsed NPRR1238 as amended by the 2/25/25 Oncor comments |
| ERCOT 031125 | Requested that the PRS table NPRR1238 pending the Texas Legislature’s consideration of SB6  |
| ERCOT 033125 | Proposed an alternative schedule for the development of an Impact Analysis for NPRR1238 prior to the May 14, 2025 PRS meeting |
| ERCOT 050725 | Proposed edits to remove language requiring ERCOT to notify TOs of the ECL deployment via an Extensible Markup Language (XML) message; and replaced language to clarify telemetry requirement |
| ERCOT 052725 | Requested that TAC table NPRR1238 until SB6 language has been finalized  |
| TIEC 060525 | Proposed edits clarifying that the registration of loads with curtailable load capabilities must be voluntary |
| GSEC 061025 | Expressed support for the 6/5/25 TIEC comments |
| ERCOT 061125 | Expressed support for NPRR1238 upon identifying anticipated use cases not appearing to raise a risk of conflict with the requirements of SB6; emphasized, in response to the 6/5/25 TIEC comments, that, while registration as an ECL (or VECL) may be voluntary, the performance requirements under the Protocols for customers that do elect such registration would not be voluntary  |

|  |
| --- |
| **Market Rules Notes** |

Please note the baseline language in the following section(s) has been updated to reflect the incorporation of the following NPRR(s) into the Protocols:

* NPRR1219, Methodology Revisions and New Definitions for the Report on Capacity, Demand and Reserves in the ERCOT Region (CDR) (incorporated 10/1/24)
	+ Section 3.2.6.2.1
	+ Section 6.5.9.4.1
* NPRR1245, Additional Clarifying Revisions to Real-Time Co-Optimization (incorporated 2/1/25)
	+ Section 6.5.7.3.1

Please note that the following NPRR(s) also propose revisions to the following Section(s):

* NPRR1214, Reliability Deployment Price Adder Fix to Provide Locational Price Signals, Reduce Uplift and Risk
	+ Section 6.5.7.3.1
* NPRR1235, Dispatchable Reliability Reserve Service as a Stand-Alone Ancillary Service
	+ Section 6.5.7.3.1
* NPRR1290, Gap Resolutions and Clarifications for the Implementation of RTC+B
	+ Section 6.5.7.3.1

|  |
| --- |
| Proposed Protocol Language Revision |

## 2.1 DEFINITIONS

**Voluntary Early Curtailment Load (VECL)**

A Load interconnected to the ERCOT System that has been registered with ERCOT as a VECL for the purpose of curtailing in response to an ERCOT instruction when necessary to maintain system reliability.

## 2.2 ACRONYMS AND ABBREVIATIONS

**VECL** Voluntary Early Curtailment Load

**6.5.7.3.1Determination of Real-Time On-Line Reliability Deployment Price Adder**

(1) The following categories of reliability deployments are considered in the determination of the Real-Time On-Line Reliability Deployment Price Adder:

(a) RUC-committed Resources, except for those whose QSEs have opted out of RUC Settlement in accordance with paragraph (14) of Section 5.5.2, Reliability Unit Commitment (RUC) Process;

(b) RMR Resources that are On-Line, including capacity secured to prevent an Emergency Condition pursuant to paragraph (4) of Section 6.5.1.1, ERCOT Control Area Authority;

(c) Deployed Load Resources other than CLRs;

(d) Deployed ERS;

(e) Real-Time DC Tie imports during an EEA where the total adjustment shall not exceed 1,250 MW in a single interval;

(f) Real-Time DC Tie exports to address emergency conditions in the receiving electric grid;

(g) Energy delivered to ERCOT through registered Block Load Transfers (BLTs) during an EEA;

(h) Energy delivered from ERCOT to another power pool through registered BLTs during emergency conditions in the receiving electric grid;

(i) Deployed Voluntary Early Curtailment Load (VECL), as described in Section 6.5.9.4.1, General Procedures Prior to EEA Operations; and

(j) ERCOT-directed firm Load shed during EEA Level 3, as described in paragraph (3) of Section 6.5.9.4.2, EEA Levels.

(2) The Real-Time On-Line Reliability Deployment Price Adder is an estimation of the impact to energy prices due to the above categories of reliability deployments. For intervals where there are reliability deployments as described in paragraph (1) above, after the two-step SCED process and also after the Real-Time On-Line Reserve Price Adder and Real-Time Off-Line Reserve Price Adder have been determined, the Real-Time On-Line Reliability Deployment Price Adder is determined as follows:

(a) For RUC-committed Resources with a telemetered Resource Status of ONRUC and for RMR Resources that are On-Line, set the LSL, LASL, and LDL to zero.

(b) Notwithstanding item (a) above, for RUC-committed Combined Cycle Generation Resources with a telemetered Resource Status of ONRUC that were instructed by ERCOT to transition to a different configuration to provide additional capacity, set the LSL, LASL, and LDL equal to the minimum of their current value and the COP HSL of the QSE-committed configuration for the RUC hour at the snapshot time of the RUC instruction.

(c) For all other Generation Resources excluding ones with a telemetered status of ONRUC, ONTEST, STARTUP, SHUTDOWN, and also excluding RMR Resources that are On-Line and excluding Generation Resources with a telemetered output less than 95% of LSL:

(i) Set LDL to the greater of Aggregated Resource Output - (60 minutes \* SCED Down Ramp Rate), or LASL; and

(ii) Set HDL to the lesser of Aggregated Resource Output + (60 minutes\*SCED Up Ramp Rate), or HASL.

(d) For all CLRs excluding ones with a telemetered status of OUTL:

(i) Set LDL to the greater of Aggregated Resource Output - (60 minutes \* SCED Up Ramp Rate), or LASL; and

(ii) Set HDL to the lesser of Aggregated Resource Output + (60 minutes\*SCED Down Ramp Rate), or HASL.

(e) Add the deployed MW from Load Resources that are not CLRs and that are providing RRS or ECRS to GTBD linearly ramped over the ten-minute ramp period and add the deployed MW from Load Resources that are not CLRs providing Non-Spin to GTBD linearly ramped over the 30-minute ramp period. The amount of deployed MW is calculated from the Resource telemetry and from applicable deployment instructions in Extensible Markup Language (XML) messages. ERCOT shall generate a linear bid curve defined by a price/quantity pair of $300/MWh for the first MW of Load Resources deployed and a price/quantity pair of $700/MWh for the last MW of Load Resources deployed in each SCED execution. After recall instruction, the restoration period length and amount of MW added to GTBD during the restoration period will be determined by validated telemetry and the type of Ancillary Service deployed from the Resource. The TAC shall review the validity of the prices for the bid curve at least annually.

(f) Add the deployed MW from VECL to GTBD linearly ramped over a 30-minute ramp period. The amount of deployed MW is calculated from the applicable deployment instructions in XML messages. ERCOT shall generate a linear bid curve defined by a price/quantity pair of $300/MWh for the first MW of VECL deployed and a price/quantity pair of $700/MWh for the last MW of VECL deployed in each SCED execution. After recall instruction, GTBD shall be adjusted to reflect restoration on a linear curve over a one-hour restoration period.

(g) Add the deployed MW from ERS to GTBD. The amount of deployed MW is determined from the XML messages and ERS contracted capacities for the ERS Time Periods when ERS is deployed. After recall, an approximation of the amount of un-restored ERS shall be used. After ERCOT recalls each group, GTBD shall be adjusted to reflect restoration on a linear curve over the assumed restoration period (“RHours”).

The above parameter is defined as follows:

| **Parameter** | **Unit** | **Current Value\*** |
| --- | --- | --- |
| RHours | Hours | 4.5 |
| \* Changes to the current value of the parameter(s) referenced in this table above may be recommended by TAC and approved by the ERCOT Board. ERCOT shall update parameter values on the first day of the month following ERCOT Board approval unless otherwise directed by the ERCOT Board. ERCOT shall provide a Market Notice prior to implementation of a revised parameter value.  |

(h) Add the MW from Real-Time DC Tie imports during an EEA to GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the ERCOT Operator.

(i) Subtract the MW from Real-Time DC Tie exports to address emergency conditions in the receiving electric grid from GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the receiving grid operator.

(j) Add the MW from energy delivered to ERCOT through registered BLTs during an EEA to GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the ERCOT Operator.

(k) Subtract the MW from energy delivered from ERCOT to another power pool through registered BLTs during emergency conditions in the receiving electric grid from GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the receiving grid operator.

(l) Perform a SCED with changes to the inputs in items (a) through (k) above, considering only Competitive Constraints and the non-mitigated Energy Offer Curves.

(m) Perform mitigation on the submitted Energy Offer Curves using the LMPs from the previous step as the reference LMP.

(n) Perform a SCED with the changes to the inputs in items (a) through (k) above, considering both Competitive and Non-Competitive Constraints and the mitigated Energy Offer Curves.

(o) Determine the positive difference between the System Lambda from item (n) above and the System Lambda of the second step in the two-step SCED process described in paragraph (10)(b) of Section 6.5.7.3, Security Constrained Economic Dispatch.

(p) Determine the amount given by the Value of Lost Load (VOLL) minus the sum of the System Lambda of the second step in the two step SCED process described in paragraph (10)(b) of Section 6.5.7.3 and the Real-Time On-Line Reserve Price Adder.

(q) The Real-Time On-Line Reliability Deployment Price Adder is the minimum of items (o) and (p) above except when ERCOT is directing firm Load shed during EEA Level 3. When ERCOT is directing firm Load shed during EEA Level 3 to either maintain sufficient PRC or stabilize grid frequency, as described in paragraph (3) of Section 6.5.9.4.2, the Real-Time On-Line Reliability Deployment Price Adder is the VOLL minus the sum of the System Lambda of the second step in the two-step SCED process described in paragraph (10)(b) of Section 6.5.7.3 and the Real-Time On-Line Reserve Price Adder. Once ERCOT is no longer directing firm Load shed, as described above, the Real-Time On-Line Reliability Deployment Price Adder will again be set as the minimum of items (o) and (p) above.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| ***[NPRR904, NPRR1006, NPRR1010, NPRR1014, NPRR1091, NPRR1105, NPRR1188, and NPRR1245: Replace applicable portions of Section 6.5.7.3.1 above with the following upon system implementation for NPRR904, NPRR1006, NPRR1014, NPRR1091, NPRR1105, or NPRR1188; or upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1010 and NPRR1245:]*****6.5.7.3.1Determination of Real-Time Reliability Deployment Price Adder**(1) The following categories of reliability deployments are considered in the determination of the Real-Time Reliability Deployment Price Adder for Energy, and the Real-Time Reliability Deployment Price Adders for Ancillary Services:(a) RUC-committed Resources, except for those whose QSEs have opted out of RUC Settlement in accordance with paragraph (14) of Section 5.5.2, Reliability Unit Commitment (RUC) Process;(b) RMR Resources that are On-Line, including capacity secured to prevent an Emergency Condition pursuant to paragraph (4) of Section 6.5.1.1, ERCOT Control Area Authority; (c) Deployed Load Resources other than CLRs;(d) Deployed ERS;(e) ERCOT-directed DC Tie imports during an EEA or transmission emergency where the total adjustment shall not exceed 1,250 MW in a single interval; (f) ERCOT-directed curtailment of DC Tie imports below the higher of DC Tie advisory import limit as of 0600 in the Day-Ahead or subsequent advisory import limit to address local transmission system limitations where the total adjustment shall not exceed 1,250 MW in a single interval;(g) ERCOT-directed curtailment of DC Tie imports below the higher of DC Tie advisory import limit as of 0600 in the Day-Ahead or subsequent advisory import limit due to an emergency action by a neighboring system operator during an emergency that is accommodated by ERCOT where the total adjustment shall not exceed 1,250 MW in a single interval;(h) ERCOT-directed DC Tie exports to address emergency conditions in the receiving electric grid where the total adjustment shall not exceed 1,250 MW in a single interval; (i) ERCOT-directed curtailment of DC Tie exports below the DC Tie advisory export limit as of 0600 in the Day-Ahead or subsequent advisory export limit during EEA, a transmission emergency, or to address local transmission system limitations where the total adjustment shall not exceed 1,250 MW in a single interval;(j) Energy delivered to ERCOT through registered Block Load Transfers (BLTs) during an EEA;(k) Energy delivered from ERCOT to another power pool through registered BLTs during emergency conditions in the receiving electric grid;(l) ERCOT-directed deployment of TDSP standard offer Load management programs;(m) ERCOT-directed deployment of distribution voltage reduction measures;(n) ERCOT-directed deployment of Off-Line Non-Spin;(o) ERCOT-directed firm Load shed during EEA Level 3, as described in paragraph (3) of Section 6.5.9.4.2, EEA Levels; and(p) Deployed Voluntary Early Curtailment Load (VECL) as described in Section 6.5.9.4.1, General Procedures Prior to EEA Operations.(2) The Real-Time Reliability Deployment Price Adder for Energy, and Real-Time Reliability Deployment Price Adders for Ancillary Services are estimations of the impact to energy prices and Real-Time MCPCs due to the above categories of reliability deployments. For intervals where there are reliability deployments as described in paragraph (1) above, the Real-Time Reliability Deployment Price Adder for Energy and Real-Time Reliability Deployment Price Adders for Ancillary Services are determined as follows:(a) For Off-Line Non-Spin Resources that are brought On-Line by ERCOT deployment instruction, RUC-committed Resources with a telemetered Resource Status of ONRUC and for RMR Resources that are On-Line:(i) Set the LSL and LDL to zero;(ii) Remove all Ancillary Service Offers; and(iii) For the first step of SCED, administratively set the Energy Offer Curve for the Resource at a value equal to the power balance penalty price for all capacity between 0 MW and the HSL of the Resource.(b) Notwithstanding item (a) above, for RUC-committed Combined Cycle Generation Resources with a telemetered Resource Status of ONRUC that were instructed by ERCOT to transition to a different configuration to provide additional capacity:(i) Set the LSL and LDL equal to the minimum of their current value and the COP HSL of the QSE-committed configuration for the RUC hour at the snapshot time of the RUC instruction;(ii) Set the maximum Ancillary Service capabilities of the Resource equal to the minimum of their current value and COP Ancillary Service capabilities of the QSE-committed configuration for the RUC hour at the snapshot time of the RUC instruction; and(iii) For the first step of SCED, administratively set the Energy Offer Curve for the Resource at a value equal to the power balance penalty price for the additional capacity of the Resource, defined as the positive difference between the Resource’s current telemetered HSL and the COP HSL of the QSE-committed configuration for the RUC hour at the snapshot time of the RUC instruction. (c) For all other Generation Resources excluding ones with a telemetered status of ONRUC, ONTEST, STARTUP, SHUTDOWN, and also excluding RMR Resources that are On-Line and excluding Generation Resources with a telemetered output less than 95% of LSL:(i) If the Generation Resource SCED Base Point is not at LDL, set LDL to the greater of Aggregated Resource Output - (60 minutes \* Normal Ramp Rate down), or LSL; and(ii) If the Generation Resource SCED Base Point is not at HDL, set HDL to the lesser of Aggregated Resource Output + (60 minutes \* Normal Ramp Rate up), or HSL. (d) For all On-Line ESRs:(i) If the ESR SCED Base Point is not at LDL, set LDL to the greater of Aggregated Resource Output - (60 minutes \* Normal Ramp Rate down), or LSL; and(ii) If the ESR SCED Base Point is not at HDL, set HDL to the lesser of Aggregated Resource Output + (60 minutes \* Normal Ramp Rate up), or HSL.(e) For all CLRs excluding ones with a telemetered status of OUTL, ONTEST, or ONHOLD:(i) If the CLR SCED Base Point is not at LDL, set LDL to the greater of Aggregated Resource Output - (60 minutes \* Normal Ramp Rate down), or LSL; and(ii) If the CLR SCED Base Point is not at HDL, set HDL to the lesser of Aggregated Resource Output + (60 minutes \* Normal Ramp Rate up), or HSL.(f) Add the deployed MW from Load Resources that are not CLRs and that are providing RRS or ECRS to GTBD linearly ramped over the ten-minute ramp period and add the deployed MW from Load Resources that are not CLRs providing Non-Spin to GTBD linearly ramped over the 30-minute ramp period. The amount of deployed MW is calculated from the Resource telemetry and from applicable deployment instructions in Extensible Markup Language (XML) messages. ERCOT shall generate a linear bid curve defined by a price/quantity pair of $300/MWh for the first MW of Load Resources deployed and a price/quantity pair of $700/MWh for the last MW of Load Resources deployed in each SCED execution. After recall instruction, the restoration period length and amount of MW added to GTBD during the restoration period will be determined by validated telemetry and the type of Ancillary Service deployed from the Resource. The TAC shall review the validity of the prices for the bid curve at least annually. (g) Add the deployed MW from VECL to GTBD linearly ramped over a 30-minute ramp period. The amount of deployed MW is calculated from the applicable deployment instructions in XML messages. ERCOT shall generate a linear bid curve defined by a price/quantity pair of $300/MWh for the first MW of VECL deployed and a price/quantity pair of $700/MWh for the last MW of VECL deployed in each SCED execution. After recall instruction, GTBD shall be adjusted to reflect restoration on a linear curve over a one-hour restoration period. (h) Add the deployed MW from ERS to GTBD. The amount of deployed MW is determined from the XML messages and ERS contracted capacities for the ERS Time Periods when ERS is deployed. After recall, an approximation of the amount of un-restored ERS shall be used. After ERCOT recalls each group, GTBD shall be adjusted to reflect restoration on a linear curve over the assumed restoration period (“RHours”).The above parameter is defined as follows:

| **Parameter** | **Unit** | **Current Value\*** |
| --- | --- | --- |
| RHours | Hours | 4.5 |
| \* Changes to the current value of the parameter(s) referenced in this table above may be recommended by TAC and approved by the ERCOT Board. ERCOT shall update parameter values on the first day of the month following ERCOT Board approval unless otherwise directed by the ERCOT Board. ERCOT shall provide a Market Notice prior to implementation of a revised parameter value.  |

(i) Add the MW from DC Tie imports during an EEA or transmission emergency, to address local transmission system limitations, or due to an emergency action by a neighboring system operator during an emergency that is accommodated by ERCOT to GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the ERCOT Operator.(j) Add the MW from DC Tie export curtailments during an EEA or transmission emergency, to address local transmission system limitations, or due to an emergency action by a neighboring system operator during an emergency that is accommodated by ERCOT to GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the ERCOT Operator. The MW added to GTBD associated with any individual DC Tie shall not exceed the higher of DC Tie advisory limit for exports on that tie as of 0600 in the Day-Ahead or subsequent advisory export limit minus the aggregate export on the DC Tie that remained scheduled following the Dispatch Instruction from the ERCOT Operator.(k) Subtract the MW from DC Tie exports to address emergency conditions in the receiving electric grid from GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the receiving grid operator. (l) Subtract the MW from DC Tie import curtailments to address local transmission system limitations or emergency conditions in the receiving electric grid from GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the receiving grid operator. The MW subtracted from GTBD associated with any individual DC Tie shall not exceed the higher of DC Tie advisory limit for imports on that tie as of 0600 in the Day-Ahead or subsequent advisory import limit minus the aggregate import on the DC Tie that remained scheduled following the Dispatch Instruction from the ERCOT Operator.(m) Add the MW from energy delivered to ERCOT through registered BLTs during an EEA to GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the ERCOT Operator.(n) Subtract the MW from energy delivered from ERCOT to another power pool through registered BLTs during emergency conditions in the receiving electric grid from GTBD. The amount of MW is determined from the Dispatch Instruction and should continue over the duration of time specified by the receiving grid operator.(o) Add the deployed MWs from TDSP standard offer Load management programs to GTBD, if ERCOT instructs TDSPs to deploy their standard offer Load management programs. The amount of deployed MW is the value ERCOT provided for all TDSP standard offer Load management programs in the most current May Report on Capacity, Demand and Reserves in the ERCOT Region (CDR), unless modified as specified in this paragraph. If ERCOT is informed that all or a portion of a TDSP’s standard offer Load management program has been fully exhausted, or has been expanded as the result of a Public Utility Commission of Texas (PUCT) proceeding, ERCOT will remove the associated MW value of any exhausted capacity from the amount of deployed MW or, in the case of an expansion, ERCOT will request an updated MW value from the relevant TDSPs to use in place of the May CDR in the ERCOT Region value for that year. The initial value ERCOT will use for deployed MW under this paragraph for each calendar year, as well as any subsequent changes to this value, will be communicated to Market Participants in a Market Notice. After recall, an approximation of the amount of un-restored TDSP standard offer Load management programs shall be used. GTBD shall be adjusted to reflect restoration on a linear curve over the assumed restoration period (“RHours”) defined by item (h) above. (p) Perform a SCED with changes to the inputs in items (a) through (n) above, considering only Competitive Constraints and the non-mitigated Energy Offer Curves.(q) Perform mitigation on the submitted Energy Offer Curves using the LMPs from the previous step as the reference LMP.(r) Perform a SCED with the changes to the inputs in items (a) through (n) above, considering both Competitive and Non-Competitive Constraints and the mitigated Energy Offer Curves.(s) The Real-Time Reliability Deployment Price Adder for Energy is equal to the positive difference between the System Lambda from item (r) above and the System Lambda of the second step in the two-step SCED process described in paragraph (10)(b) of Section 6.5.7.3, Security Constrained Economic Dispatch, except when ERCOT is directing firm Load shed during EEA Level 3. When ERCOT is directing firm Load shed during EEA Level 3 to either maintain sufficient PRC or stabilize grid frequency, as described in paragraph (3) of Section 6.5.9.4.2, the Real-Time Reliability Deployment Price Adder for Energy is the VOLL used to determine the Ancillary Service Demand Curves (ASDCs) for the Real-Time Market (RTM) minus the System Lambda of the second step in the two-step SCED process described in paragraph (10)(b) of Section 6.5.7.3.(t) For each individual Ancillary Service, the Real-Time Reliability Deployment Price Adder for Ancillary Service is equal to the positive difference between the MCPC for that Ancillary Service from item (r) above and the MCPC for that Ancillary Service, except when ERCOT is directing firm Load shed during EEA Level 3. When ERCOT is directing firm Load shed during EEA Level 3 to either maintain sufficient PRC or stabilize grid frequency, as described in paragraph (3) of Section 6.5.9.4.2, the Real-Time Reliability Deployment Price Adder for Ancillary Service is the maximum value on the ASDC for the Ancillary Service minus the MCPC for that Ancillary Service.  |

6.5.9.4.1 General Procedures Prior to EEA Operations

(1) Prior to declaring EEA Level 1 detailed in Section 6.5.9.4.2, EEA Levels, ERCOT may perform the following operations consistent with Good Utility Practice:

(a) Provide Dispatch Instructions to QSEs for specific Resources to operate at an Emergency Base Point to maximize Resource deployment so as to increase PRC levels on other Resources;

(b) Commit specific available Resources as necessary that can respond in the timeframe of the emergency. Such commitments will be settled using the HRUC process;

(c) Start RMR Units available in the time frame of the emergency. RMR Units should be loaded to full capability;

(d) Utilize available Resources providing RRS, ECRS, and Non-Spin services as required;

(e) Instruct TSPs and DSPs or their agents to reduce Customer Load by using existing, in-service distribution voltage reduction measures if ERCOT determines that the implementation of these measures could help avoid entering into EEA and ERCOT does not expect to need to use these measures to reduce the amount of Load shedding that may be needed in EEA Level 3. A TSP, DSP, or their agent shall implement these instructions if distribution voltage reduction measures are available and already installed. If the TSP, DSP, or their agent determines in their sole discretion that the distribution voltage reduction would adversely affect reliability, the voltage reduction measure may be reduced, modified, or otherwise changed from maximum performance to a level of exercise that has no negative impact to reliability; and

(f) ERCOT shall use the PRC and system frequency to determine the appropriate Emergency Notice and EEA levels.

(2) When PRC falls below 3,100 MW and is not projected to be recovered above 3,100 MW within 30 minutes following the deployment of Non-Spin, ERCOT may deploy some or all Voluntary Early Curtailment Loads (VECLs) via an Extensible Markup Language (XML) message, as described in Nodal Operating Guide Section 4.5.3.4, Qualified Scheduling Entity VECL Load reduction Obligation, in order to maintain or restore 3,100 MW of PRC to the greatest extent possible.

(a) VECLs may be deployed at any time in a Settlement Interval at the discretion of ERCOT operators.

(b) Upon deployment of any amount of VECLs, ERCOT shall notify all Market Participants via an operations message that such deployment has been made and shall specify the MW capacity of VECL deployed.

(c) ERCOT shall notify QSEs of the VECLs deployment via an XML message. The deployment time within the ERCOT XML deployment message shall initiate the VECL deployment and the VECL ramp period.

(d) Upon receipt of a VECL deployment, QSEs shall instruct their VECLs to reduce consumption without delay in a time period not to exceed 30 minutes from the start of the VECL ramp period, and the deployed VECLs shall comply with those instructions.

(e) If a VECL fails to comply with a deployment instruction, ERCOT may instruct the applicable TO to remotely disconnect the VECL. If a VECL that fails to comply with a deployment instruction is co-located with an ERCOT Resource, ERCOT may instruct the Customer’s QSE to remotely disconnect the VECL, in which case the QSE shall ensure that the VECL is promptly disconnected from the ERCOT System.

(f) ERCOT shall notify QSEs of the termination of the VECLs deployment via an XML recall message. The ERCOT XML recall message shall represent the official notice of the VECLs recall.

(i) If ERCOT has instructed the interconnecting TO to disconnect a VECL for failure to comply with a deployment instruction, ERCOT will also notify the TO once the VECL deployment has been terminated, so that the VECL can be reconnected.

(g) Upon termination of the VECLs deployment, any VECL shall not increase consumption at a rate exceeding 20% per minute.

(h) Upon termination of VECLs deployment, ERCOT shall notify all Market Participants via an operations message that such deployment has been terminated and shall specify the MW capacity of VECLs recalled.

(3) When PRC falls below 3,000 MW and is not projected to be recovered above 3,000 MW within 30 minutes following the deployment of Non-Spin and all VECL, ERCOT may deploy available contracted ERS-10 and ERS-30 via an XML message. The deployment time within the ERCOT XML deployment message shall represent the beginning of the ERS-10 and ERS-30 ramp periods.

(a) ERS-10 and ERS-30 may be deployed at any time in a Settlement Interval. ERS-10 and ERS-30 may be deployed either simultaneously or separately, and in any order, at the discretion of ERCOT operators.

(b) Upon deployment, QSEs shall instruct their ERS Resources in ERS-10 and ERS-30 to perform at contracted levels consistent with the criteria described in Section 8.1.3.1.4, Event Performance Criteria for Emergency Response Service Resources, until either ERCOT releases the ERS-10 and ERS-30 deployment or the ERS-10 and ERS-30 Resources have reached their maximum deployment time.

(c) ERCOT shall notify QSEs of the recall of ERS-10 and ERS-30 via an XML message. The recall time within the ERCOT XML message shall represent the official notice of ERS-10 and ERS-30 recall.

(d) Upon release, an ERS Resource shall return to a condition such that it is capable of meeting its ERS performance requirements as soon as practical, but no later than ten hours following the release.

(4) When a Watch is issued for PRC below 3,000 MW and ERCOT expects system conditions to deteriorate to the extent that an EEA Level 2 or 3 may be experienced, ERCOT shall evaluate constraints active in SCED and determine which constraints have the potential to limit generation output.

(a) Upon identification of such constraints, ERCOT shall coordinate with the TSPs that own or operate the overloaded Transmission Facilities associated with those constraints, as well as the Resource Entities whose generation output may be limited, to determine whether:

|  |
| --- |
| [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) Upon identification of such constraints, ERCOT shall coordinate with the TSPs and DCTOs that own or operate the overloaded Transmission Facilities associated with those constraints, as well as the Resource Entities whose generation output may be limited, to determine whether: |

(i) A 15-Minute Rating is available to allow for additional transmission capacity for use in congestion management, if an EEA Level 2 or 3 is declared, and post-contingency actions can be taken within 15 minutes to return the flow to within the Emergency Rating. Such actions may include, but are not limited to, reducing the generation that increased output as a result of enforcing the 15-Minute Rating rather than the Emergency Rating;

(ii) Post-contingency loading of the Transmission Facilities is expected to be at or below Normal Rating within two hours; or

(iii) Additional transmission capacity could allow for additional output from a limited Generation Resource by taking one of the following actions:

(A) Restoring Transmission Elements that are out of service;

(B) Reconfiguring the transmission system; or

(C) Making adjustments to phase angle regulator tap positions.

If ERCOT determines that one of the above-mentioned actions allows for additional output from a limited Generation Resource, ERCOT may instruct the TSPs to take the action(s) during the Watch to allow for additional output from the limited Generation Resource.

(b) ERCOT shall also coordinate with TSPs who own and operate the Transmission Facilities associated with the double-circuit contingencies for the constraints identified above to determine whether the double-circuit failures are at a high risk of occurring due to system conditions, which may include: severe weather conditions forecasted by ERCOT in the vicinity of the double circuit, weather conditions that indicate a high risk of insulator flashover on the double circuit, repeated Forced Outages of the individual circuits that are part of the double circuit in the preceding 48 hours, or fire in progress in the right of way of the double circuit.

(c) The actions detailed in this Section shall be supplemental to the development and maintenance of CMPs as otherwise directed by the Protocols or Operating Guides.

(5) When a Watch is issued for PRC below 3,000 MW, QSEs shall suspend any ongoing ERCOT-required Resource performance testing.

***16.20 Designation of a Qualified Scheduling Entity by a Voluntary Early Curtailment Load***

(1) A Customer that is willing to curtail its Load during the conditions described in paragraph (3), below, and that has secured the consent of each of its interconnecting Transmission and/or Distribution Service Providers (TDSPs) and the Transmission Operator (TO) that represents each of those TDSPs may register its Load as a Voluntary Early Curtailment Load (VECL) using Section 23, Form T, Voluntary Early Curtailment Load Designation Form.

(a) A Load shall not be registered as a VECL if:

(i) it is registered as a Load Resource;

(ii) it is participating as an Emergency Response Service (ERS) Resource; or

(iii) it is part of an aggregation that is registered as a Load Resource or as an ERS Resource.

(b) A Customer whose Load is registered as a VECL shall not:

1. register the same Load as a Load Resource;
2. include that Load in a participating ERS Resource; or

(iii) include that Load in an aggregation that is proposed for registration as a Load Resource or as an ERS Resource.

(2) A Customer electing to register its Facility as a VECL shall designate a Qualified Scheduling Entity (QSE) that will provide accurate telemetry to ERCOT for the following values:

(a) Current VECL Demand in MW; and

(b) VECL deployment instruction issued by the QSE to the Customer in MW.

The QSE shall timely instruct the VECL to reduce consumption consistent with ERCOT instructions in the event of a VECL deployment as described in Section 6.5.9.4.1, General Procedures Prior to EEA Operations. The VECL’s QSE designation must be submitted to ERCOT no later than 45 days prior to the VECL’s Network Operations Model change date, as described in Section 3.10.1, Time Line for Network Operations Model Changes.

(3) A Customer with one or more VECLs may change its designated QSE with written notice and effective date to ERCOT no later than 45 days prior to the effective date. The Customer shall maintain a QSE at all times.

(4) If the Customer intends to be represented by a different QSE, the Customer shall provide the name of the newly designated QSE to ERCOT along with a written statement from the designated QSE acknowledging that the QSE accepts responsibility for the accurate telemetry and timely instruction to the VECL in the event of a VECL deployment under these Protocols (Section 23, Form T).

(5) A Customer may terminate its VECL registration only with the written consent of each of its interconnecting TDSPs and its TO. The Customer may request termination of its VECL registration by submitting a completed Voluntary Early Curtailment Load Designation Form, that includes the acknowledgement of the Customer and each interconnecting TDSP no later than 45 days prior to the proposed effective date of the change.

(6) For each VECL:

(a) The designated QSE shall install all telemetry required by these Protocols for the requesting Customer and schedule point-to-point data verification with ERCOT.

(b) The designated QSE shall submit telemetry data descriptions to ERCOT to meet ERCOT’s normal model update process.

(c) The designated QSE for a Resource co-located with a VECL must submit any changes in telemetry on behalf of the Customer according to Section 3.3.2.1, Information to Be Provided to ERCOT.

(d) The interconnecting Transmission Service Provider (TSP) must submit any changes in system topology on behalf of the VECL according to Section 3.3.2.1.

(e) The effective date for the newly designated QSE, TO, or TDSP shall be in accordance with Section 3.10.1.

(f) ERCOT may request the Customer to develop a transition implementation plan to be approved by ERCOT that sets appropriate deadlines for completion of all required data and telemetry verification and cutover testing activities with ERCOT.

**ERCOT Nodal Protocols**

**Section 23**

**Form T: Voluntary Early Curtailment Load Designation Form**

**TBD**

Date Received: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Voluntary Early Curtailment Load Designation Form**

The Notification must be signed, notarized and delivered to ERCOT. Delivery may be accomplished via email to MPRegistration@ercot.com (if a scanned copy) or via facsimile (Attention: Market Participant Registration) at (512) 225-7079. ERCOT may request additional information as reasonably necessary to support operations under the ERCOT Protocols.

The Customer identified below confirms that it wishes to:

[ ]  register as a Voluntary Early Curtailment Load (VECL)

[ ]  terminate its registration as a VECL

**For a Customer registering as a VECL:**

This form must be acknowledged by Customer, Qualified Scheduling Entity (QSE), each interconnecting Transmission and/or Distribution Service Provider (TDSP), and each interconnecting TDSP’s Transmission Operator (TO).

By signing below, each Entity confirms as follows:

The Customer identified below has designated the QSE identified below to represent the Customer for the purpose of providing accurate telemetry of the Customer’s Load to ERCOT at each of the designated Electric Service Identifier(s) (ESI ID(s)) and timely instruction to the Customer to cease consumption consistent with ERCOT instructions in the event of a VECL deployment.

The QSE, designated below, hereby acknowledges that it represents the Customer and that it is responsible for providing accurate telemetry of the Customer’s Load to ERCOT and timely instructing the Customer to cease consumption consistent with ERCOT instructions in the event of a VECL deployment pursuant to the ERCOT Protocols.

If the VECL is co-located with an ERCOT Resource, the QSE identified below confirms that it has the capability to remotely disconnect the Customer if it fails to comply with a VECL deployment instruction.

The Customer’s TO and interconnecting TDSP(s), identified below, acknowledge and consent to the Customer’s registration with ERCOT as a VECL.

The requested effective date for such representation or termination is:      [[1]](#footnote-1)\*\*

**For a Customer requesting termination of its registration as a VECL:**

This form must be acknowledged by Customer and each of its interconnecting TDSPs.

The completed form should be submitted to ERCOT via at MPRegistration@ercot.com.

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Acknowledgment by **QSE**:

|  |  |
| --- | --- |
| Signature of Authorized Representative (AR) for QSE: |  |
| Printed Name of AR: |       |
| Email Address of AR: |       |
| Date: |       |
| Name of Designated QSE: |       |
| Data Universal Numbering System (DUNS) of Designated QSE: |       |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

Acknowledgment and consent by each interconnecting TDSP’s **TO**:

|  |  |
| --- | --- |
| Signature of Officer or Executive with authority to bind the TO: |  |
| Printed Name of Officer or Executive with authority to bind the TO: |       |
| Email Address of Officer or Executive with authority to bind the TO:  |       |
| Date: |       |

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |

1. \*\* *Actual effective date will depend on time needed to implement the relationship in ERCOT systems once ERCOT has received all necessary information (a minimum of three Business Days), and may be later than the requested effective date. ERCOT will notify the parties of the actual effective date*. [↑](#footnote-ref-1)