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| NPRR Number | [1190](https://www.ercot.com/mktrules/issues/NPRR1190) | NPRR Title | High Dispatch Limit Override Provision for Increased NOIE Load Costs |
| Date Posted | July 26, 2023 |
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| Requested Resolution  | Normal |
| Nodal Protocol Sections Requiring Revision  | 3.8.1, Split Generation Resources6.6.3.6, Real-Time High Dispatch Limit Override Energy Payment  |
| Related Documents Requiring Revision/Related Revision Requests | None |
| Revision Description | This Nodal Protocol Revision Request (NPRR) adds a provision for recovery of a demonstrable financial loss arising from a manual High Dispatch Limit (HDL) override to reduce real power output, in the case when that output is intended to meet NOIE load obligations.  |
| Reason for Revision |  Addresses current operational issues. Meets Strategic goals (tied to the [ERCOT Strategic Plan](https://www.ercot.com/files/docs/2018/12/13/ERCOT_Strategic_Plan_2019-2023.pdf) or directed by the ERCOT Board). Market efficiencies or enhancements Administrative Regulatory requirements Other: (explain)*(please select all that apply)* |
| Business Case | Section 6.6.3.6 currently allows for a Qualified Scheduling Entity (QSE) to file a timely dispute to recover a demonstrable financial loss stemming from a manual HDL override from the ERCOT Operator. In defining demonstrable financial losses, and in distinguishing these from opportunity costs which are not to be compensated, the current Protocol language allows for compensation for losses on Day-Ahead Market (DAM) obligations and on bilateral contracts that were affected by the HDL override. Non-Opt-In Entities (NOIEs) are bound by obligations to serve Load within their service territories, and generation supports this obligation in an arrangement akin to self-arrangement. When Security-Constrained Economic Dispatch (SCED)-dispatched generation would offset NOIE Load, and a manual HDL override reduces actual generation output, the NOIE incurs a concrete realized loss which is not an opportunity cost. The revised language would allow compensation for such a loss. The revision accounts for a compensable demonstrable financial loss when such loss is incurred by a NOIE due to ERCOT-instructed generation curtailment by an HDL override, and when revenue from that generation is regularly used to offset costs associated with serving that NOIE’s Load. Section 3.8.1 describes obligations of the Master QSE of any Split Generation Resource. The revision provides that a Master QSE shall communicate manual High Dispatch Limit override instructions to all other QSEs that represent the Split Generation Resource. Such instructions shall be received by the Master QSE only, but such instructions allow for a dispute process for each QSE to recoup financial losses due to the HDL override. The revision would support all QSEs in meeting necessary timelines for the efficient application of Section 6.6.3.6. |

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| **Market Rules Notes** |

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

* NPRR1185, HDL Override Payment Provisions for Verbal Dispatch Instructions
	+ Section 6.6.3.6
* NPRR1186, Improvements Prior to the RTC+B Project for Better ESR State of Charge Awareness, Accounting, and Monitoring
	+ Section 3.8.1

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| Proposed Protocol Language Revision |

***3.8.1 Split Generation Resources***

(1) When a generation meter is split, as provided for in Section 10.3.2.1, Generation Resource Meter Splitting, two or more independent Generation Resources must be created in the ERCOT Network Operations Model according to Section 3.10.7.2, Modeling of Resources and Transmission Loads, to function in all respects as Split Generation Resources in ERCOT System operation. A Combined Cycle Train may not be registered in ERCOT as a Split Generation Resource. A Distribution Generation Resource (DGR) or Distribution Energy Storage Resource (DESR) may not be registered in ERCOT as a Split Generation Resource.

(2) Each Qualified Scheduling Entity (QSE) representing a Split Generation Resource shall collect and shall submit to ERCOT the Resource Parameters defined under Section 3.7, Resource Parameters, for the Split Generation Resource it represents. The parameters provided must be consistent with the parameters submitted by each other QSE that represents a Split Generation Resource from the same Generation Resource. The parameters submitted for each Split Generation Resource for limits and ramp rates must be according to the capability of the Split Generation Resource represented by the QSE. Startup and shutdown times, time to change status and number of starts must be identical for all the Split Generation Resources from the same Generation Resource submitted by each QSE. ERCOT shall review data submitted by each QSE representing Split Generation Resources for consistency and notify each QSE of any errors.

(3) Each Split Generation Resource may be represented by a different QSE. The Resource Entities that own or control the Split Generation Resources from a single Generation Resource must designate a Master QSE. Each QSE representing a Split Generation Resource must comply in all respects to the requirements of a Generation Resource specified under these Protocols.

(4) The Master QSE shall:

(a) Serve as the Single Point of Contact for the Generation Resource, as required by Section 3.1.4.1, Single Point of Contact;

(b) Provide real-time telemetry for the total Generation Resource, as specified in Section 6.5.5.2, Operational Data Requirements;

(c) Receive Verbal Dispatch Instructions (VDIs) from ERCOT, as specified in Section 6.5.7.8, Dispatch Procedures; and

(d) Within five Business Days, notify all other QSEs that represent the Split Generation Resource when the Resource received an High Dispatch Limit (HDL) override instruction.

(5) Each QSE is responsible for representing its Split Generation Resource in its Current Operating Plan (COP). During the Reliability Unit Commitment (RUC) Study Periods, any conflict in the Resource Status of a Split Generation Resource in the COP is resolved according to the following:

(a) If a Split Generation Resource has a Resource Status of OUT for any hour in the COP, then any other QSEs’ COP entries for their Split Generation Resources from the same Generation Resource are also considered unavailable for the hour;

(b) If the QSEs for all Split Generation Resources from the same Generation Resource have submitted a COP and at least one of the QSEs has an On-Line Resource Status in a given hour, then the status for all Split Generation Resources for the Generation Resource is considered to be On-Line for that hour, except if any of the QSEs has indicated in the COP a Resource Status of OUT.

(6) Each QSE representing a Split Generation Resource shall update its individual Resource Status appropriately.

(7) Each QSE representing a Split Generation Resource may independently submit Energy Offer Curves and Three-Part Supply Offers. ERCOT shall treat each Split Generation Resource offer as a separate offer, except that all Split Generation Resources in a single Generation Resource must be committed or decommitted together.

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| ***[NPRR1007: Replace paragraph (7) above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project:]***(7) Each QSE representing a Split Generation Resource may independently submit Energy Offer Curves, Ancillary Service Offers, and Three-Part Supply Offers. ERCOT shall treat each Split Generation Resource offer as a separate offer, except that all Split Generation Resources in a single Generation Resource must be committed or decommitted together. |

(8) Each QSE submitting verifiable cost data to ERCOT shall coordinate among all owners of a single Generation Resource to provide individual Split Generation Resource data consistent with the total verifiable cost of the entire Generation Resource. ERCOT may compare the total verifiable costs with other similarly situated Generation Resources to determine the reasonability of the cost.

**6.6.3.6 Real-Time High Dispatch Limit Override Energy Payment**

(1) If ERCOT directs a reduction in a Generation Resource’s real power output by employing a manual High Dispatch Limit (HDL) override and the reduction causes the QSE to suffer a demonstrable financial loss, the QSE may be eligible for a Real-Time High Dispatch Limit Override Energy Payment, as calculated below, upon providing documented proof of that loss. In order to qualify for this payment the QSE must:

(a) Have complied with ERCOT Dispatch Instructions to reduce real power output;

(b) Have received a SCED Base Point equal to the Resource’s HDL override, during the 15-minute Settlement Interval;

(c) Have incurred a demonstrable financial loss (excluding lost opportunity costs) caused by the HDL override and associated with:

(i) Variable cost components of DAM obligations;

(ii) Energy purchase or sale provisions of bilateral contracts;; or

(iii) Incremental costs incurred by a NOIE in the Real-Time Market (RTM) to serve its Load; and

(d) File a timely Settlement and billing dispute in accordance with Section 9.14, Settlement and Billing Dispute Process, including the following items:

(i) An attestation signed by an officer or executive with authority to bind the QSE;

(ii) The dollar amount and calculation of the financial loss by Settlement Interval;

(iii) An explanation of the nature of the loss and how it was attributable to the HDL override; and

(iv) Sufficient documentation to support the QSE’s calculation of the amount of the financial loss.

(2) ERCOT may request additional supporting documentation or explanation with respect to the submitted materials within 15 Business Days of receipt. Additional information requested by ERCOT must be provided by the QSE within 15 business days of ERCOT’s request. ERCOT will provide Notice of its acceptance or rejection of the claim for the High Dispatch Limit Override Energy Payment within 15 Business Days of the updated submission.

(3) The Energy Offer Curve used to calculate the Real-Time High Dispatch Limit Override Energy Payment will be the most recent valid Energy Offer Curve received by ERCOT that was effective for the disputed interval(s) when the HDL override was issued. If no curve exists for the interval being disputed, ERCOT will use the most recent valid Energy Offer Curve received before the HDL override was issued for an interval prior to the disputed interval(s).

The payment shall be calculated as follows:

**HDLOEAMT *q, r, p, i* = (-1) \* Min {HDLOAL *q, r, p, i*, Max(0, ((RTSPP*p, i* – RTRSVPOR *i* – RTRDP *i* – RTEOCOST *q, r, i*) \* HDLOQTY *q, r, p, i* ))}**

Where:

HDLOQTY *q, r, p, i* = Max(0, (¼ (HDLOBRKP *q, r, p, i* – AVGHDL *q, r, p, i*)))

HDLOBRKP *q, r, p, i* = Min(AVGHASL *q, r, p, i* , HDLOBRKPCP *q, r, p, i* )

The above variables are defined as follows:

| **Variable** | **Unit** | **Definition** |
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| HDLOAL ***q, r, p, i*** | $ | *High Dispatch Limit override attested losses -* The financial loss to the QSE due to the HDL override as attested by the QSE in accordance with paragraph (1)(d) above. |
| HDLOEAMT ***q, r, p, i*** | $ | *High Dispatch Limit override energy amount per QSE per Generation Resource*—The payment to QSE *q* for an ERCOT-issued HDL override for Generation Resource *r* at Settlement Point *p* for the 15-minute Settlement Interval *i*. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| HDLOBRKP***q, r, p, i*** | MW | *High Dispatch Limit override break point per QSE per Resource*—The point on the Energy Offer Curve corresponding to the lesser of the AVGHASL or the interception between the RTSPP of the Generation Resource *r* represented by QSE *q* minus the Real-Time Reserve Price for On-Line Reserves and the Real-Time On-Line Reliability Deployment Price and the Energy Offer Curve of Generation Resource *r* represented by QSE *q*, for the 15-minute Settlement Interval *i*. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| AVGHDL***q, r, p, i*** | MW | *Average High Dispatch Limit per QSE per Settlement Point per Resource*—The time-weighted average of all 4-second HDL values calculated by the Resource Limit Calculator, subject to the manual HDL override, for the Generation Resource or Controllable Load Resource *r* represented by QSE *q* at Settlement Point *p* within the 15-minute Settlement Interval *i*.  For a Combined Cycle Train, the Resource *r* is a Combined Cycle Generation Resource within the Combined Cycle Train.  |
| AVGHASL ***q, r, p, i*** | MW | *Average High Ancillary Service Limit per QSE per Settlement Point per Resource*—The time-weighted average High Ancillary Service Limit (HASL) calculated every four seconds by the Resource Limit Calculator for the Generation Resource or Controllable Load Resource *r* represented by QSE *q* at Settlement Point *p* within the 15-minute Settlement Interval *i*.  For a Combined Cycle Train, the Resource *r* is a Combined Cycle Generation Resource within the Combined Cycle Train.  |
| HDLOBRKPCP*q, r, p, i* | MW | *High Dispatch Limit override break point at clearing price per QSE per Resource*—The MW value on the Energy Offer Curve corresponding to the Real-Time Settlement Point Price of Generation Resource *r* represented by QSE *q* at Settlement Point *p* minus the Real-Time Reserve Price for On-Line Reserves and the Real-Time On-Line Reliability Deployment Price. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| RTEOCOST *q, r, i* | $/MWh | Real-Time Energy Offer Curve Cost Cap - The Energy Offer Curve Cost Cap for Resource *r* represented by QSE *q*, for the Resource’s generation above the LSL for the Settlement Interval *i*. See Section 4.4.9.3.3, Energy Offer Curve Cost Caps. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. |
| HDLOQTY *q, r, p, i* | MWh | *High Dispatch Limit override quantity per QSE per Generation Resource—* The difference between the HDLOBRKP and the AVGHDL due to an ERCOT-issued HDL override for Generation Resource *r* represented by QSE *q* at Settlement Point *p* for the 15-minute Settlement Interval *i*. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| RTSPP *p, i* | $/MWh | *Real-Time Settlement Point Price per Settlement Point*—The Real-Time Settlement Point Price at Settlement Point *p*, for the 15-minute Settlement Interval *i*. |
| RTRSVPOR *i* | $/MWh | *Real-Time Reserve Price for On-Line Reserves*⎯The Real-Time Reserve Price for On-Line Reserves for the 15-minute Settlement Interval *i*. |
| RTRDP *i* | $/MWh | *Real-Time On-Line Reliability Deployment Price* ⎯The Real-Time price for the 15-minute Settlement Interval *i*, reflecting the impact of reliability deployments on energy prices that is calculated from the Real-Time On-Line Reliability Deployment Price Adder. |
| *q* | none | A QSE. |
| *r* | none | A Generation Resource. |
| *p* | none | A Resource Node Settlement Point. |
| *i* | none | A 15-minute Settlement Interval. |

(4) The total compensation to each QSE for an HDL override for the 15-minute Settlement Interval is calculated as follows:

**HDLOEAMTQSETOT *q, i*  = HDLOEAMT *q, r, p, i***

The above variables are defined as follows:

| **Variable** | **Unit** | **Definition** |
| --- | --- | --- |
| HDLOEAMT *q, r, p, i* | $ | *High Dispatch Limit override energy amount per QSE per Generation Resource*—The payment to QSE *q* for an ERCOT-issued HDL override for Generation Resource *r* at Settlement Point *p* for the 15-minute Settlement Interval *i*. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| HDLOEAMTQSETOT *q, i* | $ | *High Dispatch Limit override energy amount QSE total per QSE*—The total of the energy payments to QSE *q* as compensation for HDL overrides for this QSE for the 15-minute Settlement Interval *i*. |
| *q* | none | A QSE. |
| *r* | none | A Generation Resource. |
| *p* | none | A Resource Node Settlement Point. |
| *i* | none | A 15-minute Settlement Interval. |

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| ***[NPRR1010: Replace Section 6.6.3.6 above with the following upon system implementation of the Real-Time Co-Optimization (RTC) project:]*****6.6.3.6 Real-Time High Dispatch Limit Override Energy Payment** (1) If ERCOT directs a reduction in a Generation Resource’s real power output by employing a manual High Dispatch Limit (HDL) override and the reduction causes the QSE to suffer a demonstrable financial loss, the QSE may be eligible for a Real-Time High Dispatch Limit Override Energy Payment, as calculated below, upon providing documented proof of that loss. In order to qualify for this payment the QSE must:(a) Have complied with ERCOT Dispatch Instructions to reduce real power output;(b) Have received a SCED Base Point equal to the Resource’s HDL override, during the 15-minute Settlement Interval;(c) Have incurred a demonstrable financial loss (excluding lost opportunity costs) caused by the HDL override and associated with:(i) Variable cost components of DAM obligations;(ii) Energy purchase or sale provisions of bilateral contracts;; or(iii) Incremental costs incurred by a NOIE in the Real-Time Market (RTM) to serve its Load; and(d) File a timely Settlement and billing dispute in accordance with Section 9.14, Settlement and Billing Dispute Process, including the following items: (i) An attestation signed by an officer or executive with authority to bind the QSE;(ii) The dollar amount and calculation of the financial loss by Settlement Interval;(iii) An explanation of the nature of the loss and how it was attributable to the HDL override; and (iv) Sufficient documentation to support the QSE’s calculation of the amount of the financial loss.(2) ERCOT may request additional supporting documentation or explanation with respect to the submitted materials within 15 Business Days of receipt. Additional information requested by ERCOT must be provided by the QSE within 15 Business Days of ERCOT’s request. ERCOT will provide Notice of its acceptance or rejection of the claim for the High Dispatch Limit Override Energy Payment within 15 Business Days of the updated submission. (3) The Energy Offer Curve used to calculate the Real-Time High Dispatch Limit Override Energy Payment will be the most recent valid Energy Offer Curve received by ERCOT that was effective for the disputed interval(s) when the HDL override was issued. If no curve exists for the interval being disputed, ERCOT will use the most recent valid Energy Offer Curve received before the HDL override was issued for an interval prior to the disputed interval(s).(4) The amount recoverable under this section shall be offset by any Ancillary Service Imbalance revenues received by the QSE that the QSE would not have earned had ERCOT not issued an HDL override. The payment shall be calculated as follows: **HDLOEAMT *q, r, p, i* = (-1) \* Min {HDLOAL *q, r, p, i*, Max(0, ((RTSPP*p, i* – RTRDP *i* – RTEOCOST *q, r, i* ) \* HDLOQTY *q, r, p, i* ))}**Where:HDLOQTY *q, r, p, i* = Max(0, (¼ (HDLOBRKP *q, r, p, i* – AVGHDL *q, r, p, i*)))HDLOBRKP *q, r, p, i* = Min(AVGHSL *q, r, p, i* , HDLOBRKPCP *q, r, p, i* )The above variables are defined as follows:

| **Variable** | **Unit** | **Definition** |
| --- | --- | --- |
| HDLOAL ***q, r, p, i*** | $ | *High Dispatch Limit override attested losses -* The financial loss to the QSE due to the HDL override as attested by the QSE in accordance with paragraph (1)(d) above. |
| HDLOEAMT ***q, r, p, i*** | $ | *High Dispatch Limit override energy amount per QSE per Generation Resource*—The payment to QSE *q* for an ERCOT-issued HDL override for Generation Resource *r* at Settlement Point *p* for the 15-minute Settlement Interval *i*. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| HDLOBRKP***q, r, p, i*** | MW | *High Dispatch Limit override break point per QSE per Resource*—The point on the Energy Offer Curve corresponding to the lesser of the AVGHSL or the interception between the RTSPP of the Generation Resource *r* represented by QSE *q* minus the Real-Time Reliability Deployment Price for Energy and the Energy Offer Curve of Generation Resource *r* represented by QSE *q*, for the 15-minute Settlement Interval *i*. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| AVGHDL***q, r, p, i*** | MW | *Average High Dispatch Limit per QSE per Settlement Point per Resource*—The time-weighted average of all 4-second HDL values calculated by the Resource Limit Calculator, subject to the manual HDL override, for the Generation Resource or Controllable Load Resource *r* represented by QSE *q* at Settlement Point *p* within the 15-minute Settlement Interval *i*.  For a Combined Cycle Train, the Resource *r* is a Combined Cycle Generation Resource within the Combined Cycle Train.  |
| AVGHSL ***q, r, p, i*** | MW | *Average High Sustained Limit per QSE per Settlement Point per Resource*—The time-weighted average High Sustained Limit (HSL) for the Generation Resource or Controllable Load Resource *r* represented by QSE *q* at Settlement Point *p* within the 15-minute Settlement Interval *i*.  For a Combined Cycle Train, the Resource *r* is a Combined Cycle Generation Resource within the Combined Cycle Train.  |
| HDLOBRKPCP*q, r, p, i* | MW | *High Dispatch Limit override break point at clearing price per QSE per Resource*—The MW value on the Energy Offer Curve corresponding to the Real-Time Settlement Point Price of Generation Resource *r* represented by QSE *q* at Settlement Point *p* minus the Real-Time Reliability Deployment Price for Energy. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| RTEOCOST *q, r, i* | $/MWh | *Real-Time Energy Offer Curve Cost Cap—*The Energy Offer Curve Cost Cap for Resource *r* represented by QSE *q*, for the Resource’s generation above the Low Sustained Limit (LSL) for the Settlement Interval *i*. See Section 4.4.9.3.3, Energy Offer Curve Cost Caps. Where for a Combined Cycle Train, the Resource *r* is the Combined Cycle Train. |
| HDLOQTY *q, r, p, i* | MWh | *High Dispatch Limit override quantity per QSE per Generation Resource—* The difference between the HDLOBRKP and the AVGHDL due to an ERCOT-issued HDL override for Generation Resource *r* represented by QSE *q* at Settlement Point *p* for the 15-minute Settlement Interval *i*. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| RTSPP *p, i* | $/MWh | *Real-Time Settlement Point Price per Settlement Point*—The Real-Time Settlement Point Price at Settlement Point *p*, for the 15-minute Settlement Interval *i*. |
| RTRDP *i* | $/MWh | *Real-Time Reliability Deployment Price* *for Energy*⎯The Real-Time price for the 15-minute Settlement Interval *i*, reflecting the impact of reliability deployments on energy prices that is calculated from the Real-Time Reliability Deployment Price Adder for Energy. |
| *q* | none | A QSE. |
| *r* | none | A Generation Resource. |
| *p* | none | A Resource Node Settlement Point. |
| *i* | none | A 15-minute Settlement Interval. |

(5) The total compensation to each QSE for an HDL override for the 15-minute Settlement Interval is calculated as follows:**HDLOEAMTQSETOT *q, i*  = HDLOEAMT *q, r, p, i***The above variables are defined as follows:

| **Variable** | **Unit** | **Definition** |
| --- | --- | --- |
| HDLOEAMT *q, r, p, i* | $ | *High Dispatch Limit override energy amount per QSE per Generation Resource*—The payment to QSE *q* for an ERCOT-issued HDL override for Generation Resource *r* at Settlement Point *p* for the 15-minute Settlement Interval *i*. For a combined cycle Resource, *r* is a Combined Cycle Train. |
| HDLOEAMTQSETOT *q, i* | $ | *High Dispatch Limit override energy amount QSE total per QSE*—The total of the energy payments to QSE *q* as compensation for HDL overrides for this QSE for the 15-minute Settlement Interval *i*. |
| *q* | none | A QSE. |
| *r* | none | A Generation Resource. |
| *p* | none | A Resource Node Settlement Point. |
| *i* | none | A 15-minute Settlement Interval. |

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