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| NPRR Number | [1058](http://www.ercot.com/mktrules/issues/NPRR1058) | NPRR Title | Resource Offer Modernization for Real-Time Co-Optimization |
| Date Posted | November 24, 2020 |
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| Requested Resolution  | Normal |
| Nodal Protocol Sections Requiring Revision  | 4.4.9.3, Energy Offer Curve6.4.3.1, RTM Energy Bids |
| Related Documents Requiring Revision/Related Revision Requests | None |
| Revision Description | This Nodal Protocol Revision Request (NPRR) allows all Resources to update their offers in Real-Time to reflect their current costs. |
| Reason for Revision |  Addresses current operational issues. Meets Strategic goals (tied to the [ERCOT Strategic Plan](http://www.ercot.com/content/wcm/lists/144926/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 | NPRR986, BESTF-2 Energy Storage Resource Energy Offer Curves, Pricing, Dispatch, and Mitigation, developed by the Battery Energy Storage Task Force (BESTF), outlined the process for Energy Storage Resources (ESRs) to update their offers to reflect both their costs and current charge. BESTF was limited to ESRs due to the BESTF’s charter. This NPRR is the logical progression for all Resources. Real-Time Co-Optimization (RTC) will also elevate the need for this change. RTC’s efficiency comes from matching Load to energy and Ancillary Services in Real-Time. To fully maximize that efficiency and provide accurate pricing, all Resources should be able to update their offers based on the individual costs of the Resource at its current level of production. Stakeholders have brought issues to the RTC Task Force (RTCTF) that have received feedback that updating offers in Real-Time would help to alleviate. |

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| Market Segment | Independent Retail Electric Provider (IREP), Cooperative, Independent Generator, Independent Generator, Cooperative |

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| Market Rules Notes |

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

* NPRR1010, RTC – NP 6: Adjustment Period and Real-Time Operations
	+ Section 6.4.3.1
* NPRR1014, BESTF-4 Energy Storage Resource Single Model
	+ Section 4.4.9.3

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| Proposed Protocol Language Revision |

4.4.9.3 Energy Offer Curve

(1) The Energy Offer Curve represents the QSE’s willingness to sell energy at or above a certain price and at a certain quantity in the DAM or its willingness to be dispatched by SCED in Real-Time Operations.

(2) A QSE may submit Resource-specific Energy Offer Curves to ERCOT. Such Energy Offer Curves will be bounded in the DAM for each Operating Hour by the LSL and HSL of the Generation Resource specified in the COP, and bounded in SCED by the LSL and HSL of the Generation Resource as shown by telemetry.

(3) Energy Offer Curves remain active for the offered period until either:

(a) Selected by ERCOT; or

(b) Automatically inactivated by the software at the offer expiration time selected by the QSE.

(4) For any Operating Hour, the QSE for a Resource may submit or change Energy Offer Curves at any time prior to SCED execution, and SCED will use the latest updated Energy Offer Curve available in the system. If a new Energy Offer Curve is not deemed to be valid, then the most recent valid Energy Offer Curve available in the system at the time of SCED execution will be used and ERCOT will notify the QSE that the invalid Energy Offer Curve was rejected. Once an Operating Hour ends, an Energy Offer Curve for that hour cannot be submitted, updated, or canceled.

(5) A QSE may withdraw an Energy Offer Curve if:

(a) An Output Schedule is submitted for all intervals for which an Energy Offer Curve is withdrawn; or

(b) The Resource is forced Off-Line and notifies ERCOT of the Forced Outage by changing the Resource Status appropriately and updating its COP.

(5) For any Operating Hour that is a RUC-Committed Interval or a DAM-Committed Interval for a Resource, a QSE for that Resource may not change a Startup Offer or Minimum-Energy Offer.

(6) If a valid Energy Offer Curve or an Output Schedule does not exist for a Resource that has a status of On-Line at the end of the Adjustment Period, then ERCOT shall notify the QSE and set the Output Schedule equal to the then current telemetered output of the Resource until an Output Schedule or Energy Offer Curve is submitted in a subsequent Adjustment Period.

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**6.4.3.1 RTM Energy Bids**

(1) An RTM Energy Bid represents the willingness to buy energy at or below a certain price, not to exceed the System-Wide Offer Cap (SWCAP), for the Demand response capability of a Controllable Load Resource in the RTM.

(2) RTM Energy Bids remain active for the offered period until either:

(a) Selected by ERCOT; or

(b) Automatically inactivated at the offer expiration time specified in the RTM Energy Bid.

(3) For any Operating Hour, the QSE may submit or change an RTM Energy Bid at any time prior to SCED execution, and SCED will use the latest updated RTM Energy Bid available in the system. If a new RTM Energy Bid is not deemed to be valid, then the most recent valid RTM Energy Bid available in the system at the time of SCED execution will be used and ERCOT will notify the QSE that the invalid RTM Energy Bid was rejected. Once an Operating Hour ends, an RTM Energy Bid for that hour cannot be submitted, updated, or canceled.

(4) If the QSE has not submitted a valid RTM Energy Bid for an Operating Hour, ERCOT shall create a proxy RTM Energy Bid for the entire Demand response capability of that Load Resource with a not-to-exceed price at the SWCAP.

(5) The QSE may remove the Controllable Load Resource from SCED Dispatch by changing the Load Resource’s telemetered Resource Status or ramp rates appropriately. The QSE will update the COP Resource Status accordingly as soon as practicable.

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