|  |  |  |  |
| --- | --- | --- | --- |
| NPRR Number | [1074](http://www.ercot.com/mktrules/issues/nprr1074) | NPRR Title | “mp” Definition Revision |
|  |  |
| Date | April 21, 2021 |
|  |  |
| Submitter’s Information |
| Name | Mark Ruane / Juliana Morehead |
| E-mail Address | Mark.Ruane@ercot.com / Juliana.Morehead@ercot.com |
| Company | ERCOT |
| Phone Number | 512-248-3000 / 512-225-7184 |
| Cell Number |  |
| Market Segment | Not applicable |

|  |
| --- |
| Comments |

ERCOT appreciates the opportunity to provide comments on Nodal Protocol Revision Request (NPRR) NPRR1074. ERCOT’s comments provide clarification with respect to the Market Participants (the “mp”) that will be included in the Maximum MWh Activity Ratio Share (MMARS) calculation, which is used to compute the Default Uplift Ratio Share per Counter-Party (DURSCP) per paragraph (2) of Section 9.19.1, Default Uplift Invoices.

As detailed in ERCOT’s *Notice of Planned Implementation of Default Uplift Invoice Process*, filed April 14, 2021, in Public Utility Commission of Texas (PUCT) Project No. 51812, ERCOT considers Section 9.19.1 to require that the following Market Participants be allocated a Default Uplift Ratio Share:

1. A currently-registered Qualified Scheduling Entity (QSE) or Congestion Revenue Rights Account Holder (CRRAH); or
2. A QSE or CRR Account Holder that voluntarily terminated its QSE or CRRAH registration.

Per paragraph (2) of Section 9.19.1, a Counter-Party representing a QSE or CRRAH meeting either of the foregoing criteria is included in the DURSCP calculation if the QSE or CRRAH had MWh activity in ERCOT in the month prior to the month of the short-payments being collected through the Default Uplift Invoice process.

To align NPRR1074 with the foregoing understanding, ERCOT proposes revisions to the “mp” variable to clarify that “mp” includes any QSE or CRRAH that terminates its Market Participant registration with ERCOT subsequent to any short pays to be collected through the Default Uplift Invoice process. Further, ERCOT proposes a minor revision to make clear that the relevant MWh activity in the formula set forth in paragraph (2) of Section 9.19.1 is MWh activity in the “reference month” – that is, the month prior to the month of the short payments to be collected through the Default Uplift Invoice process.

|  |
| --- |
| Revised Proposed Protocol Language |

***9.19.1 Default Uplift Invoices***

(1) ERCOT shall collect the total short-pay amount for all Settlement Invoices for a month, less the total payments expected from a payment plan, from Qualified Scheduling Entities (QSEs) and CRR Account Holders. ERCOT must pay the funds it collects from payments on Default Uplift Invoices to the Entities previously short-paid. ERCOT shall notify those Entities of the details of the payment.

(2) Each Counter-Party’s share of the uplift is calculated using the best available Settlement data for each Operating Day in the month prior to the month in which the default occurred (the “reference month”), and is calculated as follows:

**DURSCP*cp* = TSPA \* MMARS*cp***

Where:

MMARS *cp* = MMA *cp* / MMATOT

MMA *cp* = Max { ∑*mp* (URTMG *mp*+ URTDCIMP *mp*),

∑*mp* (URTAML *mp* + UWSLTOT *mp*),

∑*mp*URTQQES *mp*,

∑*mp* URTQQEP *mp*,

∑*mp* UDAES *mp*,

∑*mp* UDAEP *mp*,

∑*mp* (URTOBL *mp +* URTOBLLO *mp*),

∑*mp* (UDAOPT *mp*+ UDAOBL *mp*+UOPTS *mp*+UOBLS *mp*),

∑*mp* (UOPTP *mp*+ UOBLP *mp*)}

|  |
| --- |
| ***[NPRR917 and NPRR1012: Replace applicable portions of the formula “MMA cp” above with the following upon system implementation for NPRR917; or upon system implementation of the Real-Time Co-Optimization (RTC) project for NPRR1012:]***MMA *cp* = Max { ∑*mp* (URTMG *mp*+ URTDCIMP *mp*), ∑*mp* (URTAML *mp* + UWSLTOT *mp*), ∑*mp*URTQQES *mp*, ∑*mp* URTQQEP *mp*, ∑*mp* UDAES *mp*, ∑*mp* UDAEP *mp*,∑*mp* (URTOBL *mp +* URTOBLLO *mp*), ∑*mp* (UDAOPT *mp*+ UDAOBL *mp*+UOPTS *mp*+UOBLS *mp*), ∑*mp* (UOPTP *mp*+ UOBLP *mp*),∑*mp* UDAASOAWD *mp*, ∑*mp* (USOGTOT *mp*)} |

MMATOT = ∑*cp* (MMA*cp*)

Where:

URTMG *mp* = ∑*p, r, i* (RTMG *mp, p, r, i*), excluding RTMG for RMR Resources and RTMG in Reliability Unit Commitment (RUC)-Committed Intervals for RUC-committed Resources

URTDCIMP *mp* = ∑*p, i* (RTDCIMP *mp, p, i*) / 4

URTAML *mp* = max(0,∑*p, i* (RTAML *mp, p, i*))

URTQQES *mp* = ∑*p, i* (RTQQES *mp, p, i*) / 4

URTQQEP *mp* = ∑*p, i* (RTQQEP *mp, p, i*) / 4

UDAES *mp* = ∑*p, h* (DAES *mp, p, h*)

UDAEP *mp* = ∑*p, h* (DAEP *mp, p, h*)

URTOBL *mp* = ∑*(j, k), h* (RTOBL*mp, (j, k), h*)

URTOBLLO *mp* = ∑*(j, k), h* (RTOBLLO*mp, (j, k), h*)

UDAOPT *mp* = ∑*(j, k), h* (DAOPT*mp, (j, k), h*)

UDAOBL *mp* = ∑*(j, k), h* (DAOBL*mp, (j, k), h*)

UOPTS *mp* = ∑*(j, k), h* (OPTS*mp, (j, k), h*)

UOBLS *mp* = ∑*(j, k), h* (OBLS*mp, (j, k), h*)

UOPTP *mp* = ∑*(j, k), h* (OPTP*mp, j, h*)

UOBLP *mp* = ∑*(j, k), h* (OBLP*mp, (j, k), h*)

UWSLTOT *mp* = (-1) \* ∑*r, b* (MEBL *mp, r, b*)

|  |
| --- |
| ***[NPRR1012: Insert the formula “UDAASOAWD mp” below upon system implementation of the Real-Time Co-Optimization (RTC) project:]***UDAASOAWD *mp* = ∑*h* (DARUOAWD *mp, h* + DARDOAWD *mp, h* + DARROAWD *mp, h* + DANSOAWD *mp, h* + DAECROAWD *mp, h* ) |

|  |
| --- |
| ***[NPRR917: Insert the formula “USOGTOT mp” below upon system implementation:]***USOGTOT *mp* = ∑*gsc, b* (OFSOG *mp, gsc, b*) + ∑ *p, i* (RTMGSOGZ *mp, p, i*) |

The above variables are defined as follows:

| **Variable** | **Unit** | **Definition** |
| --- | --- | --- |
| DURSCP *cp* | $ | *Default Uplift Ratio Share per Counter-Party*—The Counter-Party’s pro rata portion of the total short-pay amount for all Day-Ahead Market (DAM) and Real-Time Market (RTM) Invoices for a month.  |
| TSPA | $ | *Total Short Pay Amount*—The total short-pay amount calculated by ERCOT to be collected through the Default Uplift Invoice process. |
| MMARS *cp* | None | *Maximum MWh Activity Ratio Share*—The Counter-Party’s pro rata share of Maximum MWh Activity in the reference month. |
| MMA *cp* | MWh | *Maximum MWh Activity*—The maximum MWh activity of all Market Participants represented by the Counter-Party in the DAM, RTM and CRR Auction in the reference month. |
| MMATOT | MWh | *Maximum MWh Activity Total*—The sum of all Counter-Party’s Maximum MWh Activity in the reference month. |
| RTMG *mp, p, r, i* | MWh | *Real-Time Metered Generation per Market Participant per Settlement Point per Resource*—The Real-Time energy produced by the Generation Resource *r* represented by Market Participant *mp*, at Resource Node *p*, for the 15-minute Settlement Interval *i*, where the Market Participant is a QSE. |
| URTMG *mp* | MWh | *Uplift Real-Time Metered Generation per Market Participant*—The monthly sum of Real-Time energy produced by Generation Resources represented by Market Participant *mp*, excluding generation for RMR Resources and generation in RUC-Committed Intervals, where the Market Participant is a QSE assigned to the registered Counter-Party.  |
| RTDCIMP *mp, p, i* | MW | *Real-Time DC Import per QSE per Settlement Point*—The aggregated Direct Current Tie (DC Tie) Schedule submitted by Market Participant *mp,* as an importer into the ERCOT System through DC Tie *p*, for the 15-minute Settlement Interval *i*, where the Market Participant is a QSE. |
| URTDCIMP *mp* | MW | *Uplift Real-Time DC Import per Market Participant*—The monthly sum of the aggregated DC Tie Schedule submitted by Market Participant *mp*, as an importer into the ERCOT System where the Market Participant is a QSE assigned to a registered Counter-Party. |
| RTAML *mp, p, i* | MWh | *Real-Time Adjusted Metered Load per Market Participant per Settlement Point*—The sum of the Adjusted Metered Load (AML) at the Electrical Buses that are included in Settlement Point *p* represented by Market Participant *mp* for the 15-minute Settlement Interval *i*, where the Market Participant is a QSE. |
| URTAML *mp* | MWh | *Uplift Real-Time Adjusted Metered Load per Market Participant*—The monthly sum of the AML represented by Market Participant *mp*, where the Market Participant is a QSE assigned to the registered Counter-Party. |
| RTQQES *mp, p, i* | MW | *QSE-to-QSE Energy Sale per Market Participant per Settlement Point*—The amount of MW sold by Market Participant *mp* through Energy Trades at Settlement Point *p* for the 15-minute Settlement Interval *i*, where the Market Participant is a QSE. |
| URTQQES *mp* | MWh | *Uplift QSE-to-QSE Energy Sale per Market Participant*—The monthly sum of MW sold by Market Participant *mp* through Energy Trades, where the Market Participant is a QSE assigned to the registered Counter-Party. |
| RTQQEP *mp, p, i* | MW | *QSE-to-QSE Energy Purchase per Market Participant per Settlement Point*—The amount of MW bought by Market Participant *mp* through Energy Trades at Settlement Point *p* for the 15-minute Settlement Interval *i*, where the Market Participant is a QSE. |
| URTQQEP *mp* | MWh | *Uplift QSE-to-QSE Energy Purchase per Market Participant*—The monthly sum of MW bought by Market Participant *mp* through Energy Trades, where the Market Participant is a QSE assigned to the registered Counter-Party. |
| DAES *mp, p, h* | MW | *Day-Ahead Energy Sale per Market Participant per Settlement Point per hour*—The total amount of energy represented by Market Participant *mp*’s cleared Three-Part Supply Offers in the DAM and cleared DAM Energy-Only Offers at Settlement Point *p*, for the hour *h*, where the Market Participant is a QSE. |
| UDAES *mp* | MWh | *Uplift Day-Ahead Energy Sale per Market Participant*—The monthly total of energy represented by Market Participant *mp*’s cleared Three-Part Supply Offers in the DAM and cleared DAM Energy-Only Offer Curves, where the Market Participant is a QSE assigned to the registered Counter-Party. |
| DAEP *mp, p, h* | MW | *Day-Ahead Energy Purchase per Market Participant per Settlement Point per hour*—The total amount of energy represented by Market Participant *mp*’s cleared DAM Energy Bids at Settlement Point *p* for the hour *h*, where the Market Participant is a QSE. |
| UDAEP *mp* | MWh | *Uplift Day-Ahead Energy Purchase per Market Participant*—The monthly total of energy represented by Market Participant *mp*’s cleared DAM Energy Bids, where the Market Participant is a QSE assigned to the registered Counter-Party. |
| RTOBL *mp, (j, k), h* | MW | *Real-Time Obligation per Market Participant per source and sink pair per hour*—The number of Market Participant *mp*’s Point-to-Point (PTP) Obligations with the source *j* and the sink *k* settled in Real-Time for the hour *h*, and where the Market Participant is a QSE. |
| URTOBL *mp* | MWh | *Uplift Real-Time Obligation per Market Participant*—The monthly total of Market Participant *mp*’s PTP Obligations settled in Real-Time, counting the quantity only once per source and sink pair, and where the Market Participant is a QSE assigned to the registered Counter-Party. |
| RTOBLLO *q, (j, k)* | MW | *Real-Time Obligation with Links to an Option per QSE per pair of source and sink*⎯The total MW of the QSE’s PTP Obligation with Links to an Option Bids cleared in the DAM and settled in Real-Time for the source *j* and the sink *k* for the hour. |
| URTOBLLO *q, (j, k)* | MW | *Uplift Real-Time Obligation with Links to an Option per QSE per pair of source and sink*⎯The monthly total of Market Participant *mp*’s MW of PTP Obligation with Links to Options Bids cleared in the DAM and settled in Real-Time for the source *j* and the sink *k* for the hour, where the Market Participant is a QSE assigned to the registered Counter-Party. |
| DAOPT *mp, (j, k), h* | MW | *Day-Ahead Option per Market Participant per source and sink pair per hour*⎯The number of Market Participant *mp*’s PTP Options with the source *j* and the sink *k* owned in the DAM for the hour *h*, and where the Market Participant is a CRR Account Holder.  |
| UDAOPT *mp* | MWh | *Uplift Day-Ahead Option per Market Participant*⎯The monthly total of Market Participant *mp*’s PTP Options owned in the DAM, counting the ownership quantity only once per source and sink pair, and where the Market Participant is a CRR Account Holder assigned to the registered Counter-Party. |
| DAOBL *mp, (j, k), h* | MW | *Day-Ahead Obligation per Market Participant per source and sink pair per hour*—The number of Market Participant *mp*’s PTP Obligations with the source *j* and the sink *k* owned in the DAM for the hour *h*, and where the Market Participant is a CRR Account Holder.  |
| UDAOBL *mp* | MWh | *Uplift Day-Ahead Obligation per Market Participant*⎯The monthly total of Market Participant *mp*’s PTP Obligations owned in the DAM, counting the ownership quantity only once per source and sink pair, where the Market Participant is a CRR Account Holder assigned to the registered Counter-Party. |
| OPTS *mp, (j, k), a, h* | MW | *PTP Option Sale per Market Participant per source and sink pair per CRR Auction per hour*—The MW quantity that represents the total of Market Participant *mp*’s PTP Option offers with the source *j* and the sink *k* awarded in CRR Auction *a*, for the hour *h*, where the Market Participant is a CRR Account Holder. |
| UOPTS *mp* | MWh | *Uplift PTP Option Sale per Market Participant*—The MW quantity that represents the monthly total of Market Participant *mp*’s PTP Option offers awarded in CRR Auctions, counting the awarded quantity only once per source and sink pair, where the Market Participant is a CRR Account Holder assigned to the registered Counter-Party. |
| OBLS *mp, (j, k), a, h* | MW | *PTP Obligation Sale per Market Participant per source and sink pair per CRR Auction per hour*—The MW quantity that represents the total of Market Participant *mp*’s PTP Obligation offers with the source *j* and the sink *k* awarded in CRR Auction *a*, for the hour *h*, where the Market Participant is a CRR Account Holder. |
| UOBLS *mp* | MWh | *Uplift PTP Obligation Sale per Market Participant*—The MW quantity that represents the monthly total of Market Participant *mp*’s PTP Obligation offers awarded in CRR Auctions, counting the quantity only once per source and sink pair, where the Market Participant is a CRR Account Holder assigned to the registered Counter-Party. |
| OPTP *mp, (j, k), a, h* | MW | *PTP Option Purchase per Market Participant per source and sink pair per CRR Auction per hour*—The MW quantity that represents the total of Market Participant *mp*’s PTP Option bids with the source *j* and the sink *k* awarded in CRR Auction *a*, for the hour *h*, where the Market Participant is a CRR Account Holder. |
| UOPTP *mp* | MWh | *Uplift PTP Option Purchase per Market Participant*—The MW quantity that represents the monthly total of Market Participant *mp*’s PTP Option bids awarded in CRR Auctions, counting the quantity only once per source and sink pair, where the Market Participant is a CRR Account Holder assigned to the registered Counter-Party. |
| OBLP *mp, (j, k), a, h* | MW | *PTP Obligation Purchase per Market Participant per source and sink pair per CRR Auction per hour*—The MW quantity that represents the total of Market Participant *mp*’s PTP Obligation bids with the source *j* and the sink *k* awarded in CRR Auction *a*, for the hour *h*, where the Market Participant is a CRR Account Holder. |
| UOBLP *mp* | MWh | *Uplift PTP Obligation Purchase per Market Participant*—The MW quantity that represents the monthly total of Market Participant *mp*’s PTP Obligation bids awarded in CRR Auctions, counting the quantity only once per source and sink pair, where the Market Participant is a CRR Account Holder assigned to the registered Counter-Party. |
| UWSLTOT *mp* | MWh | *Uplift Metered Energy for Wholesale Storage Load at bus per Market Participant*⎯The monthly sum of Market Participant *mp*’s Wholesale Storage Load (WSL) energy metered by the Settlement Meter which measures WSL. |
| MEBL *mp, r, b* | MWh | *Metered Energy for Wholesale Storage Load at bus*⎯The WSL energy metered by the Settlement Meter which measures WSL for the 15-minute Settlement Interval represented as a negative value, for the Market Participant *mp*, Resource *r*, at bus *b*.  |
|

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***[NPRR1012: Insert the variables below upon system implementation of the Real-Time Co-Optimization (RTC) project:]***

|  |  |  |
| --- | --- | --- |
| UDAASOAWD *mp* | MWh | *Uplift Day-Ahead Ancillary Service Only Award per Market Participant—*The monthly total of Market Participant *mp’s* Ancillary Service Only Offers awarded in DAM, where the Market Participant is a QSE assigned to the registered Counter-Party. |
| DARUOAWD *mp, h* | MW | *Day-Ahead Reg-Up Only Award per Market Participant*⎯The Reg-Up Only capacity quantity awarded in the DAM to the Market Participant *mp* for the hour *h*. |
| DARDOAWD *mp, h* | MW | *Day-Ahead Reg-Down Only Award per Market Participant*⎯The Reg-Down Only capacity quantity awarded in the DAM to the Market Participant *mp* for the hour *h*. |
| DARROAWD *mp, h* | MW | *Day-Ahead Responsive Reserve Only Award per Market Participant*⎯ The Responsive Reserve (RRS) Only capacity quantity awarded in the DAM to the Market Participant *mp* for the hour *h*. |
| DANSOAWD *mp, h* | MW | *Day-Ahead Non-Spin Only Award per Market Participant*⎯The Non-Spin Only capacity quantity awarded in the DAM to the Market Participant *mp* for the hour *h*. |
| DAECROAWD *mp, h* | MW | *Day-Ahead ERCOT Contingency Reserve Service Only Award per Market Participant*⎯The ERCOT Contingency Reserve Service (ECRS) Only capacity quantity awarded in the DAM to the Market Participant *mp* for the hour *h*. |

 |

 |
|

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***[NPRR917 and NPRR1052: Insert the variables “*** ***USOGTOT mp”, “*** ***RTMGSOGZ mp. p, i”, and “OFSOG mp, gsc, b” below upon system implementation of NPRR917:]***

|  |  |  |
| --- | --- | --- |
| USOGTOT *mp* | MWh | *Uplift Real-Time Settlement Only Generator Site per Market Participant*—The monthly sum of Real-Time energy produced by Settlement Only Generators (SOGs) represented by Market Participant *mp*, where the Market Participant is a QSE assigned to the registered Counter-Party.  |
| RTMGSOGZ *mp. p, i* | MWh | *Real-Time Metered Generation from Settlement Only Generators Zonal per QSE per Settlement Point*—The total Real-Time energy produced by Settlement Only Transmission Self-Generators (SOTSGs) for the Market Participant *mp* in Load Zone Settlement Point *p*, for the 15-minute Settlement Interval. MWh quantities for Energy Storage System (ESS), Settlement Only Distribution Generators (SODGs), and Settlement Only Transmission Generators (SOTGs) at sites where the ESS capacity constitutes more than 50% of the total SOG nameplate capacity will be included in this value. MWh quantities for SODGs and SOTGs that opted out of nodal pricing pursuant to Section 6.6.3.9, Real-Time Payment or Charge for Energy from a Settlement Only Distribution Generator (SODG) or a Settlement Only Transmission Generator (SOTG), will also be included in this value. |
| OFSOG *mp, gsc, b* | MWh | *Outflow as measured for an SODG or SOTG Site* ⎯The outflow as measured by the Settlement Meter(s) at Electrical Bus *b* for SODG or SOTG site *gsc* represented by the Market Participant *mp*. |

 |

 |
| *cp* | none | A registered Counter-Party. |
| *mp* | none | A Market Participant with MWh activity in the reference month that is a currently-registered QSE or CRR Account Holder or that voluntarily terminated its QSE or CRR Account Holder registration. |
| *j* | none | A source Settlement Point. |
| *k* | none | A sink Settlement Point. |
| *a* | none | A CRR Auction. |
| *p* | none | A Settlement Point. |
| *i* | none | A 15-minute Settlement Interval. |
| *h* | none | The hour that includes the Settlement Interval i.  |
| *r* | none  | A Resource.  |
|

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ***[NPRR917: Insert the variables “gsc” and “b” below upon system implementation:]***

|  |  |  |
| --- | --- | --- |
| *gsc* | none | A generation site code. |
| *b* | none | An Electrical Bus. |

 |

 |

(3) The uplifted short-paid amount will be allocated to the Market Participants (QSEs or CRR Account Holders) assigned to a registered Counter-Party based on the pro-rata share of MWhs that the QSE or CRR Account Holder contributed to its Counter-Party’s maximum MWh activity ratio share.

(4) Any uplifted short-paid amount greater than $2,500,000 must be scheduled so that no amount greater than $2,500,000 is charged on each set of Default Uplift Invoices until ERCOT uplifts the total short-paid amount. ERCOT must issue Default Uplift Invoices at least 30 days apart from each other.

(5) ERCOT shall issue Default Uplift Invoices no earlier than 90 days following a short-pay of a Settlement Invoice on the date specified in the Settlement Calendar. The Invoice Recipient is responsible for accessing the Invoice on the MIS Certified Area once posted by ERCOT.

(6) Each Default Uplift Invoice must contain:

(a) The Invoice Recipient’s name;

(b) The ERCOT identifier (Settlement identification number issued by ERCOT);

(c) Net Amount Due or Payable – the aggregate summary of all charges owed by a Default Uplift Invoice Recipient;

(d) Run Date – the date on which ERCOT created and published the Default Uplift Invoice;

(e) Invoice Reference Number – a unique number generated by the ERCOT applications for payment tracking purposes;

(f) Default Uplift Invoice Reference – an identification code used to reference the amount uplifted;

(g) Payment Date and Time – the date and time that Default Uplift Invoice amounts must be paid;

(h) Remittance Information Details – details including the account number, bank name, and electronic transfer instructions of the ERCOT account to which any amounts owed by the Invoice Recipient are to be paid or of the Invoice Recipient’s account from which ERCOT may draw payments due; and

(i) Overdue Terms – the terms that would apply if the Market Participant makes a late payment.

(7) Each Invoice Recipient shall pay any net debit shown on the Default Uplift Invoice on the payment due date whether or not there is any Settlement and billing dispute regarding the amount of the debit.