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| NPRR Number | [1104](http://www.ercot.com/mktrules/issues/NPRR1104) | NPRR Title | As-Built Definition of Real Time Liability Extrapolated (RTLE) |
| Date of Decision | December 16, 2021 |
| Action | Approved |
| Timeline  | Urgent – to correctly align Protocols with ERCOT’s credit systems as soon as possible. |
| Effective Date | Upon Public Utility Commission of Texas (PUCT) approval – December 17, 2021 |
| Priority and Rank Assigned | Not applicable |
| Nodal Protocol Sections Requiring Revision  | 16.11.4.3, Determination of Counter-Party Estimated Aggregate Liability |
| Related Documents Requiring Revision/Related Revision Requests | None |
| Revision Description | This Nodal Protocol Revision Request (NPRR) corrects the definition of Real Time Liability Extrapolated (RTLE) to include market activity for Entities that have no Load or generation but have Real-Time exposure. It has come to ERCOT’s attention that the current definition of RTLE is erroneously tied to Qualified Scheduling Entities (QSEs) that represent Load or generation, and conflicts with the implementation of RTLE in ERCOT’s credit system.  |
| 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 | In the development and approval of NPRR620, Collateral Requirements for Counter-Parties with No Load or Generation, and NPRR741, Clarifications to TPE and EAL Credit Exposure Calculations, the RTLE definition for traders was incorrectly modified to include the phrase “for a QSE that represents either Load or generation”. NPRR620 had a separate RTLE definition for a QSE, trader, and Congestion Revenue Right (CRR) Account Holder. However, while NPRR620 was in grey-box, NPRR741 was approved, rolling back several of the grey-boxed items from NPRR620, and this phrase should have been removed from the RTLE definition as part of NPRR741. It was retained in error, so when NPRR620 and NPRR741 were implemented in the June 2, 2019 Nodal Protocols, the definition of RTLE in Section 16.11.4.3 incorrectly excludes market activity for Entities who have no Load or generation but have Real-Time exposure.  |
| Credit Work Group Review | See 11/11/21 Credit WG comments |
| PRS Decision | On 11/10/21, PRS voted via roll call to grant NPRR1104 Urgent status. There was one abstention from the Independent Generator (Luminant) Market Segment. PRS then voted via roll call to recommend approval of NPRR1104 as submitted and to forward to TAC NPRR1104 and the Impact Analysis. There was one abstention from the Consumer (Occidental Chemical) Market Segment. All Market Segments participated both votes. |
| Summary of PRS Discussion | On 11/10/21, ERCOT Staff provided an overview of NPRR1104 and the request for Urgent status. |
| TAC Decision | On 11/29/21, TAC unanimously voted via roll call to recommend approval of NPRR1104 as recommended by PRS in the 11/10/21 PRS Report with a recommended effective date of upon PUCT approval (12/17/21). All Market Segments participated in the vote. |
| Summary of TAC Discussion | On 11/29/21, TAC reviewed the ERCOT Opinion and ERCOT Market Impact Statement for NPRR1104. |
| ERCOT Opinion | ERCOT supports approval of NPRR1104. |
| ERCOT Market Impact Statement | ERCOT Staff has reviewed NPRR1104 and believes the market impact for NPRR1104 brings Protocols in line with current credit systems and more appropriately reflects the forward risk related to the RTLE calculation. |
| ERCOT Board Decision | On 12/10/21, the ERCOT Board recommended approval of NPRR1104 as recommended by TAC in the 11/29/21 TAC Report. |
| PUCT Decision | On 12/16/21, the PUCT approved NPRR1104 and accompanying ERCOT Market Impact Statement as presented in Project No. 52307, Review of Rules Adopted by the Independent Organization in Calendar Year 2021. |

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| Market Segment | Not applicable |

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| **Comments Received** |
| Comment Author | **Comment Summary** |
| Credit WG 111121 | Noted NPRR1104 will provide positive credit impacts as it brings Protocols in line with current credit systems and more appropriately reflects the forward risk related to the RTLE calculation |

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| **Market Rules Notes** |

Please note that the following NPRRs also propose revisions to Section 16.11.4.3:

* NPRR1067, Market Entry Qualifications, Continued Participation Requirements, and Credit Risk Assessment
* NPRR1088, Applying Forward Adjustment Factors to Forward Market Positions and Un-applying Forward Adjustment Factors to Prior Market Positions

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| Proposed Protocol Language Revision |

16.11.4.3 Determination of Counter-Party Estimated Aggregate Liability

(1) After a Counter-Party commences activity in ERCOT markets, ERCOT shall monitor and calculate the Counter-Party’s EAL based on the formulas below.

**EAL *q* = Max [IEL during the first 40-day period only beginning on the date that the Counter-Party commences activity in ERCOT markets, RFAF \* Max {RTLE during the previous *lrq* days}, RTLF] + DFAF \* DALE + Max [RTLCNS, Max {URTA during the previous *lrq* days}] + OUT *q* + ILE*q***

**EAL *t* = Max [RFAF \* Max {RTLE during the previous *lrt* days}, RTLF] + DFAF \* DALE + Max [RTLCNS, Max {URTA during the previous *lrt* days}] + OUT *t***

**EAL *a* = OUT *a***

ERCOT may adjust the number of days used in determining the highest RTLE and/or URTA, and/or to exclude specific Operating Days to calculate RTLE, URTA, OUT, or DALE.

The above variables are defined as follows:

| Variable | Unit | Description |
| --- | --- | --- |
| EAL*q* | $ | *Estimated Aggregate Liability for all the QSEs* represented by a Counter-Party if at least one QSE represented by the Counter-Party represents either Load or generation. |
| EAL *t* | $ | *Estimated Aggregate Liability for all the QSEs* represented by a Counter-Party if none of the QSEs represented by the Counter-Party represent either Load or generation. |
| EAL*a* | $ | *Estimated Aggregate Liability for all the CRR Account Holders* represented by the Counter-Party. |
| IEL | $ | *Initial Estimated Liability for all the QSEs* represented by the Counter-Party if at least one QSE represented by the Counter-Party represents either Load or generation as defined in paragraphs (1), (2), (3) and (4) of Section 16.11.4.2, Determination of Counter-Party Initial Estimated Liability. |
| *q* |  | QSEs represented by Counter-Party. |
| *t* |  | QSEs represented by a Counter-Party if none of the QSEs represented by the Counter-Party represent either Load or generation |
| *a* |  | CRR Account Holders represented by Counter-Party. |
| RTLE | $ | *Real Time Liability Extrapolated*—M1 multiplied by the sum of the net amount, with zero substituted for missing values, due to or from ERCOT by the Counter-Party in the 14 most recent Operating Days for which RTM Initial Statements are produced for Counter-Parties according to the ERCOT Settlement Calendar divided by 14. |
| URTA | $ | *Unbilled Real-Time Amount*—M2 multiplied by the sum of the net amount, with zero substituted for missing values, due to or from ERCOT by the Counter-Party in the 14 most recent Operating Days for which RTM Initial Statements are produced for Counter-Parties according to the ERCOT Settlement Calendar divided by 14. |
| RTL | $ | *Real-Time Liability*—The estimated or settled amounts due to or from ERCOT due to activities in the RTM for an Operating Day, as defined in Section 16.11.4.3.2, Real-Time Liability Estimate. |
| RTLCNS | $ | *Real Time Liability Completed and Not Settled*—For each Operating Day that is completed but not settled, ERCOT shall calculate RTL adjusted up by *rtlcu%* if there is a net amount due to ERCOT or adjusted down by *rtlcd%* if there is a net amount due to the QSE. RTLCNS = Sum of Max RTL(*rtlcu%* \* RTL, *rtlcd%* \* RTL) for all completed and not settled Operating DaysWhere:*rtlcu* = Real-Time Liability Markup*rtlcd* = Real-Time Liability Markdown |
| RTLF | $ | *Real-Time Liability Forward*— rtlfp% of the sum of estimated RTL from the most recent seven Operating Days. RTLF = *rtlf%* of the Sum of Max RTL(*rtlcu%* \* RTL*, rtlcd%* \* RTL) for the most recent seven Operating DaysWhere:*rtlfp =* Real-Time Liability Forward |
| OUT q | $ | *Outstanding Unpaid Transactions*—Outstanding unpaid transactions for all QSEs represented by the Counter-Party, which include (a) outstanding Invoices to the Counter-Party; (b) estimated unbilled items to the Counter-Party, to the extent not adequately accommodated in the RTLE calculation (including resettlements and other known liabilities); and (c) estimated CRR Auction revenue available for distribution for Operating Days in the previous two months, to the extent not invoiced to the Counter-Party. Invoices will not be considered outstanding for purposes of this calculation the Business Day after that Invoice payment is received. OUT *q* = OIA *q* + UDAA *q* + UFA *q* + UTA *q* + CARDWhere:OIA *q* = *Outstanding Invoice Amounts for all the QSEs represented by the Counter-Party* – Sum of any outstanding Real-Time and Day-Ahead unpaid invoices issued to the Counter-Party, including but not limited to CRR Auction Revenue Distribution (CARD) Invoices, CRR Balancing Account Invoices, Default Uplift Invoices and other miscellaneous Invoices. Also included are the amounts or portions of Invoices due to the Counter-Party that have been short-paid as a result of a default or non-payment of Invoices due to ERCOT by another Counter-Party.UDAA *q* = *Unbilled Day-Ahead Amounts for all the QSEs represented by the Counter-Party*  – Sum of DAL for all the QSEs represented by the Counter-Party for all Operating Days for which a DAM Statement is not generated.UFA *q* = *Unbilled Final Amounts for all the QSEs represented by the Counter-Party* – Unbilled final extrapolated days (*ufd)* multiplied by the sum of the net amount due to or from ERCOT for all QSEs represented by the Counter-Party for Operating Days for which RTM Final Statements were generated in the 21 most recent calendar days, divided by the number of Operating Days for which RTM Final Settlement Statements were generated for the Counter-Party in the 21 most recent calendar days. UTA *q* = *Unbilled True-Up Amounts for all the QSEs represented by the Counter-Party* –– Unbilled true-up extrapolated days (*utd)* multiplied by the sum of the net amount due to or from ERCOT by the Counter-Party for all the QSEs represented by the Counter-Party for Operating Days for which RTM True-up Statements were generated in the 21 most recent calendar days, divided by the number of Operating Days for which RTM True-up Settlement Statements were generated for the Counter-Party in the 21 most recent calendar days. CARD = *CRR Auction Revenue Distribution for all the QSEs represented by the Counter-Party* –Estimate of the Counter-Party’s unpaid allocation of CRR Auction revenues that have already been collected but have not been paid out to all QSEs represented by the Counter-Party. CRR Auction revenues that have been earned but not billed are distributed based on the following Load Ratio Shares (LRSs): (a) Zonal LRS applied to revenues from CRRs cleared and have source and sink points located within a 2003 ERCOT Congestion Management Zone (CMZ), and (b) ERCOT-wide LRS applied to all other CRR Auction revenues. The LRS will be based on the latest completed operating month for which LRS are available. |
| DAL | $ | *Day-Ahead Liability*—The estimated or settled amounts due to or from ERCOT due to activities in the DAM for an Operating Day, as defined in Section 16.11.4.3.1, Day-Ahead Liability Estimate.  |
| OUT *t* | $ | *Outstanding Unpaid Transactions*—Outstanding unpaid transactions for all QSEs represented by the Counter-Party if none of the QSEs represented by the Counter-Party represent either Load or generation, which include (a) outstanding Invoices to the Counter-Party; (b) estimated unbilled items to the Counter-Party, to the extent not adequately accommodated in the RTLE calculation (including resettlements and other known liabilities).OUT *t* = OIA *t* + UDAA *t* + UFA *t* + UTA *t*Where:OIA *t* = *Outstanding Invoice Amounts for all the QSEs represented by the Counter-Party if none of the QSEs represented by the Counter-Party represent either Load or generation* – Sum of any outstanding Real-Time and Day-Ahead unpaid Invoices issued to the Counter-Party, including but not limited to CRR Balancing Account Invoices, Default Uplift Invoices and other miscellaneous Invoices. Also included are the amounts or portions of invoices due to the Counter-Party that have been short-paid as a result of a Default or non-payment of invoices due to ERCOT by another Counter-Party.UDAA *t* = *Unbilled Day-Ahead Amounts for all the QSEs represented by the Counter-Party if none of the QSEs represented by the Counter-Party represent either Load or generation* – Sum of DAL for all the QSEs represented by the Counter-Party for all Operating Days for which DAM Statement is not generated.UFA *t* = *Unbilled Final Amounts for all the QSEs represented by the Counter-Party if none of the QSEs represented by the Counter-Party represent either Load or generation* – *ufd* multiplied by the sum of the net amount due to or from ERCOT for all QSEs represented by the Counter-Party for Operating Days for which RTM Final Statements were generated in the 21 most recent calendar days, divided by the number of Operating Days for which RTM Final Settlement Statements were generated for the Counter-Party in the 21 most recent calendar days. UTA *t* = *Unbilled True-Up Amounts for all the QSEs represented by the Counter-Party if none of the QSEs represented by the Counter-Party represent either Load or generation* – *utd* multiplied by the sum of the net amount due to or from ERCOT by the Counter-Party for all the QSEs represented by the Counter-Party for Operating Days for which RTM True-up Statements were generated in the 21 most recent calendar days, divided by the number of Operating Days for which RTM True-up Settlement Statements were generated for the Counter-Party in the 21 most recent calendar days.  |
| OUT *a* | $ | *Outstanding Unpaid Transactions for all CRR Account Holders represented by the Counter-Party*—Outstanding, unpaid transactions of all the CRR Account Holders represented by the Counter-Party, which include outstanding Invoices to the Counter-Party. Invoices will not be considered outstanding for purposes of this calculation the Business Day after that Invoice payment is received. OUT *a* = OIA *a* + UDAA *a* Where:OIA *a* = *Outstanding Invoice Amounts for all the CRR Account Holders represented by the Counter-Party* – Sum of any outstanding Real-Time and Day-Ahead unpaid Invoices issued to the Counter-Party including but not limited to CRR Balancing Account Invoices, Default Uplift Invoices and other miscellaneous Invoices. Also included are the amounts or portions of Invoices due to the Counter-Party that have been short-paid as a result of a default or non-payment of Invoices due to ERCOT by another Counter-Party.UDAA *a* = *Unbilled Day-Ahead Amounts for all the CRR Account Holders represented by the Counter-Party*  – Sum of DAL of all the CRR Account Holders represented by the Counter-Party for all Operating Days for which DAM Statement is not generated. |
| ILE***q*** | $ | *Incremental Load Exposure –*In the event of a Mass Transition necessitated by the default of a Counter-Party representing a QSE associated with an LSE, ERCOT may adjust the TPE of the Counter-Parties representing QSEs that are qualified as Providers of Last Resort (POLRs) to reflect the estimated Incremental Load Exposure (ILE) resulting from the Mass Transition. The adjustment will be based on the POLR’s *pro rata* share of the defaulting Counter-Party’s RTLE, based on the total estimated Electric Service Identifiers (ESI IDs) to be transitioned. ERCOT will communicate any such adjustment to the Authorized Representative of each Counter-Party who is a POLR within 24 hours of the initiation of a Mass Transition. The ILE adjustment will remain in place no more than the number of days necessary to effect a Mass Transition for the defaulting Counter-Party, after which time the incremental exposure will be fully reflected in the Counter-Party’s unadjusted TPE.  |
| DALE | $ | *Average Daily Day-Ahead Liability Extrapolated*—M1 multiplied by the sum of the net amount, with zero substituted for missing values, due to or from ERCOT by the Counter-Party in the seven most recent Operating Days for which DAM Settlement Statements are produced for Counter-Parties according to the ERCOT Settlement Calendar divided by seven. |
| M1 |  | M1 = M1a + M1b—Multiplier for DALE and RTLE. Provides for forward risk during a Counter-Party termination upon default based upon the sum of the time period required for any termination upon default (M1a) and the time period required for a Mass Transition only (M1b). The M1a component is applicable to all Counter-Parties. The M1b component is applicable only to Counter-Parties representing any QSE associated with a LSE.M1a = Time period required for any termination from an Operating Day.  M1a is comprised of a fixed value (*M1d*), representing days from issuance of a collateral call to termination, and a calendar day-specific variable value. For any Operating Day, M1a is equal to the total number of forward calendar days encompassed by starting on the Operating Day, including *M1d* Bank Business Days forward, and adding any ERCOT holidays that are also Bank Business Days.M1b = Weighted average transition days = Min(B, (2 + Max(1, (u+1)/2))\*(1-DF)), rounded up to whole days Where: u = (ESIn/r) Unscaled number of days to transition. B = Benchmark value. Used to establish a maximum M1 value.ESIn = Number of ESI IDs associated with an individual Counter-Party. This value will be updated no less often than annually by ERCOT and updated values communicated to individual Counter-Parties. Counter-Parties entering the market will provide an estimated number of ESI IDs for use during their first six months of market activity. Subsequent to this time, the value for that Counter-Party shall be updated by ERCOT concurrently with other Counter-Parties with QSEs representing an LSE.r = Assumed ESI ID daily transition rate.DF = Discount Factor applied to M1b if the Counter-Party is eligible for unsecured credit under Section 16.11.2, Requirements for Setting a Counter-Party’s Unsecured Credit Limit, or meets other creditworthiness standards that may be developed and approved by TAC and the ERCOT Board. |
| M2 |  | Multiplier for URTA. |
| RFAF | None | *Real-Time Forward Adjustment Factor*—The adjustment factor for RTM-related forward exposure as defined in Section 16.11.4.3.3, Forward Adjustment Factors. |
| DFAF | None | *Day-Ahead Forward Adjustment Factor*—The adjustment factor for DAM-related forward exposure as defined in Section 16.11.4.3.3. |
| *lrq* | Days | Look-back period for RTM to find the maximum of RTLE or URTA for all QSEs represented by the Counter-Party if any of the QSEs represented by the Counter-Party represent either Load or generation. |
| *lrt* | Days | Look-back period for RTM to find the maximum of RTLE or URTA for all QSEs represented by the Counter-Party if none of the QSEs represented by the Counter-Party represent either Load or generation. |

The above parameters are defined as follows:

| Parameter | Unit | Current Value\* |
| --- | --- | --- |
| *rtlcu* | Percentage | 110% |
| *rtlcd* | Percentage | 90%  |
| *rtlfp* | Percentage | 150%  |
| *ufd* | Days | 55 |
| *utd* | Days | 180 |
| *M1d* | Days | 8 |
| *B* | Days | 8 |
| *r* | none | 100,000 per day |
| *DF* | Percentage | 0 |
| *M2* | Days | 9 |
| *lrq* | Days | 40 |
| *lrt* | Days | 20 |
| \* The current value for the parameters referenced in this table above will 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. |