Default Uplift Allocation Design

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ERCOT's default uplift allocation in the Protocols is based on volumetric market activity in the month prior to that of the short-pay

ERCOT Default Uplift Allocation
–Protocol Formula (9.19.1 (2)) –

$$DURSCP_{cp} = TSPA * MMARS_{cp}$$

Where:

$$MMARS_{cp} = MMA_{cp} / MMATOT$$

$$MMA_{cp} = Max \{ \sum_{mp} (URTMG_{mp} + URTDCIMP_{mp}), \rightarrow RTM\ Metered\ Generation\ and\ DC\ Tie\ Imports$$
$$\sum_{mp} (URTAML_{mp} + UWSLTOT_{mp}) \rightarrow RTM\ Adjusted\ Metered\ Load\ and\ uplift\ metered\ energy$$
$$\sum_{mp} URTQQES_{mp}, \rightarrow RTM\ QSE\ to\ QSE\ Energy\ Sales$$
$$\sum_{mp} URTQQEP_{mp}, \rightarrow RTM\ QSE\ to\ QSE\ Energy\ Purchases$$
$$\sum_{mp} UDAES_{mp}, \rightarrow DAM\ Energy\ Sales\ (TPO\ and\ Energy\text{-}Only)$$
$$\sum_{mp} UDAEP_{mp}, \rightarrow DAM\ Energy\ Purchases$$
$$\sum_{mp} URTOBL_{mp} + URTOBLLO_{mp}) \rightarrow RTM\ PTP\ Obligations\ and\ uplift$$
$$\sum_{mp} (UDAOPT_{mp} + UDAOBL_{mp} + UOPTS_{mp} + UOBLS_{mp}), \rightarrow CRR\ Auction\ Sales\ \&\ CRR\ Ownership\ in\ DAM$$
$$\sum_{mp} (UOPTP_{mp} + UOBLP_{mp})\} \rightarrow CRR\ Auction\ Purchases$$

$$MMATOT = \sum_{cp} (MMA_{cp})$$

Where:

$$URTMG_{mp} = \sum_{p, r, i} (RTMG_{mp, p, r, i}), excluding\ RTMG\ for\ RMR\ Resources\ and\ RTMG\ in\ Reliability\ Unit\ Commitment\ (RUC)\text{-}Committed\ Intervals\ for\ RUC\text{-}committed\ Resources$$
$$URTDCIMP_{mp} = \sum_{p, i} (RTDCIMP_{mp, p, i}) / 4$$
$$URTAML_{mp} = \sum_{p, i} max(0, \sum_{p, i} (RTAML_{mp, p, i}))$$
$$URTQQES_{mp} = \sum_{p, i} (RTQQES_{mp, p, i}) / 4$$
$$URTQQEP_{mp} = \sum_{p, i} (RTQQEP_{mp, p, i}) / 4$$
$$UDAES_{mp} = \sum_{p, h} (DAES_{mp, p, h})$$
$$UDAEP_{mp} = \sum_{p, h} (DAEP_{mp, p, h})$$
$$URTOBL_{mp} = \sum_{(j, k), h} (RTOBL_{mp, (j, k), h})$$
$$URTOBLLO_{mp} = \sum_{(j, k), h} (RTOBLLO_{mp, (j, k), h})$$
$$UDAOPT_{mp} = \sum_{(j, k), h} (DAOPT_{mp, (j, k), h})$$
$$UDAOBL_{mp} = \sum_{(j, k), h} (DAOBL_{mp, (j, k), h})$$
$$UOPTS_{mp} = \sum_{(j, k), h} (OPTS_{mp, (j, k), h})$$
$$UOBLS_{mp} = \sum_{(j, k), h} (OBLS_{mp, (j, k), h})$$
$$UOPTP_{mp} = \sum_{(j, k), h} (OPTP_{mp, j, h})$$
$$UOBLP_{mp} = \sum_{(j, k), h} (OBLP_{mp, (j, k), h})$$
$$UWSLTOT_{mp} = (-1) * \sum_{r, b} (MEBL_{mp, r, b})$$

Estimated Default Uplift Allocation Shares
-Protocol section 9.19.1 -

- **ERCOT estimated that approximately half of a default allocation occurring in February 2021 would have been driven by CRR activity**

Estimated Default Uplift Shares by Segment

Segment	# Counter-Parties	January MMA Total (MWh)	January MMA (MWh)	January MMARS %
Gen	28		5,111,155.62	2.34%
Load	28		11,775,576.00	5.39%
Load and Gen	33	218,577,111	94,398,323.87	43.19%
Trader	120		99,928,275.50	45.72%
CRRAH Only	29		7,293,961.60	3.34%
Inactive	3		69,818.70	0.03%
Total	241		218,577,111.29	100.00%

Source: ERCOT public presentation posted to the Credit Working Group meeting page for 4/21/2021

- Approximately half of the allocation is driven by CRR activity.

- Individual Counter-Party share reports are expected to be posted to MIS on Monday, April 26, 2021.

- **The default uplift methodology uses the quantity of MWh instead of the amount of dollars**
  — This leads to the significant over-representation of CRR activity

- **Energy trades, generation, and load settle at the full energy price, because they represent the actual production, consumption, or transfer of energy, while CRRs only settle for nodal price differences**
  — Yet they are treated at the same value in the default formula

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Issues with the Default Uplift Allocation
-Protocol section 9.19.1 -

- **The allocation in the Protocols today distorts the fair value of CRR hedges and disincentivizes participation in the CRR Auctions**
  - The CRR product works with long-term energy transactions to obtain a full hedge for up to three years
  - Risk premiums to account for a potential default allocation influence CRR clearing prices
  - Reduced participation leads to less liquid markets (broader bid/asks, fewer participants, fewer transactions), lower auction revenues, and less robust price discovery

- **The risk of a cascading default situation increases under an allocation that heavily concentrates uplift costs to a subset of the market**

- **Allocating half of a total default to CRR activity is not reasonable**
  - Default allocation should be spread evenly across dollar-weighted market activity
  - Default allocation should balance the burden of paying back discounted receivables across all dollar activity (i.e., payables and receivables), however not in a way that dramatically distorts the cash flow stream
  - The allocation of 50% of a $2.9B default to CRR holders who participate in a market with an average annual value < $1B [measured by market-wide auction revenue or settlement] is unreasonable compared to the greater energy market value of ~$50B during the week of Storm Uri
  - No allocation will ever be perfectly fair; however, we need to reach a reasonable level

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Default Uplift Allocation Practices
- Table of various RTO/ISO practices-

	ERCOT	MISO	SPP	CAISO	PJM
Activity base used in default allocation:	Based on previous month Max activity buckets: -Metered -- Generation/DCT Imp -Metered Load -Bilateral sales -Bilateral purchases -DAM sales -DAM purchases -CRR Sales & ownership in DAM -CRR Auction Purchases	Based on invoice activity during the same period of time as the unpaid invoice(s) of the MP whose unpaid Past Due Amount has been declared an Uncollectible Obligation. Allocated to each MP that had been invoiced during the same period of time as the unpaid invoice(s) of the MP whose unpaid Past Due Amount has been declared an Uncollectible Obligation. % Loss for MPA = MPA Market Charges + Market Credits in weekly invoicing cycle/MPALL (Market Charges + Market Credits) in weekly invoicing cycle Loss Obligation of MPA = (% Loss for MPA) x $ Amt of Uncollectible Obligation, where: MP = Market Participant -Market Charges = The absolute value of all charge amounts associated with invoices for Market Activities. -Market Credits = The absolute value of all credit amounts associated with invoices for Market Activities. -MPALL = All Market Participants other than MPs with Uncollectible Obligations.	Based on Invoice activity during the same period of time as the unpaid invoice(s) of the MP whose Unpaid Obligation has been declared an Uncollectible Obligation. The Uncollectible Obligation is allocated to all Non-Defaulting MPs who conducted business in the market during the time covered by the invoice(s) containing the Uncollectible Obligation(s). =% Loss for MPA = MPA Market Charges + Market Credits in weekly invoicing cycle/ MPALL (Market Charges + Market Credits) in weekly invoicing cycle. -Loss Obligation of MPA = ((% Loss for MPA) x $ Amt of Uncollectible Obligation) minus (-) (Reduction of Payments + Pro rata share of partial payment(s)) Where: -MP = Market Participant --Market Charges = The absolute value of all charge amounts associated with invoices for Market Services. -Market Credits = The absolute value of all credit amounts associated with invoices for Market Services. -MPALL = All Market Participants other than MPs with Uncollectible Obligations. -Reduction of Payment = The amount of the Unpaid Obligation originally assessed to MP -Pro rata share of partial payment(s) = Any partial payments received during cure period	Hybrid approach based on dollar and MW activity: Based on quarterly percentage shares calculated based on quarterly average over rolling four-quarter look-back period: --20% of payment default amount allocated in proportion to net amounts payable --30% of payment default amount allocated in proportion to sum of absolute values of dollar amounts shown on invoices payable or receivable after certain dollar amount exclusions for GMC, RMR, and Wheeling Access Charge costs and exclusions for billing of Access Charges and payment of Transmission Revenue Requirements to Participating Transmission Owners --50% of payment default amount allocated in proportion to largest of the following amounts calculated in MWh for every month in each applicable calendar quarter •Cleared DA Schedules to supply Energy... •Metered Generation... •Cleared DA Schedules for demand... •Metered Load x 103%... •The greater of the quantity of CRRs or Inter-SC Trades of Energy...	Activity component is based on on last three months gross activity Default Allocation Assessment shall be equal to (0.1(1/N) + 0.9(A/Z)) Dissection of calculation: 1) % share to total number of participants weighted at 10% (not exceeding $10,000); and 2) % share to total market over last 3 months weighted at 90% A = for Members comprising factor "N" above, the Member's gross activity as determined by summing the absolute values of the charges and credits for each of the Activity Line Items identified in section 15.2.2(b) below as accounted for and billed pursuant to Operating Agreement, Schedule 1, section 3 for the month of default and the two previous months. Z = the sum of factor A for all Members excluding ex officio Members, State Consumer Advocates , Emergency and Economic Load Response Program Special Members , and municipal electric system Members that have been granted a waiver under Operating Agreement, section 17.2.

Advantages of PJM's Default Uplift Allocation
-PJM Operating Agreement Section 15.2.2-

- **Default uplift shares calculated using gross dollar activity spreads uplift risk more evenly across all market transactions**
  - Better represents market activity
  - Avoids a high concentration of allocation risk to a single product type
  - Using gross value avoids issues with netting where a counterparty could avoid default uplift, but yet have significant market activity and risk of default

- **Utilizing a look back horizon of three months promotes an even assessment by avoiding peaks and valleys within settlement/invoice cycles**

- **Under PJM's tiered approach all market participants backstop a default**

- **PJM's design allocates default uplift to a single risk pool**
  - Today's short-payment process draws from a single risk pool
  - Avoids potential issues with multiple risk pools
    - With more risk pools there are fewer counterparties to backstop a massive failure, which increases the likelihood of cascading defaults
    - Who is the ultimate backstop if a black swan event cannot be contained within a single market segment or product type?
    - Defining and designating risk pools does not appear to be straightforward
    - ERCOT and potentially market participants would have to manage multiple risk pools

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