Appian Way

Energy Partners

Proper Approach to Mark-to-Auction

PJM Credit Subcommittee

28 September 2018

Mark-to-Auction (MTA)
Problem with Proposals A-F

- Each of proposals A-F has a flaw that makes each inconsistent with best practice in credit and counterparty risk management
- Under A-F, a deteriorating forward FTR position would only require additional collateral once the initial path-based and per-MWh collateral was exhausted
- A-F proposals all set collateral as:
  - Max (Path-based, per-MWh, MTA)
- If the MTA is binding, PJM will have NO collateral or cushion for further losses
  - Proper margining disincentivizes doubling down on bad bets

Mark-to-Auction (MTA)

Basic Margining Concepts

- Margining is standard industry practice for all PJM participants involved in commercial trading with counterparties
  - The principles are well-established and laid out in ISDA/EEI/Futures Agreement margining protocols

- Under ISDA/EEI/Futures:
  - Collateral = Initial Margin + Variation Margin
  - **Initial margin** is the collateral associated with holding a specific set of positions (i.e. path-based or per-MWh)
  - **Variation margin** is collateral associated with the mark-to-market or MTA. I.e. When the fair value of a position deteriorates, the losing party has to give collateral to their counterparty to bring the position back to fair value

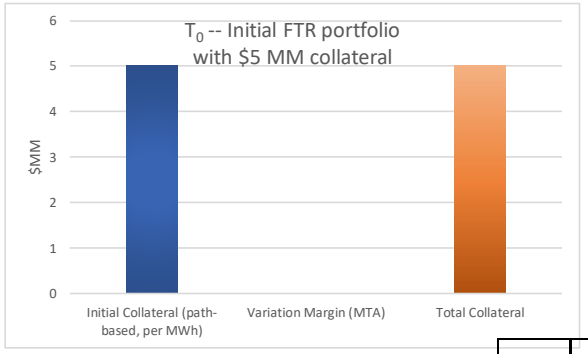
- In the case of PJM FTRs, anticipated ARR revenue can off-set MTA losses in margining

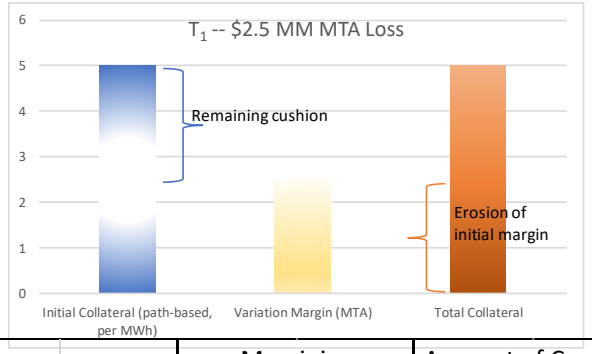
Mark-to-Auction (MTA)
MTA as an Adder

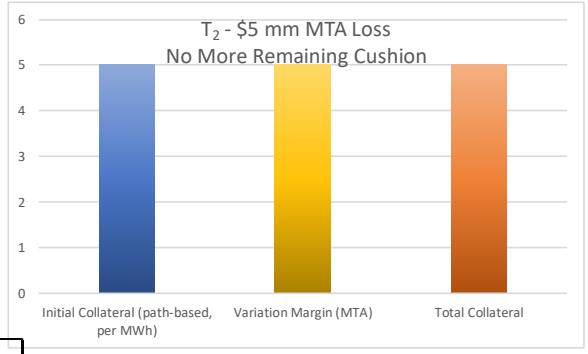
- Calculating MTA as an adder rather than the max would bring PJM's credit policy in line with standard industry practice:
  - Collateral = initial margin + variation margin, i.e.:
  - Collateral (G) = Max(Path-based, per MWh) + MTA **Correct!**
  - Collateral (A-F)= Max(Path-based, per MWh, MTA) **Not Correct!**
- Treating MTA as an adder ensures that the initial margin cushion is reestablished after a MTA loss
- Under A-F, MTA losses completely erode the initial margin cushion before asking for more collateral

Mark-to-Auction (MTA)
Example

- Assume a set of FTR positions where the initial collateral requirement (Path-based or per MWh) is $5 Million (mm).
  - At t_0, collateral is $5 mm and the cost of the positions equals their mark (MTA = 0)
  - At the next auction t_1, the MTA loss is $2.5 mm, eroding the initial margin
  - At the next auction t2, the MTA is $5 mm. Now there is no collateral to cover the next move under A-F







	Initial Margin	Variation Margin	Margining Requirement A-F	Margining Requirement G	Amount of Cushion for Future Losses A-F	Amount of Cushion for Future Losses G
t_0	5	0	5	5	5	5
t_1	5	2.5	5	7.5	2.5	5
t_2	5	5	5	10	0	5

- In order to keep PJM's exposure constant, MTA must be added to the initial requirement, dollar for dollar as soon as the forward FTR portfolio is out of the money