FTR Underfunding Review

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October 18, 2019
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Moving FTRs to an external exchange to manage credit risk raises concerns with underfunding congestion accounting and related market impacts

• **Key Takeaways**
  – There is no guarantee for full ARR/FTR funding, however SFT is designed to ensure revenue adequacy under normal conditions
  – PJM FTRs are settled using a weekly month-to-date settlement process
  – Chronic FTR underfunding can lead to risk premiums in auction bids which can impact ARR value
  – Open questions if potential future underfunding creates unintended consequences with Nodal Exchange proposal
Simultaneous Feasibility Test (SFT)

• Test to ensure that all subscribed transmission entitlements are within the capability of the existing transmission system

• Test to ensure the PJM Energy Market is revenue adequate under normal system conditions

• **NOT** a system reliability test

• **NOT** intended to model actual system conditions
FTR Settlemnts

All FTRs have a cost and a value

• FTR cost is determined from the comprehensive results of the auctions
  – charges and credits calculated daily, equally over lifetime of FTR
  – auction charges fund daily ARR target credits

• FTR value is determined from the hourly results of the day-ahead market
  – DA congestion revenues used to fund FTR target credits

• More information see Annual Training (slides 108-120):
End-of-month settlement process uses excess collected from planning period to-date to fund any deficient hours or carried forward to the next month within the planning period.

- Books close at the end of each planning period (May billing statements)

Any surplus funds are returned pro-rata to positive ARR target credits.

- Includes surplus DA congestion, auction revenues, market-to-market congestion

All positive FTR target credits get a ratio share of underfunding if any exists at the end of the planning period to create a PJM-wide uniform deficiency ratio (uplift charges and credits).

- Has not happened since May 2014
- ARR target credits have never been underfunded
Illustrative Example

Assume planning period one hour with two effective FTRs and no surplus auction or m2m revenues

- DA congestion revenue collected = $100
- FTR 1 A – B; TGT CR = $100
- FTR 1 pay out = $90
- FTR 2 C – D; TGT CR = $50
- FTR 2 pay out = $10
- FTR revenue adequacy = 67%

- FTR 1 uplift credit = $100 - $90 = $10
- FTR 2 uplift credit = $50 - $10 = $40
- Total uplift credits = $50
- FTR 1 uplift charge = ($100 / $150)*$50 = $33.34
- FTR 2 uplift charge = ($50 / $150)*$50 = $16.67
If there is interest in pursuing the Nodal Exchange model, congestion accounting would need to be adjusted

• In the previous example, if FTR A-B or C-D is novated to nodal exchange, PJM would not have enough congestion revenues to pay futures positions
  – PJM to tap credit line to cover potential; twice-a-day variation margin payments
  – PJM accounting practices would need to change to account for imbalances

• **Discussion question:**
  – If FTRs novated to Nodal Exchange are not subject to underfunding, does that cause rippling effects / unintended consequences in the market?
    • i.e. bid low and novate to avoid underfunding