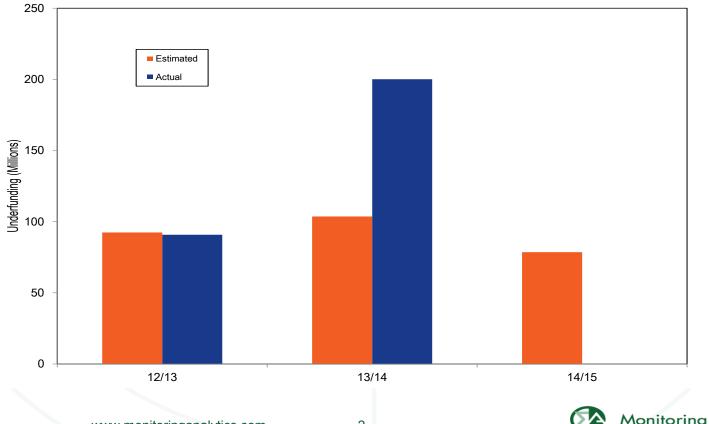
FTRSTF Education

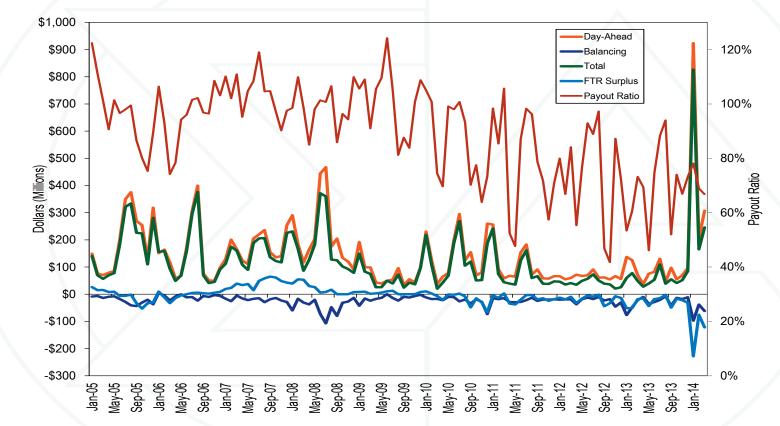
FTRSTF June 25, 2014 Seth Hayik Howard Haas



Underfunding due to Stage 1A ARR Over Allocations



FTR Funding: 2005 through March 2014



UTC Analysis: Impact on unit commitment

- PJM and the IMM agree that the data from the May and December studies indicated that UTCs affect unit commitment and dispatch in the day ahead market.
- PJM and the IMM agree that the data from the December study indicated that INCs and DECs affect unit commitment and dispatch in the day ahead market.
- PJM and the IMM agree that the magnitude of the impact on unit commitment status and unit output varies by day.

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May UTC Analysis: Impact on congestion

- Study results show that UTCs significantly increased day ahead congestion.
 - UTCs increased the number of constraints that bind in the day ahead market.
 - UTCs affected the hours that the constraints bind.
 - UTCs affected the shadow prices of the constraints in the day ahead market.

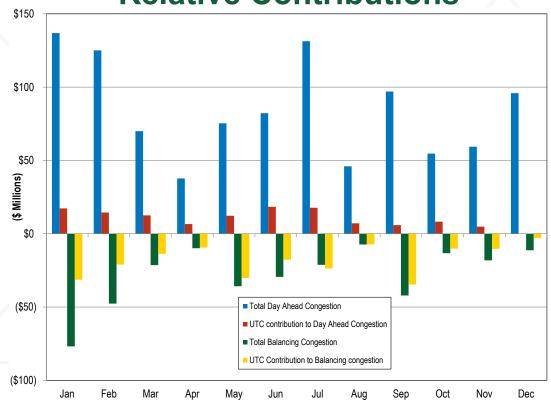
May UTC Analysis: Impact on congestion

- Study results show that UTCs increase negative balancing congestion.
 - Removing UTCs reduced the number of day ahead constraints and day ahead congestion.
 - Removing UTCs made day ahead results more consistent with real time constraints and real time congestion.
 - Removing UTCs reduced negative balancing congestion.

UTC analysis: Contributions to congestion in 2013

- Analysis shows that UTCs pay day ahead congestion, in net.
- Analysis shows that UTCs are paid balancing congestion, in net.
- Analysis shows that UTCs contribute significantly to negative balancing congestion, in net.

2013 Day Ahead and Balancing Congestion: UTC Relative Contributions



May UTC Analysis: FTR Funding

- Study results show that UTCs contributed significantly to FTR underfunding relative to target allocations.
- For the five days studied, the removal of UTCs changed FTR funding relative to target allocations from a deficit of -\$4.1 million to a net surplus of \$537 thousand, a gain in funding relative to target allocations of \$4.7 million.
- For the five days studied, removing UTCs reduced target allocations from \$16,241,505 to \$7,780,223. The reduction was \$8,461,282, or 52 percent.

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