Underfunding due to Stage 1A ARR Over Allocations

![Bar chart showing underfunding in millions for the years 12/13, 13/14, and 14/15. The chart compares estimated and actual underfunding.]
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.
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

![Chart showing the relative contributions of UTC to Day Ahead and Balancing Congestion for each month of 2013.](chart.png)
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.