



Virtual Transactions in the PJM Energy Markets

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March 24, 2016

1. How virtual transactions work.
2. Theoretical benefits of virtual transactions.
3. Volume and usage statistics.
4. Observed bidding strategies.
5. Recommendations.

- Virtual transactions provide theoretical benefits (examples)
 - Additional competition
 - Price/commitment convergence
 - Market power mitigation
- These benefits are easy to prove out with simple examples but difficult to measure the actual impact of
- PJM feels that virtual transactions, in general, provide these benefits
- However, existing market rules allow for transactions to profit in scenarios that do not meaningfully provide the theoretical benefits

1. Consistent allocation of uplift to virtual transaction types.
2. Align eligible bidding points to be consistent with locations where settlement of a physical asset or load occurs, or trading hubs.