



Energy and Reserve Pricing & Interchange Volatility Solutions

Lisa Morelli

October 30, 2014

The proposed Energy and Reserve Pricing Solution is comprised of three parts

- Day-ahead resource commitment changes
- Day-ahead scheduling reserve requirement changes
- Synchronized Reserve and Primary Reserve requirement changes

Commit long lead resources scheduled for the next operating day in the DA market based on the schedule dictated by PJM operations

- Will be done anytime long lead resources have been scheduled and are still needed
- Daily checkpoint at 10am to decide which long lead time resources are still needed

Increase the Day Ahead Scheduling Reserve requirement on “peak” days by:

- Any additional reserves scheduled to specifically address operational uncertainty
- The hourly difference in forecasted RT load and adjusted fixed demand
 - Adjusted fixed demand = actual fixed demand for the hour, scaled up by the historical average percentage of additional demand that comes from the net of price sensitive demand, incs and decs (conditional demand factor)

Will only be done during Hot weather alert, cold weather alert or more significant emergency procedures

Cost Allocation: Additional DASR quantity reflecting the difference between DA demand and forecasted RT load will be allocated to demand that is underbid in the day-ahead market

- DA Fixed Demand + Price Sensitive Demand + Decs – Incs vs. RT Load

Changes to the calculation of eligible DASR capability

- Clear DASR MW up to resources' economic max rather than emergency max
- Adjust capability considered from offline units to recognize startup and notification times
- More accurately reflects the dispatch capability of resources if they are needed in real-time

These changes will apply all the time, rather than just during peak conditions

Synch and Primary Reserve Changes

The proposed real-time reserve changes are a more flexible version of the short-term solution

	Short-term Solution	Proposed Long-term Solution
Trigger	Emergency conditions plus significant additional reserves have been scheduled	Emergency conditions plus additional reserves were committed after the close of the DA market and RAC run
Increase in SR and PR requirements by:	1300 MW	Sum of additionally scheduled capacity
Shortage Pricing	Yes – when short the extended requirement	Yes – create second, lower step at \$300 on the SR and PR demand curves

Energy and Reserve Pricing Implementation Timeline

- Energy and Reserve Pricing Solution (DA and RT reserve changes)
 - Implemented for Winter 2015, with the exception of changes requiring tariff revisions
 - Changes requiring tariff revisions to be implemented no later than Spring 2015
 - Cost allocation for additional DASR commitment
 - Additional lower step on SR / PR demand curves

	PJM Proposal	Alternative Transition Proposal
DA commitment changes	Commit long lead units in DA	Same as PJM
DASR changes	Increase DASR req during HWA / CWA / Emerg Proc	Do not increase DASR req by difference between forecasted RT load and adjusted fixed demand until cost allocation change is approved by FERC
RT reserve changes	Increase SR and PR reqs	Increase PR req only until FERC filing is approved, then increase PR and SR reqs
Implementation timeline	Implement all changes for the winter, except the following which will be implemented after FERC approval: DASR cost allocation 2 nd step on demand curves	Same as PJM, except: <ul style="list-style-type: none"> - DASR req increase is not implemented until cost allocation is approved - only PR requirement will be increased this winter until FERC filing is approved

Implement an hourly interchange cap for the forecasted peak hour(s) and surrounding hours during emergency conditions

- Only used when operators have made firm resource commitments and anticipated interchange schedules are sufficient to meet projected load for the hour
- Typically calculated and implemented 1 – 2 hours prior to the operating hour
- Limits spot imports and hourly non-firm point-to-point transactions once net interchange reaches the cap
 - Schedules with firm or network designated service and real time with price transactions will NOT be limited
 - Spot imports and hourly non-firm PTP transactions submitted prior to implementation of the cap will NOT be limited

The Interchange Volatility proposal will be implemented in two phases:

- Winter 2015 via manual curtailment of transactions violating interchange cap
 - Operators will use a report highlighting hourly service that was scheduled after the implementation of the cap
 - Operators will curtail hourly service above the cap on a last in / first out basis
- Spring 2015 via automated denial of transactions violating interchange cap at time of submission

Energy and Reserve Pricing Solution

- M11 – Energy & Ancillary Service Market Operations
- M28 – Operating Agreement Accounting
- Operating Agreement – Schedule 1
- Open Access Transmission Tariff – Attachment K

Interchange Volatility Solution

- M11 – Energy & Ancillary Service Market Operations
- Regional Practices