RECO's Compromise VOM Proposal

Orange & Rockland

Concerns of the coalition

- The AEP and PJM proposals will have significant impact if/when other impending energy market changes are implemented.
- Combined with PJM's fast-start or convex hull proposal, the changes included in the AEP and PJM proposals may result in exponentially higher costs for load.
- RECO believes that toggling costs between markets based on the prices in those markets produces uncertainty, confusion, poor precedent, and a general lack of transparency.
- RECO's proposal is a compromise between the AEP/PJM proposals and the IMM proposal created to try and find middle ground.

Elements of RECO's proposal

1. All units can include up to the Manual 15 defined VOM estimates for each technology type.
   - No multipliers
   - No exceptions
   - VOM adders will only be allowed in the unit's incremental energy offer
   - The Manual 15 VOM estimates for technology type will be updated once every two years according to the U.S. Bureau of Labor Statistics index.
2. The PJM/AEP proposals include a provision that allows units that fail to clear in the capacity market to offer their VOM in their energy offer; the RECO proposal eliminates this provision.

Up to Manual 15 VOM values, not more

- Units will be allowed to include VOM costs in their cost based energy offer up to the updated values included in Manual 15.
- No generating units will be allowed to exceed the Manual 15 VOM estimates.
- All generating units that would like to offer more competitively (below Manual 15 values or their actual costs) will still be allowed to do so at their discretion.
  - If a unit wants to offer below its actual VOM costs, it can do so.
  - If a unit wants to offer at the Manual 15 levels it will be given ‘safe harbor’, i.e. those costs will not be questioned by the IMM.
    - This offers generators price certainty, reduces administrative burden, and reduces risk.

Proposed M15 VOM Caps Compared to EIA, IMM SOM

Unit Type	Proposed M15 VOM	EIA[1]	IMM SOM
Combined Cycle (F Series)	$3.50/MWh	$3.50/MWh	$1.00/MWh
Advanced Combined Cycle (H Series)	$3.50/MWh	$2.00/MWh	$1.00/MWh
Combustion Turbine (LM-6000)	$3.50/MWh	$3.50/MWh	$.25/MWh
Advanced Combustion Turbine (F Series)	$3.50/MWh	$10.70/MWh	$.25/MWh
Reciprocating Engine	$3.50/MWh	$5.85/MWh	$.25/MWh
Subcritical Coal	$4.00/MWh	N/A	$4.00/MWh
Supercritical Coal	$4.00/MWh	$4.60/MWh	$4.00/MWh
Subcritical Gas	$3.50/MWh	$1.30/MWh	N/A
Nuclear	$3.00/MWh	$2.30/MWh	$3.00/MWh
Biomass	$4.00/MWh	$4.20/MWh	N/A
Wind, Solar, Hydro	$0.00/MWh	$0.00/MWh	$0.00/MWh

[1] See https://www.eia.gov/analysis/studies/powerplants/capitalcost/, 2016 Report, accessed June 14, 2018.

Units that fail to clear in the capacity auctions…

- PJM/AEP Proposal
  - Units that fail to clear in the capacity auction will be able to include ACR-related maintenance costs in their energy offer.

- RECO Proposal
  - Units that fail to clear in the capacity market may not include ACR-related maintenance costs in their energy offer.
  - Not clearing in the capacity auction is a signal that the unit is uneconomic and should consider retiring.

Additional Considerations...

- The Manual 15 revisions necessary to implement this proposal may need to be refined.
- Additional changes to the Operating Agreement may be necessary, but this was unclear at the time of posting.