

Variable Operations & Maintenance Costs (VOM) Updated Proposal

Melissa Pilong Sr Analyst, Operations Analysis & Compliance

Markets & Reliability Committee

September 27, 2018

July MRC Voting Results

All proposal packages failed to receive endorsement at the July MRC.

Proposal	Sector Weight In Favor	Sector Weight Not In Favor
Main Motion w/EIA Defaults	2.27	2.72
1st Alternative Motion (PJM)	2.86	2.14
2nd Alternative Motion (IMM)	1.83	3.17
3rd Alternative Motion (RECO)	1.97	3.03
4th Alternative Motion (ODEC)	2.65	2.35
Revote of 1st Alternative Motion (PJM)	2.93	2.07



PJM Considerations for Moving Forward

- PJM is concerned that the current rules in Manual 15 related to Maintenance Adders treat CTs and CCs different from other unit types
- PJM would like to seek FERCs approval on allowable maintenance costs in the PJM Energy Market
- PJM removed the ability to recover fixed costs in the Energy Market due to potential inconsistent treatment of units that partially cleared the Capacity Market
 - Some stakeholders have indicated that they would reconsider the PJM package if fixed costs were removed and FERC review and approval was required before implementation



Proposed Revisions to PJM Package

- PJM proposes to modify the PJM package
 - Remove inclusion of fixed costs for Energy Resources and units that did not clear the Capacity auction
 - Add additional clarification language to Tariff Attachment DD section 6.8 and Operating Agreement Schedule 2
- Implement changes only upon FERC approval

Changes from Original Proposal

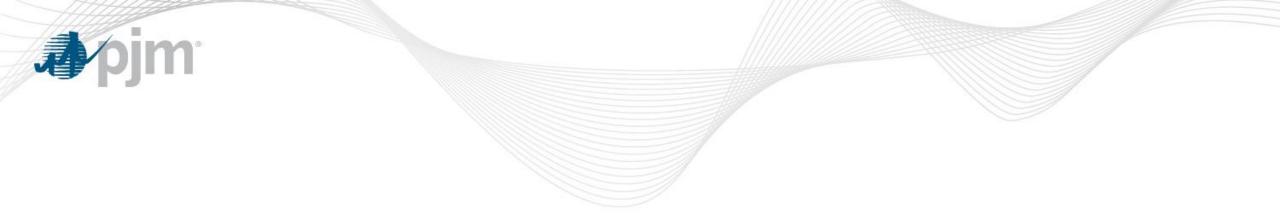
Components	PJM Original Package	PJM Revised Package
ACR Fixed Costs	Energy Only Resources and units that did not clear in the Delivery Year auctions can include ACR fixed cost in their cost-based energy offers.	Energy Only Resources and units that did not clear in the Delivery Year auctions cannot include ACR fixed cost in their cost-based energy offers. (Status Quo of current market rules)
Implementation Timeline	<u>VOM</u> - upon Board approval of M-15 Changes <u>Fixed Cost</u> - upon FERC approval of OA changes	<u>VOM</u> - upon FERC approval of OA and Tariff changes



- Endorsements, if Motioned and Moved to vote:
 - MRC/MC- September 27
- Board Approval

m

- October
- FERC Filing of Operating Agreement and Tariff Changes
 - Upon Board Approval



Appendix



Revised PJM Package

NOT RUN

ACR

Capacity - Avoidable Cost Rates

FIXED Avoidable costs

- Plant Staff
- Taxes
- Fees
- Insurance
- Carrying Charges
- Fuel Availability

VOM-M15

Energy - Variable Operations and Maintenance – Manual 15

ONE TO TEN YEARS Major overhauls and inspections

- CT Hot Gas
 Path Inspections
- Turbine Overhaul
- Boiler Overhaul
- CT and CC Overhaul & Major Inspection

ANNUAL Annual repairs from operating

RUN

- Pump/Valve Repair
- Boiler Tube Leak Repair
- CT Air Filter
 Replacement

Operating Costs Energy

OPERATING DAY Short run marginal cost

- Short Run Marginal Cost
- Water
- Chemicals
- Consumables

Jpjm

- Only actual maintenance costs attributed to running the unit and directly tied to electric production can be included in a unit's incremental energy offer.
 - CT and CC major inspection, overhaul and LTSA cost can be included
 - FERC Accounts minus labor cost can be included
 - Remove fixed Title V and emissions fees
- Immature units can use existing history (less than 10 years) or defaults



Manual 15 Revisions

- Clarification added to Section 2.6.1
 - The language was added to ensure that the description of the allowable maintenance in Section 2.6 does not prevent the use of the FERC accounts identified in the technology specific sections of M15
- Define maintenance components allowable in a unit's cost-based energy offer in Schedule 2 of the Operating Agreement



Operating Agreement and Tariff Changes

- Operating Agreement, Schedule 2
 - Section 1.1
 - Operating Costs added to the list of permissible components of Cost-Based Offers
 - Defined Operating Costs
 - Defined Maintenance Adders
 - Section 4
 - Operating Costs added (Review of Maintenance Adders and Operating Costs)
- Tariff Attachment DD, section 6.8(c)
 - Clarification of costs recoverable in the Capacity Market



Section 2.6.1 Clarification

Maintenance Costs are expenses incurred as a result of electric production. Allowable expenses can include repair, replacement, inspection, and overhaul expenses, including long term service agreements, related to the following systems and/or their associated FERC accounts identified later in this manual – steam turbine, gas turbine, generator, boiler, heat Recovery Steam generators (HSRG), main steam, feed water, condensate, condenser, cooling towers, transformers, controls, and fuel systems.



Proposed Operating Agreement Language

Schedule 2, Section 1.1(d) & (e)

(d) Operating Costs are expenses related to consumable materials used during unit operation and may include lubricants, chemicals, limestone, trona, ammonia, acids, caustics, water injection, and demineralizers usage.

(e) Maintenance Adders may include expenses incurred as a result of electric production. Allowable expenses include repair, replacement, inspection, and overhaul expenses including variable long term service agreement expenses.

Proposed Tariff Language

Attachment DD, section 6.8(c)

(c) For the purpose of determining an Avoidable Cost Rate, avoidable expenses shall exclude variable costs recoverable under cost based offers to sell energy from operating capacity on the PJM Interchange Energy Market under the Operating Agreement. A Market Seller that intends to recover variable costs under cost-based offers to sell energy from operating capacity on the PJM Interchange Energy Market may not include such costs under an Avoidable Cost Rate.

pim