

IMM Regulation Market Recommendations: Alternative Proposal

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Joseph Bowring
Howard J Haas



Monitoring Analytics

Majority Proposal

- **Shoulder Hour LOC:**
 - **Shoulder Hour LOC should recovered.**
 - **Shoulder Hour LOC should be recovered via safety net if net regulation revenues are not sufficient to cover them**
 - **Shoulder Hour LOC should not be part of clearing price.**
 - **Cannot properly attribute to multiple hour case**
 - **Cannot be fully calculated for commitment until after the fact**
- **Marginal Benefits Factor for Settlement**
- **Benefits Factor should be consistently applied throughout the market construct**

Alternative Proposal: Modifies Majority Proposal

- **Complete the consistent application of offer modifiers and units of measure throughout the market construct (as suggested for the benefits factor in the Majority Proposal).**
- **Make the components of the regulation prices reflect the offers of marginal resources.**



Alternative Proposal: Modifies Majority Proposal

- **Total Cost = A + B**
 - **Where**
 - **A = Total Capacity Cost**
 - **B = Total Cost of Performance**
- **Properly defined Total Cost, can then be used to define:**
 - **Total Cost/MW = \$/MW**
 - **Total Cost/Effective MW = \$/Effective MW**
 - **Total Cost/Mile = \$/Mile**



Alternative Proposal: Modifies Majority Proposal

- **Results in performance price that reflects marginal resource (\$/MW)**
- **Provides regulation at a cost reflective of actual offers to provide service**
- **Consistent with 755 Requirements (capability and performance offers and capability and performance payments)**
- **Rank ordering of resources consistent with relative actual costs to system**
- **Provides consistent application of scalars in pricing and settlement. (miles, MW, benefits factor, performance scores)**



Alternative Proposal

- **All of “Majority” Items, plus**
- **Item 1: Use actual cost for relative offers.**
 - **Expected and actual cost per MW or effective MW should be used consistently for clearing and within hour pricing of performance.**
 - **(Remove performance factor from denominator of performance component.)**
- **Item 2: Capacity credits (awarded per MW) should be adjusted by performance.**
 - **Consistent application of performance factor in pricing and credits.**
 - **Same logic as consistent application of the benefits factor.**



Alternative Proposal, Item 1: Use Actual Cost

Actual cost of provided miles:

$$TotalPerformanceCost = (\$/ Mile) * (Miles / MW) * Performance\% * MW$$

IMM and PJM proposal (Alternative):

$$TotalPerformanceCost = (\$/ Mile) * (Miles / MW) * Performance\% * MW$$

Current Proposal (Majority):

$$TotalPerformanceCost = (\$/ Mile) * \frac{(Miles/MW)}{Performance\%} * MW$$

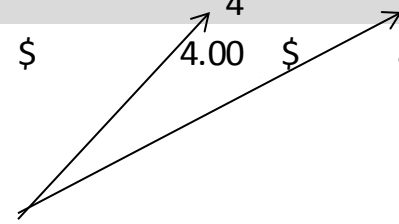
- Majority multiplies MW by (1/performance).
- Results in low performers credited with more miles (per MW) than good performers
 - Calculated performance cost would exceed actual performance cost



Alternative Proposal, Item 1: Correct Performance Cost Calculation

Example	Case 1	Case 2
Capability MW	2	2
\$/Mile	\$ 1.00	\$ 1.00
Signal Miles/MW	2	2
Performance	100%	50%
Actual Miles	Case 1	Case 2
Miles = Signal Miles/MW * Capability MW * Performance	4	2
Performance Cost = \$/mile * Actual Miles	\$ 4.00	\$ 2.00
Option 2 Proposal	Case 1	Case 2
Miles = Signal Miles/MW * Capability MW * Performance	4	2
Performance Offer = \$/mile * Actual Miles	\$ 4.00	\$ 2.00
Option 1 Proposal	Case 1	Case 2
Miles = (Signal Miles/MW * Capability MW)/(Performance)	4	8
Performance Offer = \$/mile * Actual Miles	\$ 4.00	\$ 8.00

Poorer performance = More Miles?



Alternative Proposal, Item 2: Capacity Credits Should Be Adjusted by Performance

- **Charge:**

If applied here

$$CapacityCharge = \frac{(\$ / MW)}{BF * Performance\%} * CapMW$$

- **Majority Credit:**

Performance scalar

$$CapacityCredit = CapacityRMCP(\$ / MW) * capMW * BF$$

- **Alternative Credit:**

$$CapacityCredit = CapacityRMCP(\$ / MW) * capMW * BF * Performance\%$$

- **Same logic as uniform application of benefit factor (BF)**

No scalar

Must apply here

Alternative Proposal: Modifies Majority Proposal

- **Price components better reflect actual offers**
- **Market prices better reflect marginal offers**
- **Market provides a clearer signal regarding the incremental cost to provide service**
- **Payments to marginal resources do not exceed marginal resource offers**
- **Rank ordering of resources consistent with relative actual offers and costs to system.**
- **Consistent application of scalar adjustments to prices and settlement.**
 - **Majority Proposal does not completely correct the inconsistencies**



Monitoring Analytics, LLC
2621 Van Buren Avenue
Suite 160
Eagleville, PA
19403

(610) 271-8050

MA@monitoringanalytics.com

www.MonitoringAnalytics.com

