

Regulation Market Issue Senior Task Force (RMISTF) Status Update

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- The Regulation Market Issues Senior Task Force (RMISTF) originated from a problem statement by Monitoring Analytics
- RMISTF meetings started in September 2015
- Through PJM signal and design analysis, in support of the RMISTF, a new regulation signal design and regulation requirement was implemented into PJM operations on January 9, 2017
- Vote on RMISTF solution packages issued on February 15, 2017

Total Unique Responders	29				
Total Companies	159				
Voting Members	52				
Affiliates	107				
Question	Yes	No	Abstain	#	%
1. Do you support Package E – PJM/IMM? -- Response	114	39	6	159	75%
2. Do you support Package F - Beacon? -- Response	23	118	18	159	16%
3. Do you support Package G - ESA? -- Response	33	108	18	159	23%
4. Do you support Package H – Steel Producers? -- Response	11	106	42	159	9%
5. Do you support Package I – Mosaic & A.F. Mensah? -- Response	33	108	18	159	23%
6. Do you support Package J – NextEra? -- Response	23	117	19	159	16%
7. Do you support Package K – ESA Compromise? -- Response	39	107	13	159	27%
	Make a Change	Retain the Status Quo	Abstain	#	%
8. Do you prefer to make a change to Regulation Market regarding performance score, clearing, and settlements, or retain the status quo? -- Response	126	19	14	159	87%

Benefit Factor - Application and clearing

- Replace Benefit Factor (BF) with Regulation Rate of Technical Substitution (RRTS)
- Effective MW calculation will be area under the RRTS curve

Performance Scoring

- Precision only calculation
- Minimum allowable participation threshold to be raised from status quo 40% to 50%

Settlements

- Replace Mileage Ratio from the Regulation Performance Credit with Marginal Rate of Technical Substitution
- Marginal Rate of Technical Substitution will be added to the Regulation Capability Credit

Transition Plan

- The 1st 12 months of the 24 month transition period will have a minimum (floor) MRTS value of 0.65. The last 12 months of the 24 month transition period would have a minimum (floor) MRTS value of 0.50.

Manual 12 Section

4.5.2 Certifying Regulating Resource

- For resources testing for dual-qualification (RegA and RegD), only one test will be required for qualification on the second signal type. **Resources must complete one separate test to qualify for the traditional signal (RegA) or the dynamic signal (RegD).**

Tariff/OA

- Added Regulation Signal Definition under Section 3.3 Regulation and Frequency Response Service.
- Regulation Effective Megawatts: “Regulation Effective Megawatts” shall equal **the area under the Regulation Rate of Technical Substitution Curve** given 1) the amount of Regulation that a resource is providing in a given hour, 2) the resource’s historic performance score, and 3) the resource’s Regulation Rate of Technical Substitution.

Manual 11:Energy & Ancillary Services Market Operations

Section 3: Overview of the PJM Regulation Market

- Section 3.2.7 Regulation Market Clearing
- Section 3.2.10 Settlements

Manual 12: Balancing Operations

Section 3: System Control

- Section 3.1.2 PJM Control Implementation

Section 4: Providing Ancillary Services

- 4.4.2 Regulation Signals
- 4.4.3 Determining Regulation Assignment
- 4.4.4 Dispatching Regulation
- 4.5 Qualifying Regulating Resources
 - 4.5.1 Regulation Qualification Test
 - 4.5.2 Certifying Regulating Resource
 - 4.5.4 Increasing Regulation Capability on a Resource
 - 4.5.5 Disqualification and Re-Qualification of a Regulation Resource
 - 4.5.6 Performance Score Calculation

Manual 28: Operating Agreement Accounting

Section 4: Regulation Accounting

- 4.1 Regulation Accounting Overview
- 4.2 Regulation Credits
- 4.3 Regulation Charges

Attachment K- Appendix

1.7.18 Regulation (f)

3.2.2 Regulation (c),(d),(e),(g),(h),(j),(k),(l)

3.2.2A Offer Price Caps

– 3.2.2A.1 Applicability

3.3 Regulation and Frequency Response Service