Market Efficiency Process Enhancement Task Force Phase 3 Regional Targeted Market Efficiency Project (RTMEP) Packages

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Markets and Reliability Committee
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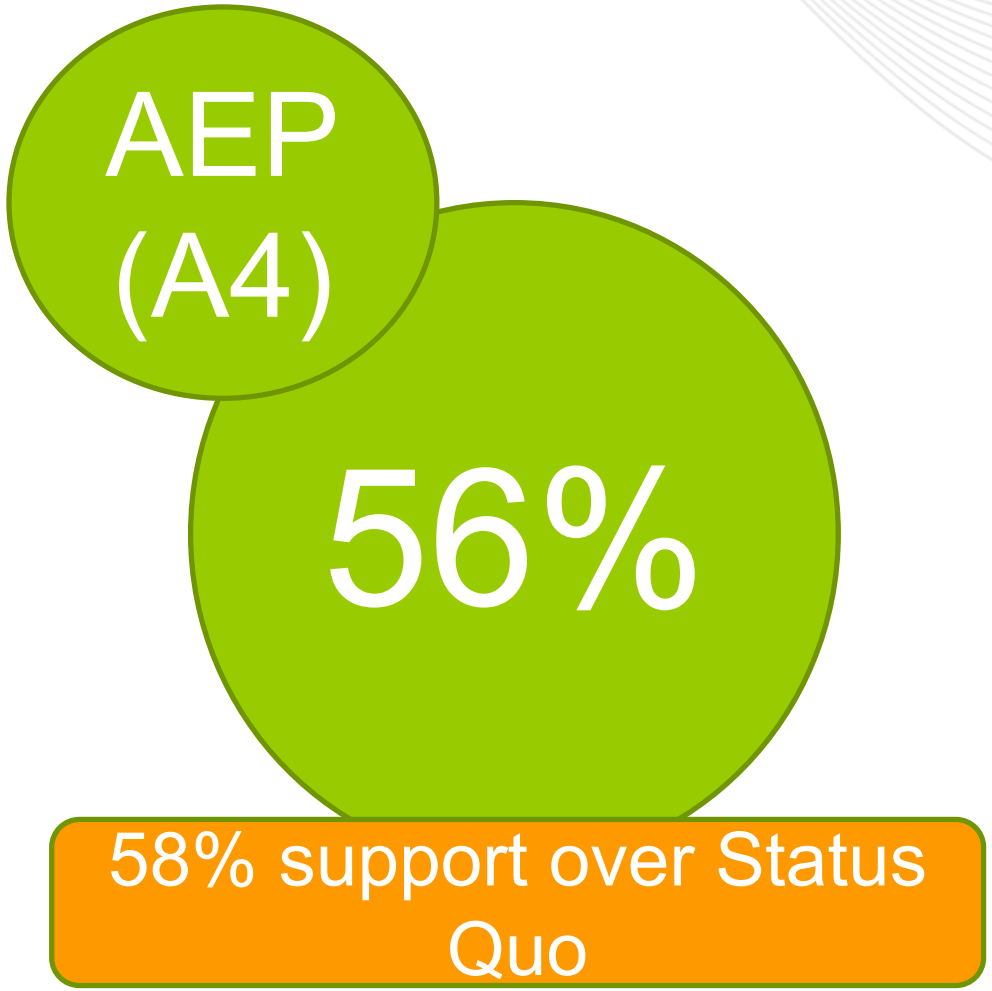
PC Endorsed RTMEP Package



- Project capital cost < $20 million
- In service by June 1 or third summer season
- Based on historical congestion
- 4 years of benefits fully cover capital cost
- Periodic studies between ME cycles (24-month)
- Project awarded to incumbent TO

RTMEP Package A4 (AEP) – OA Language Summary

Schedule 6, Section 1.5.7 Development of Economic-based Enhancements or Expansions

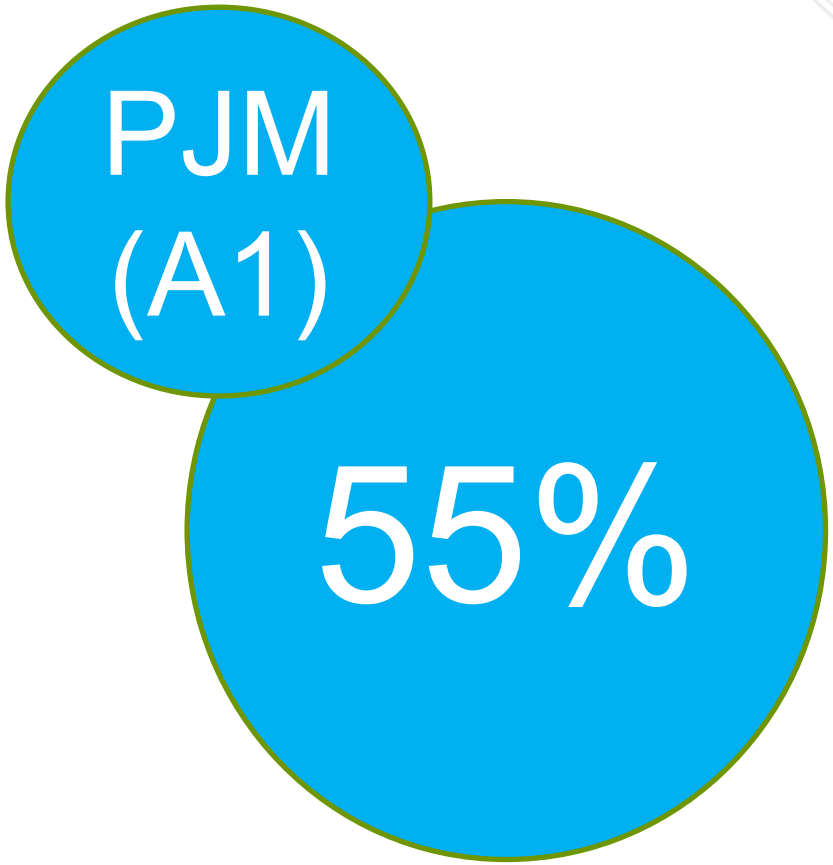
- Added new paragraph (iv) to subsection 1.5.7(c) about identifying and presenting to Transmission Expansion Advisory Committee the list of constraints associated with historical congestion to be evaluated in the market efficiency analysis

- Added new subsection 1.5.7(k) describing the Regional Targeted Market Efficiency Process:
  - Project capital cost < $20 million
  - In-service date no later than the third-summer peak season
  - Benefits based on average historical congestion from the two calendar years prior to the study year
  - 4-years of benefits fully cover project capital cost

Schedule 6, Section 1.5.8 Development of Long-lead Projects, Short-term Projects, Immediate-need Reliability Projects, and Economic-based Enhancements or Expansions

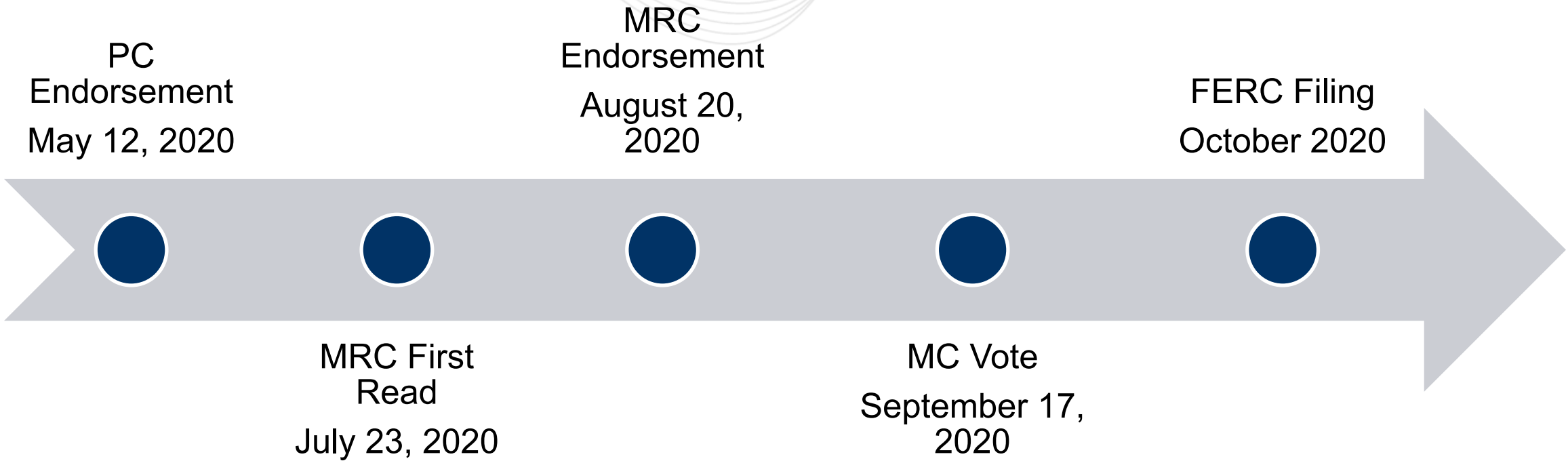
- Added new subsection 1.5.8(q) describing the exemption from the competitive window process

PC **Alternative** RTMEP Package



- Same as A4 except for use of a 30-day competitive window to award projects

Next Steps



Contact

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Market Efficiency Process Enhancement Task Force RTMEP (A) Packages

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Appendix

RTMEP PC Package Vote Details

AEP (A4) 56%

Y – 89
N - 71
Abstain - 14

PJM (A1) 55%

Y – 87
N - 72
Abstain - 15

IMM (A2) 12%

Y – 19
N - 143
Abstain - 12

AEP (A4) preferred over the status quo

Y – 97
N – 71
Abstain – 12

PJM Proposal – Package A1

Create new RTMEP process to address historical congestion not captured in planning models

Design Component	Status Quo	Proposed Change	Justification
Qualified Projects	No process exists	Projects which resolve congestion on one or more Qualified Congestion Driver(s), with a capital cost under $20 million, to be in service by June 1 of the third summer season	Establish process to fill gap that exists when historical congestion is persistent and not captured in planning models
Qualified Congestion Drivers	No process exists	PJM identified facilities with significant and persistent historical congestion (based on previous 2 years) that are not due to outages, that are not addressed by any planned system changes	
Benefits	No process exists	Average of past 2 years of historical congestion (Day Ahead + Balancing), adjusted for outage impacts	
Cost	No process exists	Project capital cost (no discount or inflation rate)	
Passing Threshold	No process exists	Four years worth of Benefits (no discount/inflation rate) must completely cover project's capital cost	

PJM Proposal – Package A1 (continue)

Create new RTMEP process to address historical congestion not captured in planning models

Design Component	Status Quo	Proposed Change	Justification
Timing and Coordination between TMEP and ME Processes	No process exists	TMEPs will be studied periodically throughout the market efficiency 24-month cycle. Any identified TMEP driver will be reviewed by TEAC and identified solutions will be approved by Board on an as needed basis.	Establish process to fill gap that exists when historical congestion is persistent and not captured in planning models
Unit Retirements in Area of Congestion	No process exists	Announced generator deactivations at time of project recommendation are considered.	
Competitive Process Type	No process exists	Sponsorship Model (Competitive Window)	
TMEP Window	No process exists	30-day window, as needed	

AEP Presentation to PJM PC Regional TMEP (Package A4)

PJM PC Meeting February 4, 2020

Description of Package (A4)

1. **Regional TMEP Package (A4) is identical to Package (A1) in all respects except for the process for identifying the solution and selecting the developer**
   a) Package (A1) calls for identification and selection through proposal window
   b) Package (A4) calls for identification and selection without proposal window

Rationale for Package (A4)

1. **Regional TMEP construct is looking to address historical congestion through quick-hit non-greenfield upgrades that can be placed in-service in short order**
2. **Regional TMEP projects must be in-service by third summer after approval**
   a) Limited amount of time to accommodate proposal window planning process
   b) Proposal window unlikely to change the identification and selection decision
3. **Interregional PJM-MISO TMEP planning process has successfully produced half-dozen projects costing $0.12M to $6.70M and assigned to incumbent TOs**
   a) b2971, b2972, b2973, b2974, b2975, b3053
   b) None involve greenfield projects (are non-competitive by FERC's definition)
      - three involve reconductoring of lines,
      - one involves reconfiguration of ring bus, and
      - two involve replacement/upgrading of terminal equipment.
   c) Expectation that regional planning process will produce similar projects
4. **PJM may not be able to share historical model needed for proposal window since historical model may contain market sensitive information**
   a) Holding proposal window without modeling information is unproductive

Questions ???

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Market Efficiency Process Enhancement Task Force – Phase 3

AEP Support for Status Quo of Benefit Calculation

AEP Request of IMM

08/21/19

At the MEPETF meeting on 07/30/19, the IMM referenced market mechanics and examples to argue for changes to the benefits calculation. AEP would appreciate having the same argument made using qualitative and policy principles. Such an approach would better illustrate the issue of economic inefficiencies caused by transmission constraints. AEP would welcome having the following qualitative example used to illustrate the issue raised by the IMM as opposed to using the calculation of market mechanics.

Several loads have joined the same RTO with the expectation that the system would be planned and operated in an economically efficient manner, and thus, all loads are paying the same price for generation at any given point in time.

A transmission constraint results in the middle of the system that causes the cheaper generation that is located upstream from that constraint to run less frequently and at a lower output level than it would if that constraint was not present. That same constraint also now causes the more expensive generation that is located downstream from that constraint to run more frequently and at a higher output level than it would if that constraint was not present.

This transmission constraint effectively provides the loads that are located upstream from that constraint the unintended positive of having exclusive access to the cheaper generation that is located upstream from that constraint. That same constraint also provides the loads that are located downstream from that constraint the unintended negative of having exclusive access to the more expensive generation that is located downstream from that constraint.

Given the initial expectation that the loads joined the same RTO with the expectation that the system would be planned and operated in an economically efficient manner, and thus, all loads were paying the same price for generation at any given point in time prior to the transmission constraint, the fundamental policy question becomes:

> Does the downstream load have the right to advise the regional planner that it wants to fund a transmission upgrade that would mitigate the transmission constraint, thus giving that downstream load access to the cheaper generation that is located upstream from that transmission constraint?
>
> The logical answer would be “yes”!

Understandably, given that this mitigation would effectively increase the cost of the generation that is being accessed by the upstream load (while decreasing the cost of the generation that is being accessed by the downstream load), that upstream load would not be asked to fund that transmission upgrade.

That upstream load, however, cannot prevent that transmission upgrade from being constructed by insisting that their increased generation costs must be taken into account when determining the economic benefits of that transmission upgrade, since the transmission upgrade is eliminating unintended positives that the transmission constraint was providing to the upstream load. For that reason, the upstream load cannot claim as costs the elimination of the unintended positives that the upstream load was receiving as a result of that transmission constraint.