

Attachment M-3 Update

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Planning Committee
July 7, 2020

- Summary of Improvements since October 2019
- Efforts underway
- Review of Action Item List
- Stakeholder discussion



Transmission Owners M-3 Process Guidelines

<https://www.pjm.com/planning/rtep-development/stakeholder-process/trans-owners.aspx>

pjm.com/planning/rtep-development/stakeholder-process/trans-owners.aspx

under PJM control including that for carrying out the development of a coordinated regional transmission expansion plan.

Learn more about the [TOA-Administrative Committee](#).

Planning of Supplemental Projects

The [PJM Transmission Owners Attachment M-3 Process Guidelines](#) [PDF](#) have been developed and adopted by the transmission owners that plan supplemental projects through the FERC-approved process described in Attachment M-3 to the PJM Open Access Transmission Tariff. The guidelines, which are subject to change by the transmission owners that use them (listed in Appendix 1), provide general guidelines for the implementation of the M-3 process. The guidelines provide stakeholders with an understanding of the step-by-step interactive information exchange process under the M-3 process, including how they can best provide input at various stages of the process.

Load Growth & Forecasting

One of the core principles of PJM's planning process is the integration of all drivers that impact grid infrastructure planning needs and all solutions available to meet those needs. Load Forecasting is a fundamental, key driver of resource adequacy requirements and transmission expansion plans.

Learn more about the [Load Forecasting Development Process](#) or visit the [Load Analysis Subcommittee](#) page.

Applicable Transmission Owner Technical Requirements & Standards

Transmission owners must adhere to applicable technical requirements and standards. These include engineering design requirements and standards; equipment specification and suppliers; construction requirements and standards; and, engineering, procurement and construction process requirements and standards

Learn more about transmission owners design, engineering and construction [guidelines and standards](#).

pjm.com/-/media/planning/rtep-dev/pjm-to-attachment-m3-process-guidelines.ashx?la=en

PJM TRANSMISSION OWNERS ATTACHMENT M-3 PROCESS GUIDELINES 37/35

Guidelines for Attachment M-3 Process

1 INTRODUCTION

In this introductory section, you will find information about this guide, the purpose of this document, and the intended audience.

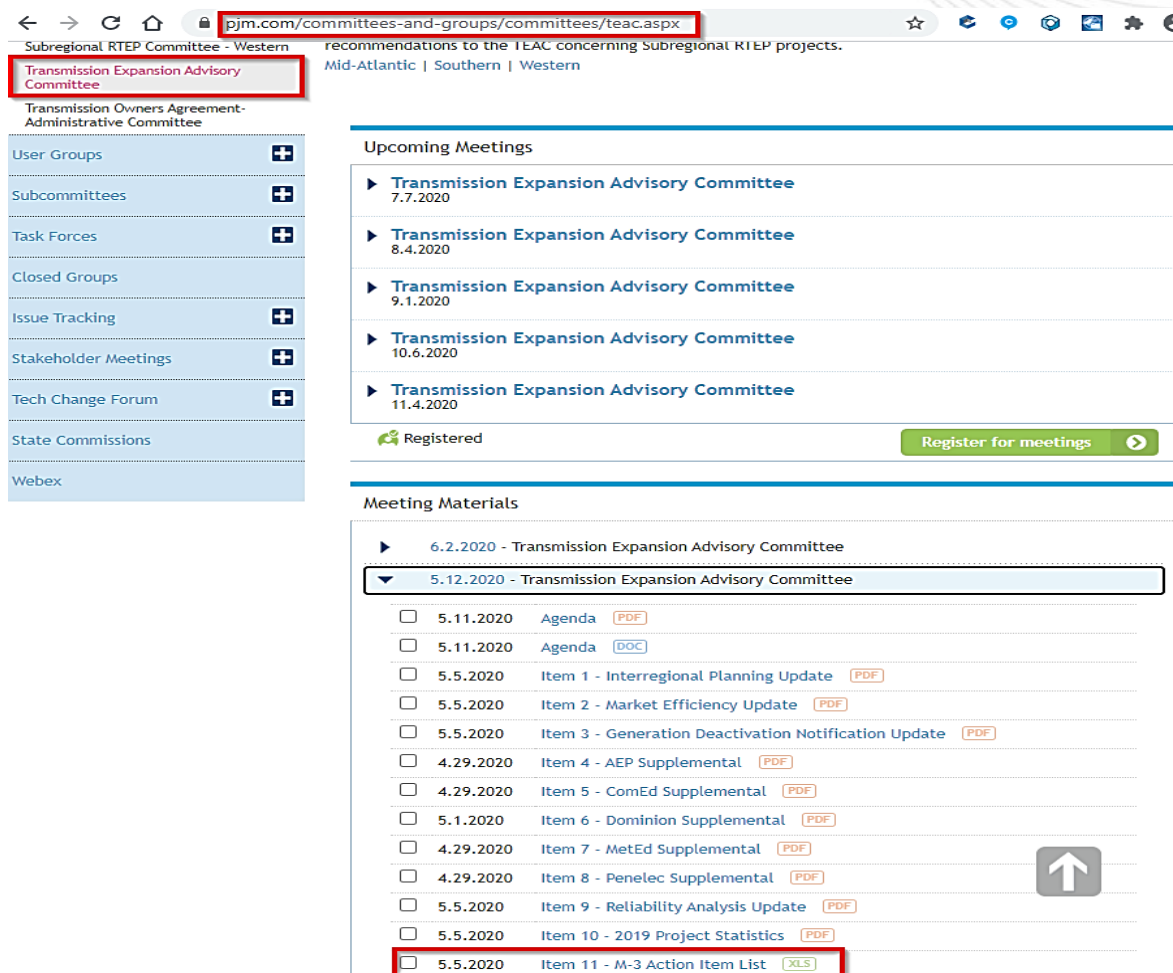
1.1 About This Document

This document provides general guidelines to implement the FERC-approved PJM Tariff framework for planning Supplemental Projects under PJM Open Access Transmission Tariff (OATT) Attachment M-3 (the "M-3 Process"). These guidelines have been developed and adopted by the PJM Transmission Owners that plan Supplemental Projects through the M-3 Process and that are listed in Appendix 1 ("Transmission Owners"). These guidelines are subject to change from time to time and the Transmission Owners plan to review them on an annual basis. Additional PJM Transmission Owners that plan Supplemental Projects may also adopt these guidelines.

The uniform approach presented in these PJM Transmission Owners Attachment M-3 Process Guidelines ("Guidelines") provides all stakeholders with an understanding of the step-by-step interactive information exchange process under the M-3 Process, including how they can best provide input at various stages of the process. However, nothing in this document modifies Attachment M-3 in any respect or imposes obligations or confers any rights or privileges on PJM, Transmission Owners, or stakeholders. Accordingly, this document should be interpreted to be consistent with the provisions of Attachment M-3 and if anything in this document appears to be inconsistent with anything in Attachment M-3, the provisions of Attachment M-3

M-3 Action list posted and noted on all TEAC agendas for review during committee meeting

<https://pjm.com/committees-and-groups/committees/teac.aspx>



Subregional RTEP Committee - Western
Transmission Expansion Advisory Committee

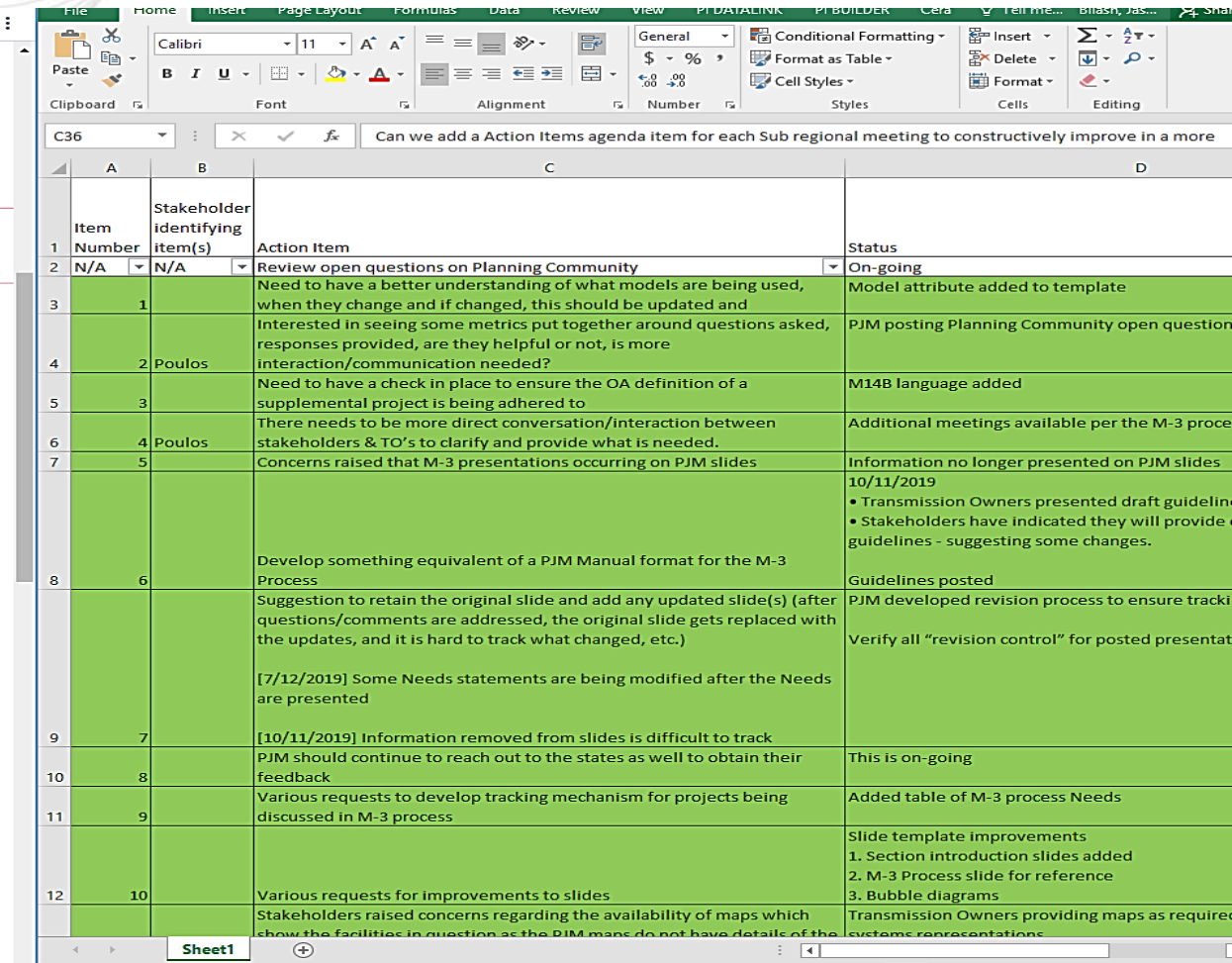
Upcoming Meetings

- Transmission Expansion Advisory Committee 7.7.2020
- Transmission Expansion Advisory Committee 8.4.2020
- Transmission Expansion Advisory Committee 9.1.2020
- Transmission Expansion Advisory Committee 10.6.2020
- Transmission Expansion Advisory Committee 11.4.2020

Registered Register for meetings

Meeting Materials

- 6.2.2020 - Transmission Expansion Advisory Committee
- 5.12.2020 - Transmission Expansion Advisory Committee
 - 5.11.2020 Agenda PDF
 - 5.11.2020 Agenda DOC
 - 5.5.2020 Item 1 - Interregional Planning Update PDF
 - 5.5.2020 Item 2 - Market Efficiency Update PDF
 - 5.5.2020 Item 3 - Generation Deactivation Notification Update PDF
 - 4.29.2020 Item 4 - AEP Supplemental PDF
 - 4.29.2020 Item 5 - ComEd Supplemental PDF
 - 5.1.2020 Item 6 - Dominion Supplemental PDF
 - 4.29.2020 Item 7 - MetEd Supplemental PDF
 - 4.29.2020 Item 8 - Penelec Supplemental PDF
 - 5.5.2020 Item 9 - Reliability Analysis Update PDF
 - 5.5.2020 Item 10 - 2019 Project Statistics PDF
 - 5.5.2020 Item 11 - M-3 Action Item List XLS



Item Number	Stakeholder identifying item(s)	Action Item	Status
N/A	N/A	Review open questions on Planning Community	On-going
1		Need to have a better understanding of what models are being used, when they change and if changed, this should be updated and interested in seeing some metrics put together around questions asked, responses provided, are they helpful or not, is more interaction/communication needed?	Model attribute added to template PJM posting Planning Community open question
2	Poulos	Need to have a check in place to ensure the OA definition of a supplemental project is being adhered to	M14B language added
3		There needs to be more direct conversation/interaction between stakeholders & TO's to clarify and provide what is needed.	Additional meetings available per the M-3 process
4	Poulos	Concerns raised that M-3 presentations occurring on PJM slides	Information no longer presented on PJM slides 10/11/2019 • Transmission Owners presented draft guidelines • Stakeholders have indicated they will provide guidelines - suggesting some changes.
5		Develop something equivalent of a PJM Manual format for the M-3 Process	Guidelines posted
6		Suggestion to retain the original slide and add any updated slide(s) (after questions/comments are addressed, the original slide gets replaced with the updates, and it is hard to track what changed, etc.)	PJM developed revision process to ensure tracking Verify all "revision control" for posted presentations
7		[7/12/2019] Some Needs statements are being modified after the Needs are presented	
8		[10/11/2019] Information removed from slides is difficult to track	
9		PJM should continue to reach out to the states as well to obtain their feedback	This is on-going
10		Various requests to develop tracking mechanism for projects being discussed in M-3 process	Added table of M-3 process Needs
11		Slide template improvements 1. Section introduction slides added 2. M-3 Process slide for reference 3. Bubble diagrams	
12		Various requests for improvements to slides Stakeholders raised concerns regarding the availability of maps which show the facilities in question as the PJM maps do not have details of the	Transmission Owners providing maps as required customized representations



Improvements

Planning Community open questions posted and noted on all agendas for review during committee meetings

<https://www.pjm.com/markets-and-operations/etools/planning-community.aspx>

PJM - Subregional RTEP Committ

pjm.com/committees-and-groups/committees/srrtep-s.aspx

Planning Committee
Security & Resilience Advisory Committee
Subregional RTEP Committee - Mid-Atlantic
Subregional RTEP Committee - Southern
Subregional RTEP Committee - Western
Transmission Expansion Advisory Committee
Transmission Owners Agreement-Administrative Committee

User Groups
Subcommittees
Task Forces
Closed Groups
Issue Tracking
Stakeholder Meetings
Tech Change Forum
State Commissions
Webex

Local Plan Submissions

2020 RTEP: Dominion [PDF](#) 2.24.2020
2019 RTEP: Dominion [PDF](#)

Upcoming Meetings

- ▶ Subregional RTEP Committee - Southern 7.16.2020
- ▶ Subregional RTEP Committee - Southern 8.13.2020
- ▶ Subregional RTEP Committee - Southern 9.10.2020
- ▶ Subregional RTEP Committee - Southern 10.15.2020
- ▶ Subregional RTEP Committee - Southern 11.18.2020

Registered [Register for meetings](#)

Meeting Materials

6.16.2020 - Subregional RTEP Committee - Southern

- ☐ 6.10.2020 Agenda [PDF](#)
- ☐ 6.10.2020 Agenda [DOC](#)
- ☐ 5.26.2020 Dominion Local Planning Assumptions - 2020 [PDF](#)
- ☐ 6.5.2020 Dominion Supplemental Projects [PDF](#)
- ☐ 6.5.2020 Informational Only - Aggregate Maps for Supplemental Projects [PDF](#)
- ☐ 6.5.2020 Informational Only - M-3 Process Needs Status [XLS](#)
- ☐ 6.5.2020 Informational Only - Planning Community Open Questions [XLS](#)

select all clear all [Download](#)

20200616-srrtep-s-info-only-planning-community-open-questions.xlsx - Excel

Batteries and Other Energy Storage devices			
Question Created Date	Question Created By	Title	Body
1/27/2020	AMP	AEP-2018-AP010	In regards to AEP's proposed solution to address need number AEP-2018-AP010, the following details and responses to the questions below: 1. Life expectancy of the proposed solution as compared to that of the AEP's existing transmission facilities. 2. Parameters and requirements used to size the battery storage project. 3. Overall size and MWh capability of the battery. 4. Additional details regarding the voltage level at which the battery will connect to the system. Will it connect at distribution level voltages or will it connect directly to the transmission system? 5. What referenced criteria or assumption were used to quantify the need for the battery? 6. Under what situations will the proposed battery operate? For example, during peak demand periods? 7. Will the battery participate as a PJM market participant including but not limited to energy or capacity? 8. Will the battery be owned by AEP's Kentucky Power Company or will it be owned by a Transco company? 9. Will the battery enter into the PJM generation connection queue? 10. What organization will control the dispatch of the battery resource, AEP or Transco? 11. For what period of time has the line between AEP's system and EKPC's system been open?
1/31/2020	AMP	Batteries and Other Energy Storage devices	Does the PJM OA definition of "Transmission Facilities" include Batteries and Other Energy Storage devices? If so, what parameters or test must a battery or storage device meet to be determined as a Transmission Facility?
2/3/2020	AMP	2019 RTEP statistics	Will PJM be providing 2019 RTEP statistics similar to those provided for 2018?
2/6/2020	LS Power	AEP-2018-AP010	LS Power has questions about AEP-2018-AP010, as presented at a recent PJM meeting. The project proposes a 2 MW BEES solution at Middle Creek Substation. The project proposes a 2 MW BEES solution at Middle Creek Substation. A supplemental project must meet the definition of a Transmission Facility (as defined in the PJM Operating Agreement, in order for the Transmission Facility to be included in the RTEP definition of Transmission). This battery has not had a FERC ruling clarifying whether it meets the definition of Transmission Facilities in the PJM Operating Agreement. In addition, we are seeking input on the precedent of batteries in Supplemental Project category. Which case has the correct line rating for Laurel to Short 69 kV line? Is it 500 kV or 69 kV? Please provide a summary of the AEP-2018-AP010 supplemental project.
2/7/2020	Sonny Nguyen	Correct line rating	Which case has the correct line rating for Laurel to Short 69 kV line? Is it 500 kV or 69 kV? Please provide a summary of the AEP-2018-AP010 supplemental project.
2/18/2020	RTE Energy	AEP-2018-AP010	Please provide a summary of the AEP-2018-AP010 supplemental project.

Improved slide revision process based on stakeholder request

Need Number: AEP-2020-OH011

Process Stage: Need Meeting 02/21/2020

Supplemental Project Driver:

Equipment Material/Condition/Performance/Risk

Specific Assumption Reference:

AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 8), AEP Presentation on Pre-1930s Lines

Problem Statement:

Dexter – Rosewood 138kV (1927 Steel Lattice Line)

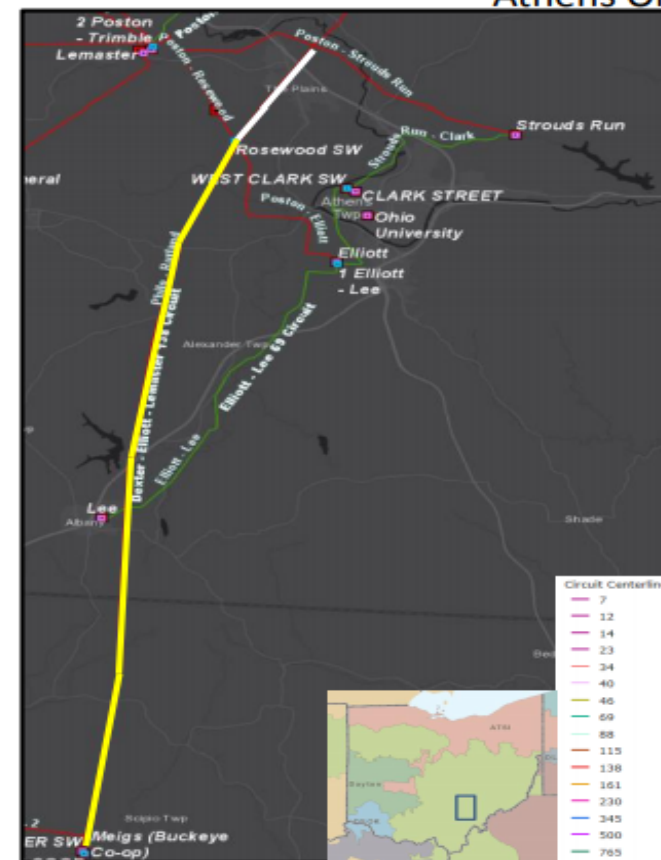
- Length: ~~16.8~~ 8.8 Miles
- Original Construction Type: Aluminum/Steel Lattice
- Original Conductor Type: 397.5 CM ACSR 30/7 (1926 vintage)
- Momentary/Permanent Outages: 3 total outages over last 5 years
 - Total structure count: ~~68~~ 38
- Please reference needs materials on pre-1930s era lattice lines
- There is an additional 2.5 miles of the 1920's Philo - Rutland lattice line which is de-energized and runs through the middle of The Plains community north of Athens

Model: N/A

The remaining 8 miles out of Dexter will be captured under Need Number: **AEP-2020-OH022**

SRRTEP-Western – AEP Supplemental February 21, 2020

AEP Transmission Zone M-3 Process
Athens Ohio



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- Map project
 - Current presentation of maps involves manual insertion of objects in a database resulting in production of a static map
 - Project being developed will allow more automated development of maps and present an interactive capability to display project elements
- PJM Improving internal processes
 - PJM developing expanded internal documentation to help PJM engineers in managing process steps
 - Adding tracking for age of M-3 needs

- Upgrade submission templates and portal project
 - Help PJM internal administrative functions
 - Works towards automatic population of database following a review of data
 - Project to include automated production of slides if needed to improve consistency in slide decks

- Multiple issues previously identified were addressed in responses on Action Item list
- Requests for more information
- Requests for contact information at Transmission Owner organizations
- Ensure that Needs statements are updated if Solutions encompass work not easily identifiable as tied to the Need as it had been presented
- Requests to improve consistency in the presentations made by different Transmission Owners

- Requests to improve responses on Planning Community
- Request to add information on slides relating to other supplemental projects and baseline upgrades
- Requests to improve outage tracking/documentation on slides
- EOL facility replacement issues

Open Stakeholder Discussion