

Summary of M-03A Rev 11 Changes

OC

June 2016

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Overview of Changes:

- Updated URL for Tariff Facilities List throughout document
- Miscellaneous administrative and formatting updates
- Section 1.2: Submission timelines and detail added for modeling updates specific to Generators.
- Section 1.2.1: New section outlining Electrical Model Responsibilities for Behind the Meter Generation (BtMG)
- Section 3.2: Submit-on-time functionality and process outlined; (old) Exhibit 3 deleted (redundant/confusing); Exhibit 3 (General Schedule for Submitting Modeling Data) enhanced distinguish between Required and Preferred In Service Date for Project; Exhibit 4 (Network Model Data Submission and Model Validation Timeline) enhanced to display corrected timelines, and new timelines added for 'Preferred In Model Build' and 'PJM Tests New Model'
- Section 3.2.1: New section added for EHV Modeling.
- Section 3.4: Paragraph added to outline non-automated process for submitting fixed tap changes to PJM.

Overview of Changes:

- Section 4.1: Paragraph 5 updated to reflect current practices.
- Section 4.8.1: Sharing of data and one-lines across DMS Members outlined.
- Section 4.9: Reference added for PJM Sub-Transmission Modeling White Paper.
- Section 4.9.3: Instructions added for BES notification of BES exceptions
 - Exhibit 12 and preceding paragraph moved to Section 2.4 (now Exhibit 2).
- Appendix C: New paragraph added to outline BESNet process with supporting web links.
- Appendix D: New appendix added for new Behind the Meter Generation (BtMG) Submission Form and outlining procedure for form submission.
 - New Exhibit D1 (blank BtMG submission form)
 - New Exhibit D2 (sample BtMG Submission Form for Distribution)
 - New Exhibit D3 (sample BtMG Submission Form for Transmission).
- Appendix E: Acronyms & Descriptions moved from Appendix D to Appendix E to accommodate new Appendix D for BtMG.

Appendix

Section 1.2:

- Outlines GSU details needed specifically for units 20MW+ connected to BES in consistent with Manuals 1, 3, 14b, 14d
- Added information on where to view build schedule and exhibit on submission timelines

Section 1.2.1:

- New section detailing model update requirements to link telemetry as required in Manual 14d Appendix A Item 9 for BtMG 10MW+
 - Adding reference to this section in Manual 14d Appendix A Item 9

Section 3.2:

- Removed Exhibit 3: Timeline for PJM Actions in Coordinating Model Update - Sample Summer Process since info already covered in Exhibit 4: Network Model Data Submission & Model Validation Timeline
 - Repointed all references to removed exhibit to Network Model Data Submission & Model Validation Timeline exhibit
- Added task for model update testing period to Network Model Data Submission & Model Validation Timeline exhibit
- Adjusted effective model update area with colors to better explain period being modeled and time period to date of model build forward

Timeline for Model Update — Sample

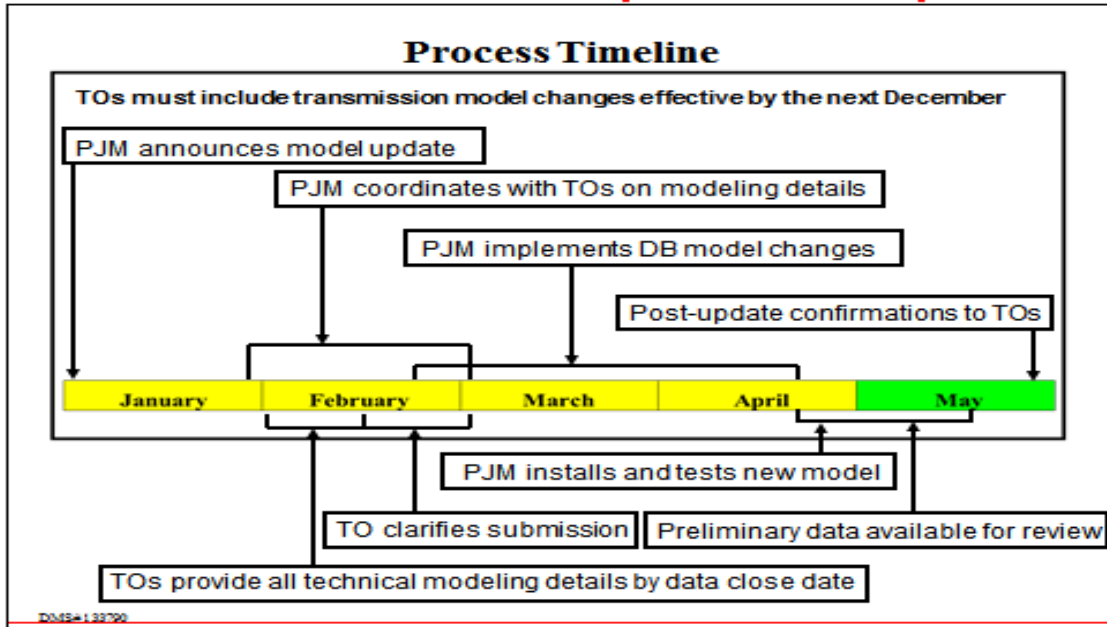


Exhibit 3: Timeline for PJM Actions in Coordinating Model Update—Sample Summer Process

FORMAL BUILD MILESTONES (Winter)																															
Month	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
TOs Submit Data																															
PJM Packages Submitted Data																															
Cut-Ins, Outage Request, Telemetry, Ratings																															
PJM Tests New Model																															
Model Build Implementation																															
TOs Check Changes																															
Month	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D

INTERIM BUILD MILESTONES (Spring)																															
Month	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
TOs Submit Data																															
PJM Packages Submitted Data																															
Cut-Ins, Outage Request, Telemetry, Ratings																															
PJM Tests New Model																															
Model Build Implementation																															
TOs Check Changes																															
Month	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D

FORMAL BUILD MILESTONES (Summer)																															
Month	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
TOs Submit Data																															
PJM Packages Submitted Data																															
Cut-Ins, Outage Request, Telemetry, Ratings																															
PJM Tests New Model																															
Model Build Implementation																															
TOs Check Changes																															
Month	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D

INTERIM BUILD MILESTONES (Fall)																															
Month	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
TOs Submit Data																															
PJM Packages Submitted Data																															
Cut-Ins, Outage Request, Telemetry, Ratings																															
PJM Tests New Model																															
Model Build Implementation																															
TOs Check Changes																															
Month	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D

Color Key	
	Required in model build
	Preferred in model build
	Desired/discretionary in model build
	Testing Period
	Changes Implemented

Exhibit 43: Network Model Data Submission & Model Validation Timeline

Section 3.2:

- Updated renumbered Exhibit 3: General Schedule for Submitting Modeling Data by replacing Target In-Service Date for Project with Required & Preferred In-Service Date for Project columns to better align with updated Exhibit 4: Network Model Data Submission & Model Validation Timeline

<u>Quarterly Build Name</u>	<u>Build Type</u>	<u>Information Submission Close Date Timeframe</u>	<u>EMS Model Update Date</u>	<u>Required In-Service Date for Project</u>	<u>Preferred In-Service Date for Project</u>
<u>Spring</u>	<u>Interim¹</u>	<u>Late November</u>	<u>March</u>	<u>April - Sept.</u>	<u>October + 11 months</u>
<u>Summer</u>	<u>Formal</u>	<u>Early February</u>	<u>May</u>	<u>June - Nov.</u>	<u>December + 11 months</u>
<u>Fall</u>	<u>Interim</u>	<u>Early June</u>	<u>September</u>	<u>Oct. - March</u>	<u>April + 11 months. -</u>
<u>Winter</u>	<u>Formal</u>	<u>Early September</u>	<u>December</u>	<u>Jan. - June</u>	<u>July + 11 months</u>

- Two new paragraphs added that detail Submit-on-time functionality now available through Network Model application.

Section 3.2.1:

- New section added to state that EHV equipment update info should be communicated to PJM a year in advance of energization

Section 3.4:

- Specific direction added on how to submit updates on load tap parameters and nominal voltage information for transformers

Section 4.1:

- Additional clarifying text on using the data posted on the secure DMS SharePoint site to review model updates

Section 4.8.1:

- Added example of types of files stored on the DMS SharePoint site

Section 4.9:

- Added reference to Sub-Transmission whitepaper

Section 4.9.3:

- Added reference to PJM Compliance Bulletin 14 and utilization of NERC BESnet tool to request changes to transmission facility BES status
- Transmission Facilities page on PJM.com exhibit moved to section 2.4

Appendix C:

- PJM Compliance Bulletin 14 referenced
- Required use of BESNet tool identified

Appendix D:

- *Note: Detailed review of processes and procedures referenced in this appendix provided as part of a separate DMS agenda item*
- Detailed explanation of field requirements in the new PJM Behind the Meter Generation Submission Form
- Example of form submission where unit tied to transmission facilities
- Example of form submission where unit tied to distribution facilities

Appendix E:

- Acronyms & Descriptions moved from Appendix D to Appendix E to accommodate new Appendix D for BtMG