



NERC MOD-032 Implementation Update

Jonathan Thompson

Reliability Standards and
Compliance Subcommittee

April 15, 2016

- Purpose NERC MOD-032-1
 - To establish consistent modeling data requirements and reporting procedures for development of planning horizon cases necessary to support analysis of the reliability of the interconnected transmission system
- Exists in conjunction with MOD-033-1 and relates to system modeling and validation
- Replaces MOD-010-0, MOD-01101, MOD-012-0, MOD-013-0, MOD-014-0, and MOD-015-0.1

- Requirement 1
 - Requires PC and TP shall jointly develop steady state, dynamic, and short circuit modeling data requirements and reporting procedures for that PC's planning area.
 - Effective **July 1, 2015**
- Requirement 2
 - Each Balancing Authority, Generation Owner, Load Serving Entity, Resource Planner, Transmission Owner, and Transmission Service Provider shall provide SS, dynamics, and SC modeling data to its TP and TC according to R1
 - Effective **July 1, 2016**



Requirement 1 Approach

- Drafted data collection and procedure document outlining how TOs, GOs, LSEs, and PJM will be compliant with MOD-032
 - Current Document available on PJM.com MOD-032 web page:
 - <http://pjm.com/planning/rtep-development/powerflow-cases/mod-032.aspx>

- Model On Demand
 - Siemens software used by TOs and PJM to upload updates to model topology, load, generation
 - Will be used to build SS and dynamics case topology
- Planning Center: Gen Model
 - Web application developed by PJM to allow generation owners to submit generation modeling data
 - Each GO must log in and provide required data/verify or update previous years data
 - PJM will review submitted data and use for steady state, dynamics, and short circuit models

- Application pilot tested by several GOs
 - Bugs and feedback being rolled into final product
- Application will go live May 1, 2016
- Window for 2016 submission will close July 31, 2016
- Users will gain access via pjm.com log on
 - PJM will reach out to CAM admins of anticipated companies to make them aware of access



Welcome Screen

Gen Model

Consistent with NERC's MOD-032-1 standard, each transmission owner, generation owner and load serving entity in PJM's footprint must provide steady state, dynamics, and short-circuit modeling data to PJM as outlined in the [MOD-032 Steady State, Dynamics and Short Circuit Modeling Data Requirements and Procedures \(PDF\)](#).

[Submit 2016 Data](#)

Submissions						
Records per page: 15 (1 of 1)						
Year	Plant	Submission Status	Due Date	Created By	Creation Date	Actions
2016	Bremo Bluff-1234-2016	Submitted	7.31.2016	HAZARC	2/4/16 2:33:37 PM	
2015	Carlls Corner-1234-2015	Submitted	7.31.2016	WEI.LI1	2/4/16 2:34:34 PM	
2015	Armstrong-9999-2015	Submitted	7.31.2016	WEI.LI1	2/4/16 2:38:45 PM	
2016	Armstrong-9999-2016	Submitted	7.31.2016	WEI.LI1	2/4/16 2:38:45 PM	
2016	Carlls Corner-9346-2016	Submitted	7.31.2016	CAMERONW	2/4/16 2:52:28 PM	
2015	Brandon Shores-7777-2016	In Progress	7.31.2016	WEI.LI1	2/4/16 2:52:58 PM	
2015	Beech Ridge Energy LLC-9999-2015	Submitted	7.31.2016	WEI.LI1	2/4/16 2:56:04 PM	

| Planning Center

2016 - Not Started

Generator Data Forms				
	Form	Form Status	Actions	Not Applicable
	General Information	Not Started		
	Synchronous Generator Parameters	Not Started		<input type="checkbox"/>
	Wind Farm Parameters	Not Started		<input type="checkbox"/>
	Inverter-Based Parameters	Not Started		<input type="checkbox"/>
	Circuit Breakers	Not Started		<input type="checkbox"/>
	Main Transformer	Not Started		<input type="checkbox"/>
	Additional Data Files			

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General Information

Plant Information

Transmission Owner Area *

Plant Name *

- AE
- AEP
- AP
- ATSI
- BGE
- CE
- DAY
- DECOG

Number of Units *

Plant Location

Plant Code *

State *

County *

Individual Completing Data

Name *
Changing this will not affect PJM account

Email *
Changing this will not affect PJM account

Phone *
Changing this will not affect PJM account

Company Name *

Generator Details

Prime Mover Code *

Energy Source Code *

Commercial Operation Date *



Submission of Synchronous Generator

Synchronous Transformer		
Transformer Id	Submission Status	Action
No records found.		
Submit data for	<input type="text" value="Synchronous Generator"/>	
Provide individual generator capability (All values requested here are for individual units)		
Machine ID (e.g. ST, CT, CT1, CT2, ST2, etc.) *	<input type="text" value="CT1"/>	
	<i>List all the Machine IDs that these data corresponds (e.g. CT1, CT2)</i>	
MVA Base (MVA) *	<input type="text"/>	
Terminal Voltage (KV) *	<input type="text"/>	
Nominal Power Factor (PU) *	<input type="text"/>	
	Summer	Winter
Unit Maximum Net Capacity Output (Unit CIR) *	<input type="text"/>	
Unit Gross Energy Output (MW) *	<input type="text"/>	<input type="text"/>
Unit Reactive Power Capability at Maximum Gross Energy Output		



Next Steps

- Will be reaching out shortly to NERC compliance contacts and CAM administrators
- Go live May 1, 2016
- Any questions, comments, or concerns please contact MOD-032@pjm.com