

Consideration of Comments

Project Name:	2021-01 System Model Validation with IBRs Draft 1
Comment Period Start Date:	4/17/2025
Comment Period End Date:	5/21/2025
Associated Ballot(s):	2021-01 System Model Validation with IBRs Implementation Plan IN 1 OT 2021-01 System Model Validation with IBRs MOD-033-3 IN 1 ST

There were 60 sets of responses, including comments from approximately 146 different people from approximately 95 companies representing 8 of the Industry Segments as shown in the table on the following pages.

All comments submitted can be reviewed in their original format on the [project page](#).

If you feel that your comment has been overlooked, let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, contact Director, Standards Development [Jamie Calderon](#) (via email) or at (404) 446-9647.

Questions

1. Do you agree with the DT's assessment that no substantive changes are needed to MOD-033 to address Order 901 directives regarding system model validation? If not, please provide your reasoning and suggested revisions.
2. Do you agree with the changes made to Requirement R1? If not, please provide the basis for your disagreement and any proposed revisions.
3. Do you agree with the changes made to Requirement R2? If not, please provide the basis for your disagreement and any proposed revisions.
4. Do you agree with the changes made to Measure M1? If not, please provide the basis for your disagreement and any proposed revisions.
5. Do you agree with the changes made to Measure M2? If not, please provide the basis for your disagreement and any proposed revisions.
6. Do you agree with the changes made to the VSLs? If not, please provide the basis for your disagreement and any proposed revisions.
7. Do you agree with the changes made to the Technical Rationale? If not, please provide the basis for your disagreement and any proposed revisions.
8. Do you agree with the proposed Implementation Plan? If not, please provide the basis for your disagreement and your proposed revisions.

9. Do you agree that MOD-033-3 is cost effective to address the Directives in the FERC Order? If you do not agree, or if you agree but have suggestions for improvement to enable more cost-effective approaches, please provide your recommendation and, if appropriate, technical, or procedural justification.

10. Please provide any additional comments for the drafting team to consider, if desired.

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
BC Hydro and Power Authority	Adrian Andreoiu	1	WECC	BC Hydro	Hootan Jarollahi	BC Hydro and Power Authority	3	WECC
					Helen Hamilton Harding	BC Hydro and Power Authority	5	WECC
					Adrian Andreoiu	BC Hydro and Power Authority	1	WECC
MRO	Anna Martinson	1,2,3,4,5,6	MRO	MRO Group	Shonda McCain	Omaha Public Power District (OPPD)	1,3,5,6	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jamison Cawley	Nebraska Public Power District	1,3,5	MRO
					Jay Sethi	Manitoba Hydro (MH)	1,3,5,6	MRO
					Husam Al-Hadidi	Manitoba Hydro (System Performance)	1,3,5,6	MRO
					George Brown	Pattern Operators LP	5	MRO

					Amy Key	MidAmerican Energy Company (MEC)	1	MRO
					Seth Shoemaker	Muscatine Power & Water	1,3,5,6	MRO
					Michael Ayotte	ITC Holdings	1	MRO
					Peter Brown	Invenergy	5,6	MRO
					Angela Wheat	Southwestern Power Administration	1	MRO
					Joshua Phillips	Southwest Power Pool	2	MRO
					Patrick Tuttle	Oklahoma Municipal Power Authority	4,5	MRO
					Hayden Maples	Evergy	1,3,5,6	MRO
					Kirsten Rowley	MISO	2	MRO
					Andrew Coffelt	Kansas City Board of Public Utilities	1,3,5,6	MRO
Dominion - Dominion Resources, Inc.	Barbara Marion	5		Dominion	Victoria Crider	Dominion	3	NA - Not Applicable
					Barbara Marion	Dominion	5	NA - Not Applicable

					Sean Bodkin	Dominion	6	NA - Not Applicable
					Steven Belle	Dominion	1	NA - Not Applicable
Santee Cooper	Chris Wagner	1		Santee Cooper	Weijian Cong	Santee Cooper	1,3,5,6	SERC
					Chris Wagner	Santee Cooper	1,3,5,6	SERC
					Diana Scott	Santee Cooper	1,3,5,6	SERC
Exelon	Daniel Gacek	1		Exelon	Daniel Gacek	Exelon	1	RF
					Kinte Whitehead	Exelon	3	RF
Jennie Wike	Jennie Wike		WECC	Tacoma Power	Jennie Wike	Tacoma Public Utilities	1,3,4,5,6	WECC
					John Merrell	Tacoma Public Utilities (Tacoma, WA)	1	WECC
					John Nierenberg	Tacoma Public Utilities (Tacoma, WA)	3	WECC
					Hien Ho	Tacoma Public Utilities (Tacoma, WA)	4	WECC
					Terry Gifford	Tacoma Public Utilities (Tacoma, WA)	6	WECC
					Ozan Ferrin	Tacoma Public Utilities (Tacoma, WA)	5	WECC

Black Hills Corporation	Josh Schumacher	6		Black Hills Corporation Segments 1, 3, 5, 6	Trevor Rombough	Black Hills Corporation	1	WECC
					Josh Combs	Black Hills Corporation	3	WECC
					Sheila Suurmeier	Black Hills Corporation	5	WECC
					Josh Schumacher	Black Hills Corporation	6	WECC
Entergy	Julie Hall	6		Entergy	Oliver Burke	Entergy - Entergy Services, Inc.	1	SERC
					Jamie Prater	Entergy	5	SERC
FirstEnergy - FirstEnergy Corporation	Mark Garza	4		FE Voter	Julie Severino	FirstEnergy - FirstEnergy Corporation	1	RF
					Aaron Ghodooshim	FirstEnergy - FirstEnergy Corporation	3	RF
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Mark Garza	FirstEnergy-FirstEnergy	1,3,4,5,6	RF
					Stacey Sheehan	FirstEnergy - FirstEnergy Corporation	6	RF
Northeast Power	Ruida Shu	10	NPCC	NPCC RSC	Gerry Dunbar	Northeast Power	10	NPCC

Coordinating Council						Coordinating Council			
						Deidre Altobell	Con Edison	1	NPCC
						Michele Tondalo	United Illuminating Co.	1	NPCC
						Stephanie Ullah-Mazzuca	Orange and Rockland	1	NPCC
						Michael Ridolfino	Central Hudson Gas & Electric Corp.	1	NPCC
						Randy Buswell	Vermont Electric Power Company	1	NPCC
						James Grant	NYISO	2	NPCC
						Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC
						David Burke	Orange and Rockland	3	NPCC
						Salvatore Spagnolo	New York Power Authority	1	NPCC
					Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC	

Silvia Mitchell	NextEra Energy - Florida Power and Light Co.	1	NPCC
Sean Cavote	PSEG	4	NPCC
Jason Chandler	Con Edison	5	NPCC
Shivaz Chopra	New York Power Authority	6	NPCC
Vijay Puran	New York State Department of Public Service	6	NPCC
David Kiguel	Independent	7	NPCC
Joel Charlebois	AESI	7	NPCC
Joshua London	Eversource Energy	1	NPCC
Joel Charlebois	AESI	7	NPCC
John Hastings	National Grid	1	NPCC
Erin Wilson	NB Power	1	NPCC
James Grant	NYISO	2	NPCC
Michael Couchesne	ISO-NE	2	NPCC
Kurtis Chong	IESO	2	NPCC
Michele Pagano	Con Edison	4	NPCC
Bendong Sun	Bruce Power	4	NPCC

					Carvers Powers	Utility Services	5	NPCC
					Wes Yeomans	NYSRC	7	NPCC
					Emma Halilovic	Hydro One	1,3	NPCC
					Philip Nichols	National Grid	1	NPCC
					Emma Halilovic	Hydro One	1,3	NPCC
					Caver Powers	Utility Services	5	NPCC
Western Electricity Coordinating Council	Steven Rueckert	10		WECC	Steve Rueckert	WECC	10	WECC
					Curtis Crews	WECC	10	WECC
Tim Kelley	Tim Kelley		WECC	SMUD and BANC	Nicole Looney	Sacramento Municipal Utility District	3	WECC
					Charles Norton	Sacramento Municipal Utility District	6	WECC
					Wei Shao	Sacramento Municipal Utility District	1	WECC
					Foung Mua	Sacramento Municipal Utility District	4	WECC
					Nicole Goi	Sacramento Municipal Utility District	5	WECC
					Kevin Smith	Balancing Authority of	1	WECC

						Northern California		
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1. Do you agree with the DT's assessment that no substantive changes are needed to MOD-033 to address Order 901 directives regarding system model validation? If not, please provide your reasoning and suggested revisions.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

No

Document Name

Comment

FirstEnergy supports EEI's comments which state:

While EEI agrees that the changes made to MOD-033-3 do not appear to be substantive, we do have concerns with the repeated use of the term "System" used in both the capitalized and uncapitalized version. For this reason, clarity should be provided for why they have used both capitalized and uncapitalized versions of system or simply correct the standard if this was an editing error

Likes 0

Dislikes 0

Response

Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

Josh Schumacher - Black Hills Corporation - 6, Group Name Black Hills Corporation Segments 1, 3, 5, 6

Answer

No

Document Name

Comment

Black Hills Corporation agrees with EEI's comments and suggested changes regarding the changes to MOD-033. While the changes made do not appear to be substantive, there is concern with the use of the word "System" in the capitalized & uncapitalized version. If this was intentional then clarity should be provided as to why, if it was just an editing error it should be corrected.

Likes 0

Dislikes 0

Response

Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

Daniela Atanasovski - APS - Arizona Public Service Co. – 1

Answer

No

Document Name

Comment

AZPS supports the following comments submitted by EEI on behalf of its members:

While EEI agrees that the changes made to MOD-033-3 do not appear to be substantive, we do have concerns with the repeated use of the term "System" used in both the capitalized and uncapitalized version. For this reason, clarity should be provided for why they have used both capitalized and uncapitalized versions of system or simply correct the standard if this was an editing error.

Likes 0

Dislikes 0

Response

Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer	No
Document Name	
Comment	
While EEI agrees that the changes to MOD-033-3 do not appear to be substantive, we do have concerns with the repeated use of the term "System" used in both the capitalized and uncapitalized version. Without knowing whether this was intentional or not, we cannot definitively say whether we agree the changes to MOD-033 were not substantive. For this reason, we ask the DT to either explain why they have used both capitalized and uncapitalized versions of system or simply correct the standard if this was an editing error.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.	
Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE	
Answer	No
Document Name	
Comment	
CenterPoint Energy Houston Electric, LLC (CEHE) supports the comments as submitted by the Edison Electric Institute (EEI).	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.	

Mary Smith - Southern Indiana Gas and Electric Co. - 3,5,6 – RF**Answer** No**Document Name****Comment**

Southern Indiana Gas & Electric Company d/b/a CenterPoint Energy Indiana South (SIGE) supports the comments as submitted by the Edison Electric Institute (EEI) for Project 2020-06.

Likes 0

Dislikes 0

Response

Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

Sharon Darwin - Southern Company - Southern Company Services, Inc. - 1,3,5,6 – SERC**Answer** No**Document Name****Comment**

Southern Company supports EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

Barbara Marion - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion

Answer	No
Document Name	
Comment	
Dominion supports EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.	
Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers	
Answer	No
Document Name	
Comment	
Ameren agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.	
Daniel Gacek - Exelon - 1, Group Name Exelon	
Answer	No

Document Name	
Comment	
Exelon agrees with the comments submitted by the EEI.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.	
Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebel, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc. , 6; - Joseph Gatten	
Answer	No
Document Name	
Comment	
While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.	
James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable	
Answer	No

Document Name	
Comment	
<p>The NAGF supports the comments made by EEI: as stated “While EEI agrees that the changes to MOD-033-3 do not appear to be substantive, we do have concerns with the repeated use of the term “System” used in both the capitalized and uncapitalized version. Without knowing whether this was intentional or not, we cannot definitively say whether we agree the changes to MOD-033 were not substantive. For this reason, we ask the DT to either explain why they have used both capitalized and uncapitalized versions of system or simply correct the standard if this was an editing error.”</p>	
Likes 0	
Dislikes 0	
Response	
<p>Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.</p>	
John Pearson - ISO New England, Inc. – 2	
Answer	No
Document Name	
Comment	
<p>See comments for question 2</p>	
Likes 0	
Dislikes 0	
Response	
<p>Thank you for your comment. Please refer to the drafting team’s responses to your comments in Q2.</p>	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	

Answer	Yes
Document Name	
Comment	
None.	
Likes 0	
Dislikes 0	
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 – MRO	
Answer	Yes
Document Name	
Comment	
<p>MH agrees that no substantive changes are needed to meet considered Order 901 directives, although additional clarity could be provided related to the Paragraph 161 directive to keep models up-to-date. The MH provides the following recommendation:</p> <p>R1.4 Guidelines to resolve the unacceptable differences in performance identified under Part 1.3, including updates to the relevant model(s).</p> <p>In addition, It was notice that the FERC Order 901 directive on P85 was not listed in the Consideration of FERC Order 901 Directives document “Pursuant to section 215(d)(5) of the FPA, we adopt the NOPR proposal to direct NERC to include in the new or modified Reliability Standards technical criteria to require registered IBR generator owners to install disturbance monitoring equipment at their buses and elements, to require registered IBR generator owners to provide disturbance monitoring data to Bulk-Power System planners and operators for analyzing disturbances on the Bulk-Power System, and to require Bulk Power System planners and operators to validate registered IBR models using disturbance monitoring data from installed registered IBR generator owners’ disturbance monitoring equipment.”</p>	

SDT, please confirm if that the validation of the individual IBR is covered in this standard?

Likes 0

Dislikes 0

Response

Thank you for your comments. After careful consideration, the drafting team determined that “including updates to the relevant model” is not the only way to resolve unacceptable differences in performance. Further, NERC Standards address what is required to accomplish a reliability objective, and refrain from being prescriptive about how it must be accomplished. Therefore, the drafting team has not accepted the recommended modification to R1.4.

The cited FERC Order 901 directive was not included in the Project 2021-01 Consideration of FERC Order 901 Directives documents as it was not fully determined how the directive would be addressed in this project and in conjunction with Project 2020-06, MOD-026 standard updates for individual registered IBR verification and validation.

Please also refer to the FERC Order 901 mapping document on NERC's website, Index 8B.

Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group

Answer

Yes

Document Name

Comment

The MRO NSRF agrees that no substantive changes are needed to meet Order 901 directives, although additional clarity could be provided related to the Paragraph 161 directive to keep models up-to-date. The MRO NSRF provides the following recommendation:

R1.4 Guidelines to resolve the unacceptable differences in performance identified under Part 1.3, **including updates to the relevant model(s).**

Likes 0

Dislikes 0

Response

Thank you for your comments. After careful consideration, the drafting team determined that “including updates to the relevant model” is not the only way to resolve unacceptable differences in performance. Further, NERC Standards address what is required to accomplish a reliability objective, and refrain from being prescriptive about how it must be accomplished. Therefore, the drafting team has not accepted the recommended modification to R1.4.

Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples

Answer Yes

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and the Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 1

Likes 0

Dislikes 0

Response

Thank you for your comment. The Glossary term "System" is now used consistently in all Requirements within the Standard. However, "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

After careful consideration, the drafting team determined that “including updates to the relevant model” is not the only way to resolve unacceptable differences in performance. Further, NERC Standards address what is required to accomplish a reliability objective, and refrain from being prescriptive about how it must be accomplished. Therefore, the drafting team has not accepted the recommended modification to R1.4.

Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott

Answer Yes

Document Name

Comment

ITC supports comments submitted by NSRF

Likes 0

Dislikes 0

Response

Thank you for your comments. After careful consideration, the drafting team determined that “including updates to the relevant model” is not the only way to resolve unacceptable differences in performance. Further, NERC Standards address what is required to accomplish a reliability objective, and refrain from being prescriptive about how it must be accomplished. Therefore, the drafting team has not accepted the recommended modification to R1.4.

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 – WECC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mohamad Elhousseini - DTE Energy - Detroit Edison Company – 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes	0
Response	
Kevin Conway - Western Power Pool – 4	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Alyssia Rhoads - Public Utility District No. 1 of Snohomish County – 1	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Mark Flanary - Midwest Reliability Organization – 10	
Answer	Yes
Document Name	

Comment

Likes 0

Dislikes 0

Response**Donna Wood - Tri-State G and T Association, Inc. – 1****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Daren Brubaker - Seattle City Light – 6****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Robert Jones - Seattle City Light - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Zenon O'young-Chu - Seattle City Light - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bryan Bennett - Sempra - San Diego Gas and Electric - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Pirouz Honarmand - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bob Cardle - Bob Cardle On Behalf of: Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes	0
Response	
Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Steven Taddeucci - NiSource - Northern Indiana Public Service Co. - 3	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Israel Perez - Israel Perez On Behalf of: Laura Somak, Salt River Project, 3, 5, 6, 1; Mathew Weber, Salt River Project, 3, 5, 6, 1; Matthew Jaramilla, Salt River Project, 3, 5, 6, 1; Timothy Singh, Salt River Project, 3, 5, 6, 1; - Israel Perez	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Greg Sorenson - ReliabilityFirst - 10 - RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Karen Weaver - Tallahassee Electric (City of Tallahassee, FL) - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ben Hammer - Western Area Power Administration - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; FOUNG MUA, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Carver Powers - Utility Services, Inc. - 4

Answer	Yes
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Document Name	
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Comment	
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Likes	0
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Dislikes	0
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Response	
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Hillary Creurer - Allete - Minnesota Power, Inc. - 1

Answer	Yes
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Document Name	
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Comment	
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Likes	0
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Dislikes	0
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Response	
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Scott Thompson - TXNM Energy - 1,3

Answer	Yes
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Document Name	
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Comment	
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Likes	0
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Dislikes 0	
Response	
Ruchi Shah - AES - AES Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sing Tay - AES - Indianapolis Power and Light Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Adrian Harris - Adrian Harris On Behalf of: Kirsten Rowley, Midcontinent ISO, Inc., 2; - Adrian Harris	
Answer	Yes
Document Name	

Comment

Likes 0

Dislikes 0

Response**Joshua Phillips - Southwest Power Pool, Inc. (RTO) - 2****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF**Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Mike Magruder - Avista - Avista Corporation - 1****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Julie Hall - Entergy - 6, Group Name Entergy****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response

Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 - WECC

Answer

Document Name

Comment

See Utility Services and SMUD Comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please note that Utility Services and SMUD did not provide comments on Q1.

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE appreciates the drafting team's efforts in meeting the directives in FERC Order No. 901. Texas RE is concerned, however, that proposed MOD-033-3 Requirement R1 does not include Transmission Planners. In paragraph 152 of FERC Order No. 901, it states that the NOPR proposed to include Transmission Planners. It is unclear why Transmission Planners were not included in the directive language in paragraph 156. Texas RE recommends the Transmission Planners be included in the applicability as the TPs need to understand the comparison of actual operational behavior and the models. This is consistent with TPL-001, in which both the PCs and TPs are required to maintain system models. Since they are both maintaining the models, they should both compare the models with actual behavior. Texas RE recommends the following revision to Requirement R1:

R1. Each Planning Coordinator **and Transmission Planner** shall implement a documented Model Validation Process...

Additionally, Texas RE recommends the comparison be done at least once every 12 calendar months, instead of 24 calendar months as required by Requirement Parts 1.2 and 1.3. There have been significant IBR events each year for the past years and as the system is changing rapidly, the comparisons need to be completed more often than once every 24 months. Paragraph 161 states “NERC may implement this directive by modifying Reliability Standards MOD-032-1 and MOD- 033-2 or by developing new Reliability Standards to establish requirements mandating an annual process to coordinate, validate, and keep up-to-date transmission planning, operations, and interconnection-wide models.”

Likes 0

Dislikes 0

Response

Thank you for your comments.

After careful consideration, the DT respectfully declines to accept your recommendation of including Transmission Planner to MOD-033 applicability since simply the existence of IBR's in the system model does not create any reliability gap in the existing approved MOD-033-2. Consequently, the Planning Coordinator as applicable entity is not rendered inadequate by the mere presence of IBRs in the system model. Also, as correctly noted in your comment, neither P156 nor any other directive in Order 901 has suggested adding Transmission Planner as applicable entity.

After careful consideration, the DT respectfully declines to accept your recommendation to change the existing 24 calendar months periodicity for system model validation in Requirement Parts 1.2 and 1.3 to every 12 calendar months. Simply the existence of numerous IBR's in the system model for a Planning Coordinator's footprint does not necessarily create any reliability gap in the existing approved MOD-033-2. And since the comment does not explain what potential reliability gap would be addressed by reducing the periodicity of only dynamic model validation (in part 1.2) but not steady-state model validation (in part 1.1), the drafting team is unable to appreciate the technical rationale for the recommended change.

Further, the drafting team also notes that system models are an outcome of the annual MOD-032 model building process which is based on verified and validated component models (including IBR plant models) being made available to the Transmission Planner and/or Planning Coordinator. As such, the system models assembled annually would presumably include the best available (validated) steady-state and dynamic models for the IBRs.

2. Do you agree with the changes made to Requirement R1? If not, please provide the basis for your disagreement and any proposed revisions.

Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro

Answer	No
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Document Name	
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Comment

BC Hydro appreciates the opportunity to review and offers the following comments and suggestions.

1. The Requirement R1 mandates that a documented Model Validation process be implemented. For additional clarity, BC Hydro suggests that R1 explicitly outlines the actions to document and implement, e.g. suggested wording:

R1 Each Planning Coordinator shall document and implement a Model Validation process for its portion of the existing System that includes the following attributes:

This will also provide better alignment with the revised Measure M1.

BC Hydro also notes that the revised wording includes the use of the term “system” (i.e. generic) and “System” (i.e. NERC Glossary Term). BC Hydro request that the drafting team clarify if this is was intentional, and if so what are the meaningful differences, or revise as appropriate for consistency.

2. R1 Part 1.2 requires a comparison of the “dynamic local event simulation performance”. It is not clear the value the term “local” adds since R1 now explicitly states the applicability for a PC’s System.

BC Hydro suggests that the use of footnotes to clarify compliance obligations is not conducive for clear and consistent interpretation and suggests the following revised wording for the drafting team's consideration.

1.2. Comparison of the performance of the dynamic System model simulation to actual System behavior, represented by Real-time data sources such as Disturbance data recording(s)

- at least once every 24 calendar months of the last dynamic event comparison if such an event occurred; or
- if no dynamic event usable for Model Validation in its System occurs within 24 calendar months of the last dynamic event comparison, use the next dynamic event that occurs.

1.2.1 Each comparison required per Part 1.2 is to be completed within 24 calendar months of the dynamic event.

3. The Footnote 1 to the Requirement R1 of MOD-033-3 can introduce confusion as the intent of Footnote 1 is not clear whether it is used for information or intended as a mandatory Requirement enforceable via R1. Furthermore, as drafted, the Footnote 1 can be interpreted as requiring the PC to validate non-BES unregistered IBR and DER models as part of the R1 System Model Validation.

BC Hydro requests the drafting team to further clarify the intent of Footnote 1 and revise or remove as appropriate.

Likes 0

Dislikes 0

Response

The Glossary term "System" is now used consistently in all Requirements within the Standard. However "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

The term dynamic local event is not new – for its detailed description please refer to the Technical Guidelines in the existing approved version of the standard MOD-033-2 or the Technical Rationale document supporting the posted draft of MOD-033-3. This term is flexible based on events determined as "local" by different PCs. Similarly, system model validation being applicable to the Planning Coordinator's footprint is not new verbiage in R1 – the same verbiage exists in R1 parts 1.1 and 1.2 in the approved MOD-033-2. Please refer to the redlined posted draft of MOD-033-3.

For clarity, any footnote in a Requirement of NERC Reliability Standards is an integral, mandatory part of the requirement and therefore enforceable. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF

Answer No

Document Name

Comment

ACES agrees with the DT's assessment that no substantive changes are needed to MOD-033 to address FERC Order 901 directives regarding system model validation. However, it is the opinion of ACES that the changes made to Requirement R1 represent just such a change. From our perspective, the DT's choice to specify that "unregistered IBRs and aggregate DERs" be included in the System model, represents an undue compliance burden for the Planning Coordinator. We contend that requiring the Planning Coordinator to collect data from unregistered entities places the Planning Coordinator in the unenviable position of attempting to collect data, with no mechanism to compel such entities to provide it. In short, why should the Planning Coordinator be held liable for the failure of another entity to provide the required data?

We recommend the following modification to footnote 1:

System models should include unregistered Inverter-Based Resources (IBRs) and aggregate Distributed Energy Resources (DERs) when present, and sufficient data is available to validate the model. The phrase "unregistered IBR" refers to a Bulk-Power System connected IBR that does not meet the criteria that would require the owner to register with NERC for mandatory Reliability Standards compliance purposes.

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

John Pearson - ISO New England, Inc. - 2

Answer	No
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Document Name	
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Comment

R1 should be made more prescriptive to require redispatch of the planning model to actual system conditions for the power flow simulation comparison with actual System behavior (e.g., matching resource MW and voltage values for all resources modeled in an applicable EMS, matching area load, etc.). As currently written, the requirement may be used to allow very little actual analysis.

In Requirements 1.1 and 1.2, “planning” should be added back since R1 is applicable to the Planning Coordinator. Without the term “planning,” Requirement R1 becomes very ambiguous; for example, it is not clear whether it is allowable to compare a state estimator case with any planning or operations system model case.

FERC order 901 directives require system model validation. It does not limit itself to portions of the system. In R1 1.2, using a single local event may only be sufficient for validating those portions of the system that are affected by the event. That is to say, a single local event may not be sufficient for system wide model validation. Furthermore, multiple events for benchmarking are necessary for robust model validation. R1 1.2 should require something to the effect that the PC shall decide which events are applicable for the purposes of validating ALL portions of the system.

Likes	0
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Dislikes	0
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Response

NERC Standards address what is required to accomplish a reliability objective, and refrain from being prescriptive about how it must be accomplished. Therefore, the DT declines adding the suggested prescriptive language in R1.

The DT has added the word "planning" into R1 to address your ambiguity concern.

As noted in R1 of the existing approved MOD-033-2 standard as well as the proposed draft standard MOD-033-3, each Planning Coordinator is required to implement a model validation process for “its portion of the existing System”. Each Planning Coordinator therefore has the responsibility and the authority to develop a comprehensive and robust system model validation process that adequately addresses the unique characteristics of its Planning Coordinator area. That is, each PC has the obligation and the prerogative to determine how best to accomplish the reliability objective of MOD-033 for its footprint – which can presumably be very different for each PC. Therefore, the drafting team declines to make R1 part 1.2 prescriptive to address your concern. As noted earlier, NERC Standards address what is required to accomplish a reliability objective, and refrain from being prescriptive about how it must be accomplished.

Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2

Answer No

Document Name

Comment

ERCOT joins the comments submitted by the ISO/RTO Council (IRC) Standards Review Committee (SRC) and adopts them as its own.

Likes 0

Dislikes 0

Response

Please refer to the response provided to IRC SRC.

James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable

Answer No

Document Name

Comment

The NAGF supports the comments made by EEI: as stated “EEI does not support Footnote 1 (as written) because models validated within MOD-033 should conform to those used in MOD-032 and while the footnote implies that, it cannot technically accomplish that until the revised version of MOD-032 is approved (Project 2022-02). Otherwise, PC will be obligated to develop and validate models inconsistent with the current version of MOD-032, which will take more time than is allotted in the proposed implementation plan. To resolve this issue, we suggest changing Footnote 1 to the following, which would allow PCs to validate models developed under the currently approved version of MOD-032 and then once the new version is approved, they will validate models in conformance with the new version, which includes all of the desired attributes (i.e., unregistered IBRs and aggregated DERs):

Footnote 1: The models shall use data consistent with that provided in accordance with the MOD-032 standard. ”

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process.

Joshua Phillips - Southwest Power Pool, Inc. (RTO) - 2

Answer

No

Document Name

Comment

The ISO/RTO Council (IRC) Standards Review Committee (SRC) believes MOD-033 is intended to ensure consistency between planning models and operations/real-time behavior, and the Technical Rationale seems to indicate that the Drafting Team shares this understanding. MOD-033-2 Requirement R1, Part 1.1 refers specifically to a “planning power flow model,” and the SRC recommends that “planning” be added back into Parts 1.1 and 1.2 in MOD-033-3. Without the term “planning,” Requirement R1 becomes very ambiguous; for example, it is not clear whether it is allowable to compare a state estimator case with any planning or operations System model case.

Additionally, the SRC recommends that Requirement R1 be revised to clarify that the planning model will be developed in accordance with data provided under MOD-032-2, and that there is no independent obligation for PCs to go beyond what was provided under MOD-

032-2 with regard to unregistered IBRs and DERs. To accomplish this, the SRC recommends that Requirement R1 (both Part 1.1 and Part 1.2) be revised to refer to a “planning steady state System model developed in accordance with MOD-032-2.” The SRC believes that this modification would address FERC’s directives in Order No. 901, rendering footnote 1 unnecessary. However, if the drafting team elects to keep footnote 1, the SRC recommends that footnote 1 also be clarified by revising it to read “System models include unregistered Inverter-Based Resources (IBRs) and aggregate Distributed Energy Resources (DERs) when this data has been provided to the PC under MOD-032-2. The phrase ‘unregistered IBR’ refers to a Bulk-Power System connected IBR that does not meet the criteria that would require the owner to register with NERC for mandatory Reliability Standards compliance purposes.”

Furthermore, the SRC recommends Requirement R1, Part 1.1 be revised to accommodate entities that have developed a process to produce planning steady-state System models from the same data source as state estimator cases or other Real-time model cases as an alternative to performing a steady-state model comparison.

The standard currently assumes entities have implemented separate and disconnected processes to create and maintain their operations and planning models. This approach presumes model changes must be made independently in each process and that comparisons are required to ensure each path remains synchronized with the other. However, not every entity relies on disconnected processes to create and maintain operations and planning models. For example, ERCOT has greatly improved upon this approach by implementing a single modeling repository that is the source for both operations and planning use cases. This common repository ensures that operations and planning models are inherently synchronized with each other because they are all created with the same base information and any modeling changes are automatically incorporated into subsequent model builds.

The common source ERCOT uses for planning and operations models allows for detailed operations model information (e.g., breakers and switches) to commingle with planning-specific information (e.g., PSS/E bus name and number). However, grid information that is required for each model type (i.e., topology, impedances, ratings, etc.) is defined using the same model object instead of being modeled independently for each function.

To create planning models, ERCOT has developed a programmatic method, known as topology processing, to transform the more complex breaker-switch connectivity information into the required bus-branch models. This process also ensures that the common model objects, such as lines, loads, and generators, effectively remain unchanged. This allows ERCOT to create both operations and planning models from the same source information that represents the same point in time, has the same connectivity, and has the same underlying characteristics (e.g., ratings and impedances).

ERCOT currently performs the steady-state model comparisons as described in Requirement R1, Part 1.1 every 5 minutes via the state estimator process. This process continuously compares estimated solution values to telemetry. Large differences in these values indicate

potential mismatches between the Network Operations Model (NOM) and the real-world transmission system. These issues are investigated and, where necessary, resolved via model submissions. Planning cases are created using the same NOM and, therefore, are effectively (but not explicitly) being compared via the same process.

To account for entities that have adopted processes similar to the process ERCOT uses, the SRC proposes that Part 1.1 be revised to read as follows:

1.1. {C}Comparison of the power flow simulation performance of the planning steady state System model developed in accordance with MOD-032-2 to actual System behavior, represented by state estimator case(s) or other Real-time data sources, at least once every 24 calendar months, or a process to develop planning steady state System models from the same data source as state estimator case(s) or other Real-time model cases;

If footnote 1 is retained, it is currently unclear whether footnote 1 also applies to the use of the term “System model” in Part 1.2. If footnote 1 is intended to apply in Part 1.2, then either the footnote should be revised to indicate that it applies to “System model” as used throughout the standard, or the term “System model” in Part 1.2 should have its own dedicated footnote (or a shared footnote) to provide clarification.

The SRC supports the 24-month timeframe in Part 1.2, but is concerned that the clause “using a dynamic local event that occurs within 24 calendar months of the last dynamic local event used in comparison” does not incentivize selection of a good event or the most relevant event to analyze. Rather, it incentivizes selection of events that occur towards the end of the 24-calendar-month period to avoid accelerating the schedule for selecting the next event. The SRC believes the intent of Part 1.2 is to establish a two-year window in which an event should be selected. To clarify this, the SRC proposes that Part 1.2 and footnote 2 be revised to read as follows:

1.2. Comparison of the dynamic local event simulation performance of the planning dynamic System model developed in accordance with MOD-032-2 to actual System behavior, represented by Real-time data sources such as Disturbance data recording(s), at least once every two calendar years² and completing each comparison within 24 calendar months of the dynamic local event.

²At least one dynamic local event shall be selected for each two-calendar-year period. If no dynamic local event occurs within the two-calendar-year period, use the next dynamic local event that occurs.

Under this language, if no event occurs within the 2-year period, analysis of the next event would qualify for the 2-year period during which no event occurred and another event within the current 2-year period would still need to be selected for analysis. This nuance could be addressed in the footnote or described in some examples in the Technical Rationale, such as: “Analysis of an event in January of Year 1 would fulfill the obligation for the Year 1-2 period. The event for the Year 3-4 period could occur as late as December of Year 4. If

no event occurs in the Year 3-4 period, analysis of the next event (which could, for example, occur in March of Year 5) would fulfill the Year 3-4 obligation. Analysis of another event in the Year 5-6 period would still be needed to satisfy the Year 5-6 obligation.”

Likes 0

Dislikes 0

Response

Thank you for your comment.

The DT has added the word "planning" into R1 to address your ambiguity concern.

Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process.

Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebel, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc. , 6; - Joseph Gatten

Answer

No

Document Name

Comment

While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the response to EEI comments.

Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott

Answer

No

Document Name

Comment

ITC supports comments submitted by NSRF

Likes 0

Dislikes 0

Response

Thank you for your comment. The Model Validation definition from the 2020-06 team has passed industry ballot and will be sent to final ballot.

For clarity, any footnote in a Requirement of NERC Reliability Standards is an integral, mandatory part of the requirement and therefore enforceable. Although footnote 1 has been revised, as noted above, the scope of a footnote is mandatory and enforceable.

Adrian Harris - Adrian Harris On Behalf of: Kirsten Rowley, Midcontinent ISO, Inc., 2; - Adrian Harris

Answer

No

Document Name

Comment

MISO supports the reintroduction of the term "Planning" in Requirement R1 and Part 1.1 to ensure clarity and alignment with the intent of the standard.

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT has added the word "planning" into R1.

Sing Tay - AES - Indianapolis Power and Light Co. - 3

Answer

No

Document Name	
Comment	
AES Indiana supports comments provided by EEI.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. Please refer to the response to EEI comments.	
Ruchi Shah - AES - AES Corporation - 5	
Answer	No
Document Name	
Comment	
AES supports the comments provided by EEI.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. Please refer to the response to EEI comments.	
Scott Thompson - TXNM Energy - 1,3	
Answer	No
Document Name	
Comment	

TXNM Energy would is concerned about moving the clarification about what to do when no dynamic local event occurred within 24 months to a footnote. There is disagreement about the enforceability of footnotes which may leave certain entities vulnerable if no event occurs within a 24 month period.

Likes 0

Dislikes 0

Response

Thank you for your comment. For clarity, any footnote in a Requirement of NERC Reliability Standards is an integral, mandatory part of the requirement and therefore enforceable. Nevertheless, the drafting team has deleted footnote 2 and moved the language into Requirement 1.2.

Daniel Gacek - Exelon - 1, Group Name Exelon

Answer

No

Document Name

Comment

Exelon agrees with the comments submitted by the EEI.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the response to EEI comments.

Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers

Answer

No

Document Name

Comment

Ameren agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Please refer to the response to EEI comments.

Carver Powers - Utility Services, Inc. - 4

Answer

No

Document Name

Comment

Reliability Standards to Address Inverter-Based Res., Order No. 901, 185 FERC ¶ 61,042 (2023) (“Order 901”) calls for two different terms for purposes of determining the data and modeling of Inverter-Based Resources (“IBRs”) whose owners are not registered and subject to compliance as Category 2 Generator Owners/Generator Operators (GO/GOPs): (1) “unregistered IBRs,” whose data is to be reported individually and (2) IBR-Distributed Energy Resources (“IBR-DERs”), whose data is to be reported (or estimated) in the aggregate. Order 901 explicitly differentiates between “unregistered IBRs,” which it describes as “IBRs connected directly to the Bulk-Power System but not registered with NERC and therefore not subject to the Reliability Standards,” and “IBR-DERs,” which it describes as “IBRs connected to the distribution system that in the aggregate have a material impact on the Bulk Power System.” *Id.* P 4 n.14. The two draft standards address both types of IBRs but do so in ways that fail to achieve FERC’s stated purpose of addressing the failure of existing standards to accurately account for the different way that IBRs respond to disturbances, as compared to synchronous generation. *Id.* P 37 (emphasis added) (footnotes omitted). *See also id.* PP 2-4, 50:

Data that *accurately* represents IBRs is necessary to properly plan for, operate, and analyze IBR performance on the Bulk-Power System. Without data that accurately represents all IBRs, planning coordinators, transmission planners, reliability coordinators, transmission operators, and balancing authorities are not able to develop system models that accurately account for the behavior of IBRs on their system, nor are they able to facilitate the analysis of Bulk-Power System disturbances.

While there may be other issues with the proposed use of these terms, these comments focus on two flaws:

(1) Defining the scope of the unregistered IBRs to be reported and modeled by use of a footnote referring to those IBRs connected to the Bulk-Power System (“BPS”), a vague term that is for FERC to define, rather than providing a clear cutoff consistent with the FERC-approved GO/GOP Category 2 registry criteria or the successfully balloted GO/GOP Category 2 Glossary definition. Such usage is not appropriate to determine the scope of what is to be covered by enforceable standards, and the resulting imprecision will invite double counts and gaps that will prevent the standards from achieving Order 901’s reliability purposes.

(2) Instead of restricting the provision of data and modeling to IBR-DERs as Order 901 directs, relying on a DER definition that encompasses both IBR and non-IBR resources that are connected to the distribution system. This failure to have a definition focused solely on IBR-DERs threatens to undermine the express objective of Order 901 to accurately account for the behavior of IBRs. While the addition of Item 9.c under the “steady-state” column in MOD-032-2 Attachment 1 may somewhat mitigate the adverse impact of this combined IBR/non-IBR DER definition, the use of the DER definition without express restrictions to IBR-DERs elsewhere in the proposed draft standards (*see, e.g.*, Item 10 under “dynamics” of that same Attachment; footnote 1 of draft MOD-033-3) invites confusion that could also carry over to other standards that are intended to reflect and account for the particular characteristics of IBRs.

Both proposed standards (MOD-032-2; MOD-033-3) purport to define unregistered IBRs in a footnote (i.e., footnote 1 of each), with draft MOD-032-2 limiting its applicability with “as used in this standard.” Footnote treatment seems ill-suited to a definition that must be used consistently in a set of Milestone 3 and 4 standards to enable the data, modeling, planning and operational studies to be developed on a consistent basis to produce the reliability benefits Order 901 expressly contemplated. *See, e.g.*, Order 901, P 53. To better ensure consistent usage throughout the relevant standards, an appropriate unregistered IBR definition should be added to the Glossary. Indeed, inclusion of the unregistered IBR definition in a footnote is inconsistent with the proposal to include the DER definition in the Glossary.

In addition, the proposed footnote explanations of unregistered IBRs improperly use the term “Bulk-Power System connected” to delineate the IBRs to be covered. That term lacks the precision necessary for the registered entities (i.e., Transmission Owners and Distribution Providers) that are required to provide individualized data on such entities (proposed MOD-032-2, R2), and PCs, RCs, and TOPs that are required to validate system models using this data “to facilitate achieving and maintaining adequate model accuracy” (proposed MOD-033-3, Purpose), or to provide confidence that the resulting reporting will consistently produce results that do not reflect gaps or double counting of IBRs. While the MOD-032-2 Technical Rationale, at 4, suggests that “bulk system-connected” can be shorthand for resources connected to the transmission system, it does not provide a controlling interpretation of the term “Bulk-Power System connected” as used in the proposed standard that can be consistently applied and relied upon.

Moreover, to the extent the MOD-032-2 Technical Rationale explanation is meant to inform the “unregistered IBRs” footnote, it fails to remedy the concern that there is no precise definition of Bulk-Power System that would enable a clean delineation of the IBR resources whose data is to be provided. The statutory term “bulk-power system,” like “local distribution,” is pertinent to the boundaries of FERC’s jurisdiction, and as stated in Order No. 773, “[t]he determination whether an element or facility is ‘used in local distribution,’ as the phrase is used in the FPA, requires a jurisdictional analysis that is more appropriately performed by the Commission.” *Revisions to Elec. Reliability Org. Definition of Bulk Elec. Sys. & Rules of Proc.*, Order No. 773, 141 FERC ¶ 61,236, P 69 (2012), *clarified on reh’g*, Order No. 773-A, 143 FERC ¶ 61,053, *compliance deadline extended*, 143 FERC ¶ 61,231, *clarified*, 144 FERC ¶ 61,174 (2013), *review denied sub nom. New York v. FERC*, 783 F.3d 946 (2d Cir. 2015).

In approving NERC’s criteria for fulfilling the directives to register IBRs that are “connected to the Bulk-Power System and that have an aggregate material impact on the reliable operation of the Bulk-Power System,” FERC found it reasonable for NERC to use “non-BES Inverter-Based Resource(s) that either have or contribute to an aggregate nameplate capacity of greater than or equal to 20 MVA, connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage greater than or equal to 60 kV.” *N. Am. Elec. Reliability Corp.*, 187 FERC ¶ 61,196, PP 10, 36-39 (2024). At the same time, FERC reiterated that determining the scope of the BPS is its call to make. *Id.* P 54 n.127. *See also id.* P 44.

Given FERC’s acceptance of the 60 kV cutoff as described above for Category 2 GO/GOP registration purposes as sufficient to meet its “connected to the BPS” directive, and Project 2024-01’s use of that same cut off for purposes of the GO/GOP Category 2 Glossary definitions (which recently received more than the requisite votes needed for approval), there is no reason for the proposed MOD-032-2 and MOD-033-3 footnotes to use vague BPS terminology. Instead, “unregistered IBR” should be added to the Glossary and defined using the already approved proxies for “BPS-connected,” *e.g.*: “non-BES Inverter-Based Resource(s) that do not either have or contribute to an aggregate nameplate capacity of greater than or equal to 20 MVA, connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage greater than or equal to 60 kV.”

Additionally, both proposed standards rely on the proposed DER definition to describe the IBR-DERs that Order 901 directs these standards to address, in aggregate, for purposes of data reporting and modeling. *See, e.g.*, proposed MOD-032-2, R2.2.1 & n.1; proposed MOD-033-3, R1.1.2. A key problem with the proposed use of the DER definition is that it is inconsistent with Order 901’s express intent and directives, and therefore will undermine FERC’s objectives, described above, to accurately represent IBRs, which is needed because such generation responds differently to system disturbances than synchronous generation.

Although Order 901 expressly directs the development of standards requiring the provision of data and modeling of aggregate IBR-DERs, the proposed draft standards use a generalized DER definition, which includes both IBRs and non-IBR generation. *See, e.g.*, Order 901, PP 7, 53. *See also* MOD-032-2 Technical Rationale Figure 2 (at 5). While the MOD-032-2 Technical Rationale, at 7, found it practical to have a

consistent estimation framework for all DERs regardless of technology, the proposed DER definition fails to isolate IBR-DERs so that their impacts can be analyzed and appropriately accounted for in modeling, operations, and planning. The addition of Item 9.c under the “steady-state” column in MOD-032-2 Attachment 1 may somewhat mitigate the adverse impact of this combined IBR/non-IBR DER definition, but the use of the DER definition without express restrictions to IBR-DERs elsewhere in the proposed draft standards invites confusion that could also carry over to other standards that are intended to account for the particular characteristics of IBRs. For example, Item 10 under “dynamics” of MOD-032-2 Attachment 1 fails to make the distinction captured in Item 9.c. *Compare* Order 901, PP 37-39, 50-56. MOD-033-3 footnote 1 likewise refers to the DER definition without focusing on those DERs that are IBRs.

Thus, the proposed homogenized DER definition may impede the ability of these standards, and other IBR-related standards, to achieve Order 901’s reliability objectives. Steps should be taken to more clearly define IBR-DERs or otherwise further mitigate the potential adverse impacts of use of the proposed DER definition.

Likes 1	American Municipal Power, 5, Ritts Amy
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Dislikes 0	
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Response

Thank you for your comments. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032. For more information on modeling requirements for unregistered IBRs & IBR-DERs, please refer to the proposed MOD-032-2 under Project 2022-02.

Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC

Answer	No
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Document Name	
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Comment	
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SMUD and BANC believe that the use of footnotes should be minimized and see no good reason why the words of footnote #2 cannot be left in Requirement R1.2 as it was originally written. The drafting team should remove footnote #2 and add the following words back into Requirement R1.2.

“If no dynamic local event occurs within this 24 calendar months period, use the next dynamic local event that occurs.”

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has deleted footnote 2 and moved the language into Requirement 1.2.

Ben Hammer - Western Area Power Administration - 1

Answer

No

Document Name

Comment

The Model Validation definition is not yet approved and changes to that term may prompt additional requirement language changes, including substantive changes being required.

Also concerned about moving the clarification about what to do when no dynamic local event occurred within 24 months to a footnote. There is disagreement about the enforceability of footnotes which may leave certain entities vulnerable if no event occurs within a 24 month period. MRO NSRF suggests leaving that sentence in R1.2.

Likes 0

Dislikes 0

Response

Thank you for your comment. The Model Validation definition from the 2020-06 team has passed industry ballot and will be sent to final ballot.

For clarity, any footnote in a Requirement of NERC Reliability Standards is an integral, mandatory part of the requirement and therefore enforceable. Nevertheless, the drafting team has deleted footnote 2 and moved the language into Requirement 1.2.

Greg Sorenson - ReliabilityFirst - 10 - RF

Answer No

Document Name

Comment

The revised language does not require large RTOs to perform a sufficient amount of dynamic studies. To address this, the Standard should require more studies for larger loads (such as one study per 25,000MW of peak load).

Likes 0

Dislikes 0

Response

Thank you for your comment. Addressing it is outside the Project 2021-01 scope, which is limited to addressing applicable Order 901 directives.

Israel Perez - Israel Perez On Behalf of: Laura Somak, Salt River Project, 3, 5, 6, 1; Mathew Weber, Salt River Project, 3, 5, 6, 1; Matthew Jaramilla, Salt River Project, 3, 5, 6, 1; Timothy Singh, Salt River Project, 3, 5, 6, 1; - Israel Perez

Answer No

Document Name

Comment

SRP supports concerns raised by Tacoma Power. Defining non-registered IBRs in a footnote leads to inconsistent use of terms. Additionally, with no requirement for behind the meter models to be submitted to the TP, these models are unlikely to be gathered and usable. Changing the inclusion to “when available” instead of “when present” is more likely.

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples

Answer No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and the Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 2

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the responses given to EEI and MRO NSRF.

Barbara Marion - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion

Answer No

Document Name

Comment

Dominion supports EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the responses given to EEI.

Steven Taddeucci - NiSource - Northern Indiana Public Service Co. - 3

Answer No

Document Name

Comment

NIPSCO Supports EEI Comments: EEI does not support Footnote 1 (as written) because models validated within MOD-033 should conform to those used in MOD-032 and while the footnote implies that, it cannot technically accomplish that until the revised version of MOD-032 is approved (Project 2022-02). Otherwise, PC will be obligated to develop and validate models inconsistent with the current version of MOD-032, which will take more time than is allotted in the proposed implementation plan. To resolve this issue, we suggest changing Footnote 1 to the following, which would allow PCs to validate models developed under the currently approved version of MOD-032 and then once the new version is approved, they will validate models in conformance with the new version, which includes all of the desired attributes (i.e., unregistered IBRs and aggregated DERs):

Footnote 1: The models shall use data consistent with that provided in accordance with the MOD-032 standard.

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

Sharon Darwin - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC

Answer No

Document Name

Comment

Southern Company supports EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the responses given to EEI.

Mary Smith - Southern Indiana Gas and Electric Co. - 3,5,6 - RF**Answer**

No

Document Name**Comment**

SIGE supports the comments as submitted by EEI.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the responses given to EEI.

Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**Answer**

No

Document Name**Comment**

CEHE supports the comments as submitted by EEI.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the responses given to EEI.

Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer No

Document Name

Comment

EEI does not support Footnote 1 (as written) because models validated within MOD-033 should conform to those used in MOD-032 and while the footnote implies that, it cannot technically accomplish that until the revised version of MOD-032 is approved (Project 2022-02). Otherwise, PC will be obligated to develop and validate models inconsistent with the current version of MOD-032, which will take more time than is allotted in the proposed implementation plan. To resolve this issue, we suggest changing Footnote 1 to the following, which would allow PCs to validate models developed under the currently approved version of MOD-032 and then once the new version is approved, they will validate models in conformance with the new version, which includes all of the desired attributes (i.e., unregistered IBRs and aggregated DERs):

Footnote 1: The models shall use data consistent with that provided in accordance with the MOD-032 standard.

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer No

Document Name

Comment

In R1 Footnote 1, it is unclear whether the language “when present” is referring to the system models or is referring to all unregistered IBRs and/or aggregate DERs that are connected to the BPS. The latter understanding is too broad and would need to be bounded, as

under a conservative interpretation you could bring in nearly any IBR/DER. We suggest replacing “when present” with “when models are available or appropriately estimated.”

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

Daniela Atanasovski - APS - Arizona Public Service Co. - 1

Answer

No

Document Name

Comment

AZPS supports the following comments submitted by EEI on behalf of its members:

EEI does not support Footnote 1 as written because models validated within MOD-033 should use data consistent to what is used in MOD-032. The proposed footnote would obligate the PC to develop separate models that are inconsistent with the current version of MOD-032 and would therefore necessitate additional time within the Implementation Plan to develop and validate models that included non-registered IBRs and aggregated DER. To resolve this issue, we suggest aligning MOD-033 with MOD-032, similar to what has been done within TPL-001-5.1, Requirement R1. This following change (clean version) would allow the proposed Implementation Plan to remain unchanged:

Footnote 1: The models shall use data consistent with that provided in accordance with the MOD-032 Reliability Standard.

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

Josh Schumacher - Black Hills Corporation - 6, Group Name Black Hills Corporation Segments 1, 3, 5, 6

Answer No

Document Name

Comment

Black Hills Corporation agrees with EEI's comments and suggested changes regarding requirement R1. Footnote 1 should be adjusted so that it aligns with MOD-032, similar to how it is handled within TPL-001-5.1. As written the footnote would obligate the PC to develop separate models that are inconsistent with the current version of MOD-032.

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer No

Document Name

Comment

FirstEnergy supports EEI's comments which state:

EEI does not support Footnote 1 as written because models validated within MOD-033 should use data consistent to what is used in MOD-032. The proposed footnote would obligate the PC to develop separate models that are inconsistent with the current version of MOD-032 and would therefore necessitate additional time within the Implementation Plan to develop and validate models that included

non-registered IBRs and aggregated DER. To resolve this issue, we suggest aligning MOD-033 with MOD-032, similar to what has been done within TPL-001-5.1, Requirement R1. This change would allow the proposed Implementation Plan to remain unchanged:

Footnote 1: The models shall use data consistent with that provided in accordance with the MOD-032 Reliability Standard.

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group

Answer

No

Document Name

Comment

While the MRO NSRF appreciates the general cleanup and adjustments for alignment with Model Validation, that definition is not yet approved and changes to that term may prompt additional requirement language changes, including substantive changes being required.

The MRO NSRF is also concerned about moving the clarification about what to do when no dynamic local event occurred within 24 months to a footnote. There is disagreement about the enforceability of footnotes which may leave certain entities vulnerable if no event occurs within a 24 month period. MRO NSRF suggests leaving that sentence in R1.2

Likes 1

Wike Jennie On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merre

Dislikes 0

Response

Thank you for your comment. The Model Validation definition from the 2020-06 team has passed industry ballot and will be sent to final ballot.

For clarity, any footnote in a Requirement of NERC Reliability Standards is an integral, mandatory part of the requirement and therefore enforceable. Nevertheless, the drafting team has deleted footnote 2 and moved the language into Requirement 1.2.

Randy Peters - Manitoba Hydro - 1,3,5,6 – MRO

Answer No

Document Name

Comment

(1) While the MH appreciates the general cleanup and adjustments for alignment with Model Validation, that definition is not yet approved and changes to that term may prompt additional requirement language changes, including substantive changes being required.

(2) The MH is also concerned about moving the clarification about what to do when no dynamic local event occurred within 24 months to a footnote. There is disagreement about the enforceability of footnotes which may leave certain entities vulnerable if no event occurs within a 24 month period. MH suggests leaving that sentence in R1.2.

Likes 0

Dislikes 0

Response

Thank you for your comment. The Model Validation definition from the 2020-06 team has passed industry ballot and will be sent to final ballot.

For clarity, any footnote in a Requirement of NERC Reliability Standards is an integral, mandatory part of the requirement and therefore enforceable. Nevertheless, the drafting team has deleted footnote 2 and moved the language into Requirement 1.2

Alyssia Rhoads - Public Utility District No. 1 of Snohomish County – 1

Answer No

Document Name

Comment

Footnote 1 is unclear regarding the term “aggregate Distributed Energy Resources.” Does it refer to Utility-scale Distributed Energy Resources (U-DER) or Retail-scale Distributed Energy Resources (R-DER)?

Likes 1

JEA, 1, McClung Joseph

Dislikes 0

Response

The term aggregate DERs is intended to be consistent with the description for IBR-DERs in footnote 14 of Order 901 – that is, “...IBRs connected to the distribution system that in the aggregate have a material impact on the Bulk-Power System (i.e., IBR-DER).” For more information on modeling requirements for aggregate DERs please refer to the proposed MOD-032-2 under Project 2022-02.

Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC

Answer

Yes

Document Name

Comment

In R1: 1:2 SPP would like to affirm the support for the 24-month timeframe for comparing the dynamic local event simulation performance of the dynamic System model to actual System behavior, which includes conducting at least one comparison using a dynamic local event within a 24-calendar-month window and completing each comparison within 24 calendar months of that event.

Likes 0

Dislikes 0

Response

Thank your comment and support.

Robert Jones - Seattle City Light – 4

Answer

Yes

Document Name

Comment

City Light believes there is room for additional clarification from the drafting team. The term “Unregistered IBR” is not clearly defined in the current revision of the standard. City Light recommends that a formal definition be added to the NERC Glossary of Terms to promote consistent understanding and interpretation across all applicable entities.

Likes 0

Dislikes 0

Response

Thank you for your comment. For more information on modeling requirements for unregistered IBRs please refer to the proposed MOD-032-2 under Project 2022-02.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF**Answer**

Yes

Document Name**Comment**

None.

Likes 0

Dislikes 0

Response**Cain Braveheart - Bonneville Power Administration - 1,3,5,6 – WECC****Answer**

Yes

Document Name**Comment**

BPA believes there is an opportunity for the DT to clarify further in footnote 1. As proposed, footnote 1 could be misinterpreted to state that unregistered IBRs and DERs are among the examples of ‘Systems’ whose models must be validated under MOD-033 R1.1. BPA recommends eliminating that misinterpretation by revising language in footnote 1.

BPA’s proposed solution: “footnote 1: The interconnection-wide model (System model) contains unregistered Inverter-Based Resources (IBR) and aggregate Distributed Energy Resources (DERs) when present. Comparison of power flow simulation performance, internal to these facilities, is not required under MOD-033. The phrase “unregistered IBR”...”

Likes 0

Dislikes 0

Response

Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. As such, the planning model would include one or more registered IBRs, unregistered IBRs and aggregate DERs only if their presence is consistent with the system model assembled in MOD-032.

Mike Magruder - Avista - Avista Corporation – 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC

Answer Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Karen Weaver - Tallahassee Electric (City of Tallahassee, FL) – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Bob Cardle - Bob Cardle On Behalf of: Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Pirouz Honarmand - Independent Electricity System Operator – 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP – 5	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Zenon O'young-Chu - Seattle City Light - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daren Brubaker - Seattle City Light - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Mark Flanary - Midwest Reliability Organization - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Western Power Pool - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mohamad Elhousseini - DTE Energy - Detroit Edison Company - 5	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	
Document Name	
Comment	
Minnesota Power is not registered as a Planning Coordinator, so will not be providing comments on Requirement R1.	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	
Comment	

FERC Order No. 693 mandates a process to “*validate, and keep up to date the transmission planning, operations, and interconnection-wide models.*” Requirement R1, 1.1 does not specifically state that the *planning* steady state System model power flow simulation performance must be used for comparison to actual system behavior. Texas RE recommends the following revision (in bold):

1.1 Comparison of the power flow simulation performance of the **transmission planning** steady state System model1 to actual System behavior, represented by state estimator case(s) or other Real-time data sources, at least once every 24 calendar months;

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT has added the word "planning" into R1.

Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 - WECC

Answer

Document Name

Comment

See Utility Services and SMUD Comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the responses given to Utility Services and SMUD.

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC

Answer

Document Name	
Comment	
WECC questions whether a footnote is a mandatory portion of a Reliability Standard. If it is, and NERC clarifies it is, then moving the clarification to the footnote is OK. If a footnote is not mandatory, WECC suggests the DT move the clarification back to the Requirement language.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. For clarity, any footnote in a Requirement of NERC Reliability Standards is an integral, mandatory part of the requirement and therefore enforceable. Nevertheless, the drafting team has deleted footnote 2 and moved the clarification language into Requirement 1.2	

3. Do you agree with the changes made to Requirement R2? If not, please provide the basis for your disagreement and any proposed revisions.	
Israel Perez - Israel Perez On Behalf of: Laura Somak, Salt River Project, 3, 5, 6, 1; Mathew Weber, Salt River Project, 3, 5, 6, 1; Matthew Jaramilla, Salt River Project, 3, 5, 6, 1; Timothy Singh, Salt River Project, 3, 5, 6, 1; - Israel Perez	
Answer	No
Document Name	
Comment	

What is meant by “next dynamic event”? is that by proximity or by date and does it work in either direction?

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT did not make changes to this portion of the language. The DT retained the language to be consistent with the existing approved version of the standard.

John Pearson - ISO New England, Inc. - 2

Answer

No

Document Name

Comment

R2 should state that the RC and TOP must provide the requested data. Here is the proposed re-write:

“within 30 calendar days of a written request, provide the requested actual System behavior data (or a written response that it does not have the requested data) to any Planning Coordinator performing “

Currently, the RC and TOP could provide any system data, whether it is useful for validation or not. They should have to provide the specific values, quantities, locations, etc. that the TP is asking for.

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT did not make changes to this portion of the language. The DT retained the language to be consistent with the existing approved version of the standard.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Yes

Document Name	
Comment	
None.	
Likes 0	
Dislikes 0	
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	Yes
Document Name	
Comment	
The MH appreciates efforts to reduce unnecessary and potentially confusing language. While 30 days was the time provided previously, MH would appreciate clarification of the reliability need for such a short window?	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The DT did not make changes to this portion of the language. The DT retained the 30 day time frame to be consistent with the existing approved version of the standard.	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	Yes
Document Name	
Comment	

The MRO NSRF appreciates efforts to reduce unnecessary and potentially confusing language. While 30 days was the time provided previously, the MRO NSRF would appreciate clarification of the reliability need for such a short window?

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT did not make changes to this portion of the language. The DT retained the 30-day time frame to be consistent with the existing approved version of the standard.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

Yes

Document Name

Comment

FirstEnergy has no objections to the proposed changes to Requirement R2

Likes 0

Dislikes 0

Response

Josh Schumacher - Black Hills Corporation - 6, Group Name Black Hills Corporation Segments 1, 3, 5, 6

Answer

Yes

Document Name

Comment

Black Hills Corporation agrees with EEI's comments.

Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1	
Answer	Yes
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	
Response	
Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	Yes
Document Name	
Comment	
EEI has no objections to the proposed changes to Requirement R2.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	

Sharon Darwin - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC**Answer** Yes**Document Name****Comment**

Southern Company has no objections to the changes made to R2.

Likes 0

Dislikes 0

Response**Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples****Answer** Yes**Document Name****Comment**

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and the Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 3

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the responses given to EEI and MRO NSRF.

Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers**Answer** Yes

Document Name	
Comment	
Ameren agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott	
Answer	Yes
Document Name	
Comment	
ITC supports comments submitted by NSRF	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. Please refer to the response given to MRO NSRF.	
Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebel, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc. , 6; - Joseph Gatten	
Answer	Yes
Document Name	
Comment	

While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable

Answer

Yes

Document Name

Comment

NAGF has no objections to the proposed changes to Requirement R2.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response	
Mohamad Elhousseini - DTE Energy - Detroit Edison Company - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Western Power Pool - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Alyssia Rhoads - Public Utility District No. 1 of Snohomish County - 1	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Mark Flanary - Midwest Reliability Organization - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daren Brubaker - Seattle City Light - 6	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Robert Jones - Seattle City Light - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Zenon O'young-Chu - Seattle City Light - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 5	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bryan Bennett - Sempra - San Diego Gas and Electric - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Pirouz Honarmand - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bob Cardle - Bob Cardle On Behalf of: Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Mary Smith - Southern Indiana Gas and Electric Co. - 3,5,6 - RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Taddeucci - NiSource - Northern Indiana Public Service Co. – 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Barbara Marion - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response**Greg Sorenson - ReliabilityFirst - 10 – RF****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Karen Weaver - Tallahassee Electric (City of Tallahassee, FL) – 5****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Rachel Coyne - Texas Reliability Entity, Inc. – 10****Answer** Yes**Document Name****Comment**

Likes 0	
Dislikes 0	
Response	
Ben Hammer - Western Area Power Administration – 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Carver Powers - Utility Services, Inc. – 4

Answer Yes

Document Name

Comment

Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. – 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1, Group Name Exelon	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Scott Thompson - TXNM Energy - 1,3	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruchi Shah - AES - AES Corporation – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sing Tay - AES - Indianapolis Power and Light Co. – 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Adrian Harris - Adrian Harris On Behalf of: Kirsten Rowley, Midcontinent ISO, Inc., 2; - Adrian Harris	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joshua Phillips - Southwest Power Pool, Inc. (RTO) – 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. – 2	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mike Magruder - Avista - Avista Corporation – 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Julie Hall - Entergy - 6, Group Name Entergy	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 – WECC	
Answer	
Document Name	
Comment	
See Utility Services and SMUD Comments.	
Likes 0	
Dislikes 0	
Response	
Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro	
Answer	
Document Name	
Comment	

BC Hydro suggests that the use of brackets in Requirement R2 is not required and recommends removing the brackets around “or a written response that it does not have the requested data”.

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT did not make changes to this portion of the language.

4. Do you agree with the changes made to Measure M1? If not, please provide the basis for your disagreement and any proposed revisions.

John Pearson - ISO New England, Inc. - 2

Answer

No

Document Name

Comment

It looks like the Planning Coordinator was removed from M1 so it no longer says who has to meet the measure. This is also the case for the other measures as well. The applicable entity should be included in the measures

Likes 0

Dislikes 0

Response

Thank you for your comment. The Measures were updated to align with the latest guidelines for NERC Standards development – since the applicable entity is noted in the Requirement, it is superfluous to repeat it in the associated Measure.

James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable

Answer	Yes
Document Name	
Comment	
NAGF has no objections to the changes made to M1.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebe, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc. , 6; - Joseph Gatten	
Answer	Yes
Document Name	
Comment	
While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott	
Answer	Yes
Document Name	
Comment	

ITC supports comments submitted by NSRF

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers

Answer

Yes

Document Name

Comment

Ameren agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Sharon Darwin - Southern Company - Southern Company Services, Inc. - 1,3,5,6 – SERC

Answer

Yes

Document Name

Comment

Southern Company has no objections to the changes made to M1.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer Yes

Document Name

Comment

EEl has no objections to the changes made to M1.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Daniela Atanasovski - APS - Arizona Public Service Co. – 1

Answer Yes

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Josh Schumacher - Black Hills Corporation - 6, Group Name Black Hills Corporation Segments 1, 3, 5, 6

Answer Yes

Document Name	
Comment	
Black Hills Corporation agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	Yes
Document Name	
Comment	
FirstEnergy has no objections to the changes made to M1.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	Yes
Document Name	
Comment	
The MRO NSRF agrees with these changes.	

Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	Yes
Document Name	
Comment	
None.	
Likes 0	
Dislikes 0	
Response	
Mike Magruder - Avista - Avista Corporation – 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. – 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joshua Phillips - Southwest Power Pool, Inc. (RTO) – 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Adrian Harris - Adrian Harris On Behalf of: Kirsten Rowley, Midcontinent ISO, Inc., 2; - Adrian Harris	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sing Tay - AES - Indianapolis Power and Light Co. – 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruchi Shah - AES - AES Corporation – 5	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Scott Thompson - TXNM Energy - 1,3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1, Group Name Exelon	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Carver Powers - Utility Services, Inc. – 4	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO, WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ben Hammer - Western Area Power Administration – 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Karen Weaver - Tallahassee Electric (City of Tallahassee, FL) – 5	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Greg Sorenson - ReliabilityFirst - 10 – RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Israel Perez - Israel Perez On Behalf of: Laura Somak, Salt River Project, 3, 5, 6, 1; Mathew Weber, Salt River Project, 3, 5, 6, 1; Matthew Jaramilla, Salt River Project, 3, 5, 6, 1; Timothy Singh, Salt River Project, 3, 5, 6, 1; - Israel Perez	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Barbara Marion - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Taddeucci - NiSource - Northern Indiana Public Service Co. - 3	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Mary Smith - Southern Indiana Gas and Electric Co. - 3,5,6 - RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bob Cardle - Bob Cardle On Behalf of: Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Pirouz Honarmand - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 5	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes	0
Response	
Zenon O'young-Chu - Seattle City Light - 3	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Robert Jones - Seattle City Light - 4	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Daren Brubaker - Seattle City Light - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Mark Flanary - Midwest Reliability Organization - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Alyssia Rhoads - Public Utility District No. 1 of Snohomish County - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Western Power Pool - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Mohamad Elhousseini - DTE Energy - Detroit Edison Company - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	
Document Name	

Comment

Minnesota Power is not registered as a Planning Coordinator, so will not be providing comments on Measure M1.

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE recommends adding the performance comparison results to the list of acceptable evidence (revision in bold):

M1. Acceptable evidence may include, but is not limited to, a copy of the documented Model Validation process, **performance comparison results**, and documentation that demonstrates its implementation in accordance with Requirement R1.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team declined to make the recommended changes since Measure M1 requires a demonstration of implementation which would invariably include performance comparison results.

Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 - WECC

Answer

Document Name	
Comment	
See Utility Services and SMUD Comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. Please note that Utility Services and SMUD did not provide comments on Q4.	

5. Do you agree with the changes made to Measure M2? If not, please provide the basis for your disagreement and any proposed revisions.	
Bryan Bennett - Sempra - San Diego Gas and Electric - 3	
Answer	No
Document Name	
Comment	
What data is required. Be more specific to ensure compliance with the request.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The Measurement M2 was revised to be more consistent with Measurement language while not changing the intent of the Measure, which is dated communication.	

John Pearson - ISO New England, Inc. - 2	
Answer	No
Document Name	
Comment	
It looks like applicable entities were removed from the measure and should be added back in	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The Measurement M2 was revised to be more consistent with Measurement language while not changing the intent.	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	Yes
Document Name	
Comment	
None.	
Likes 0	
Dislikes 0	
Response	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	Yes

Document Name	
Comment	
The MRO NSRF agrees with these changes.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	Yes
Document Name	
Comment	
FirstEnergy has no objections to the changes made to M2.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Josh Schumacher - Black Hills Corporation - 6, Group Name Black Hills Corporation Segments 1, 3, 5, 6	
Answer	Yes
Document Name	
Comment	
Black Hills Corporation agrees with EEI's comments.	

Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1	
Answer	Yes
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	
Response	
Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	Yes
Document Name	
Comment	
EEI has no objections to the changes made to M2.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	

Sharon Darwin - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC**Answer** Yes**Document Name****Comment**

Southern Company has no objections to the changes made to M2.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers**Answer** Yes**Document Name****Comment**

Ameren agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott**Answer** Yes**Document Name****Comment**

ITC supports comments submitted by NSRF

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebe, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc. , 6; - Joseph Gatten

Answer

Yes

Document Name

Comment

While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable

Answer

Yes

Document Name

Comment

NAGF has no objections to the changes made to M2.

Likes 0

Dislikes 0	
Response	
Thank you for your comment and support.	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mohamad Elhousseini - DTE Energy - Detroit Edison Company - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Western Power Pool – 4	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Alyssia Rhoads - Public Utility District No. 1 of Snohomish County - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Flanary - Midwest Reliability Organization - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Donna Wood - Tri-State G and T Association, Inc. - 1**Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Daren Brubaker - Seattle City Light – 6****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Robert Jones - Seattle City Light – 4****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes	0
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Zenon O'young-Chu - Seattle City Light - 3	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response**Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Pirouz Honarmand - Independent Electricity System Operator - 2****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE****Answer** Yes**Document Name****Comment**

Likes 0	
Dislikes 0	
Response	
Bob Cardle - Bob Cardle On Behalf of: Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mary Smith - Southern Indiana Gas and Electric Co. - 3,5,6 - RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Taddeucci - NiSource - Northern Indiana Public Service Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes	0
Response	
Barbara Marion - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Israel Perez - Israel Perez On Behalf of: Laura Somak, Salt River Project, 3, 5, 6, 1; Mathew Weber, Salt River Project, 3, 5, 6, 1; Matthew Jaramilla, Salt River Project, 3, 5, 6, 1; Timothy Singh, Salt River Project, 3, 5, 6, 1; - Israel Perez	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Greg Sorenson - ReliabilityFirst - 10 – RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Karen Weaver - Tallahassee Electric (City of Tallahassee, FL) - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ben Hammer - Western Area Power Administration - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Carver Powers - Utility Services, Inc. – 4**Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Hillary Creurer - Allete - Minnesota Power, Inc. - 1****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Daniel Gacek - Exelon - 1, Group Name Exelon****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0	
Response	
Scott Thompson - TXNM Energy - 1,3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruchi Shah - AES - AES Corporation – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sing Tay - AES - Indianapolis Power and Light Co. - 3	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Adrian Harris - Adrian Harris On Behalf of: Kirsten Rowley, Midcontinent ISO, Inc., 2; - Adrian Harris	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joshua Phillips - Southwest Power Pool, Inc. (RTO) - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mike Magruder - Avista - Avista Corporation - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes	0
Response	
Julie Hall - Entergy - 6, Group Name Entergy	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 - WECC	
Answer	
Document Name	
Comment	
See Utility Services and SMUD Comments.	
Likes	0
Dislikes	0
Response	
Thank you for your comment and support.	

6. Do you agree with the changes made to the VSLs? If not, please provide the basis for your disagreement and any proposed revisions.

Scott Thompson - TXNM Energy - 1,3

Answer No

Document Name

Comment

TXNM Energy would like to request the DT give justifications for the timeframe reductions to the VSLs for R1, R2 is in agreement.

Likes 0

Dislikes 0

Response

The redlines to the VSL are not intended to alter the durations of the severity levels. Rather they are intended to improve clarity by measuring the severity of noncompliance once the time frame specified in Requirement 2 has ended.

The redlines rephrase the VSL descriptions to begin counting from the end of the compliance window stated in Requirement 2 rather than beginning the count from the original request date, which is how the VSL is currently worded. This is intended to improve clarity and have the VSL durations describe the severity of noncompliance once the required time frame has ended. "

Steven Taddeucci - NiSource - Northern Indiana Public Service Co. - 3

Answer No

Document Name

Comment

NIPSCO can not support the VSL's as drafted until the DT addresses concerns with R1 and the implementation plan.

Likes	0
Dislikes	0
Response	
Standard language has been updated based on your comments on R1.	
Pirouz Honarmand - Independent Electricity System Operator - 2	
Answer	No
Document Name	
Comment	
<p>1- The changes made to the R1 VSLs did not explicitly address the situation when there is no dynamic local event occurs within the 24 calendar months period. Given the footnote #2 in page-4, should we assume that the late periods (<4, <8, <12, and >12 calendar months) under R1 VSLs are calculated from the time at which the next dynamic local event occurs (even if this time was > 24 calendar months)?</p> <p>2- The changes made to the R2 VSLs ignored the situation when “the RC/TO provided a written response that it does not have the requested data, but actually had the data”. We suggest keeping this part under the “R2 – Severe VSL” column.</p>	
Likes	0
Dislikes	0
Response	
<p>The redlines to the VSL are not intended to alter the durations of the severity levels. Rather they are intended to improve clarity by measuring the severity of noncompliance once the time frame specified in Requirement 2 has ended.</p> <p>The redlines rephrase the VSL descriptions to begin counting from the end of the compliance window stated in Requirement 2 rather than beginning the count from the original request date, which is how the VSL is currently worded. This is intended to improve clarity and have the VSL durations describe the severity of noncompliance once the required time frame has ended.</p>	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	No
Document Name	

Comment

Until the DT clarifies this draft and its intent, FirstEnergy cannot support the VSLs as drafted

Likes 0

Dislikes 0

Response

The redlines to the VSL are not intended to alter the durations of the severity levels. Rather they are intended to improve clarity by measuring the severity of noncompliance once the time frame specified in Requirement 2 has ended.

The redlines rephrase the VSL descriptions to begin counting from the end of the compliance window stated in Requirement 2 rather than beginning the count from the original request date, which is how the VSL is currently worded. This is intended to improve clarity and have the VSL durations describe the severity of noncompliance once the required time frame has ended.

James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable

Answer

Yes

Document Name

Comment

NAGF has no objections to the changes made to the VSLs.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebe, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc., 6; - Joseph Gatten

Answer

Yes

Document Name

Comment

While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott

Answer

Yes

Document Name

Comment

ITC supports comments submitted by NSRF

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers

Answer

Yes

Document Name

Comment

Ameren agrees with EEI's comments.

Likes 0

Dislikes	0
Response	
Thank you for your comment and support.	
Sharon Darwin - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	
Southern Company has no objections to the changes made to the VSLs.	
Likes	0
Dislikes	0
Response	
Thank you for your comment and support.	
Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	Yes
Document Name	
Comment	
EEI has no objections to the changes made to the VSLs	
Likes	0
Dislikes	0
Response	
Thank you for your comment and support.	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1	

Answer	Yes
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	
Response	
Josh Schumacher - Black Hills Corporation - 6, Group Name Black Hills Corporation Segments 1, 3, 5, 6	
Answer	Yes
Document Name	
Comment	
Black Hills Corporation agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	Yes
Document Name	
Comment	

The MRO NSRF agrees with these changes.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Yes

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mike Magruder - Avista - Avista Corporation - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
John Pearson - ISO New England, Inc. - 2	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joshua Phillips - Southwest Power Pool, Inc. (RTO) - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Adrian Harris - Adrian Harris On Behalf of: Kirsten Rowley, Midcontinent ISO, Inc., 2; - Adrian Harris	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sing Tay - AES - Indianapolis Power and Light Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruchi Shah - AES - AES Corporation – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Daniel Gacek - Exelon - 1, Group Name Exelon	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Carver Powers - Utility Services, Inc. – 4	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ben Hammer - Western Area Power Administration - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Karen Weaver - Tallahassee Electric (City of Tallahassee, FL) - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes	0
Response	
Greg Sorenson - ReliabilityFirst - 10 – RF	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Israel Perez - Israel Perez On Behalf of: Laura Somak, Salt River Project, 3, 5, 6, 1; Mathew Weber, Salt River Project, 3, 5, 6, 1; Matthew Jaramilla, Salt River Project, 3, 5, 6, 1; Timothy Singh, Salt River Project, 3, 5, 6, 1; - Israel Perez	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Barbara Marion - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mary Smith - Southern Indiana Gas and Electric Co. - 3,5,6 - RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bob Cardle - Bob Cardle On Behalf of: Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bryan Bennett - Sempra - San Diego Gas and Electric - 3	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Zenon O'young-Chu - Seattle City Light - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Robert Jones - Seattle City Light – 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daren Brubaker - Seattle City Light – 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Donna Wood - Tri-State G and T Association, Inc. – 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Flanary - Midwest Reliability Organization – 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Alyssia Rhoads - Public Utility District No. 1 of Snohomish County – 1	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Kevin Conway - Western Power Pool – 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mohamad Elhousseini - DTE Energy - Detroit Edison Company – 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 – WECC	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. – 10	
Answer	
Document Name	
Comment	
Texas RE recommends that the failure to address or the absence of guidelines to resolve the unacceptable differences in dynamic performance identified under Part 1.3.(R1, 1.4) should be considered a high VSL. Failure to address unacceptable dynamic system performance can compromise system reliability and increase the risk of cascading outages. Texas RE recommends the following revision (in bold): The Planning Coordinator implemented a documented Model Validation process but failed to address the steady state attributes stipulated in Requirement R1, Parts 1.1, 1.3 through 1.4. OR The Planning Coordinator performed the comparison as stipulated in Parts 1.1 or 1.2 but was late by less than or equal to 4 calendar months.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The redlines to the VSL are not intended to alter the durations of the severity levels. Rather they are intended to improve clarity by measuring the severity of noncompliance once the time frame specified in Requirement 2 has ended.	
The redlines rephrase the VSL descriptions to begin counting from the end of the compliance window stated in Requirement 2 rather than beginning the count from the original request date, which is how the VSL is currently worded. This is intended to improve clarity and have the VSL durations describe the severity of noncompliance once the required time frame has ended.	

Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 – WECC

Answer

Document Name

Comment

See Utility Services and SMUD Comments.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

7. Do you agree with the changes made to the Technical Rationale? If not, please provide the basis for your disagreement and any proposed revisions.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer

No

Document Name

Comment

FirstEnergy notes EEI comments for consideration:

EEI does not have any significant concerns but offers the following suggestions for DT consideration:

EEl notes that on page 2, the paper references 4 suggested documents for those interested in reviewing more information on recommended methods and procedures for system Model validation. EEl suggest the following for two of the referenced documents:

Item 3: Guidelines for Validation of Powerflow and Dynamic Cases for MOD-033-1 (WECC), 2016 – developed by the WECC Model Validation Working Group (MVWG) – This document is nearly 10 years old and not easily found on the WECC website. Please add an active link to the document or if the document is no longer available, please remove this referenced document.

Item 4: System-Wide Model Validation 3002005746 (EPRI) – This document is 10 years old and still available on the EPRI website; however, it is also only freely available to EPRI members. EEl suggests either finding an open reference document or removing this reference from the Technical Rationale.

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT has removed item 3, as it is not a publicly available document. EPRI has confirmed it has made the “*System-Wide Model Validation 3002005746*” document publicly available.

Bryan Bennett - Sempra - San Diego Gas and Electric - 3

Answer

No

Document Name

Comment

60 samples/ per second and above is only captured on events that protective replays capture. Additionally, typical PMU data is 30 samples/ per second. If no event is detected by relays due to an event happening outside of our service territory, we are limited to providing 30 sample/ per second data. For events taking place within our service territory, higher sample rates can by captured and passed along.

Likes 0

Dislikes 0

Response

Thank you for your comment. Per the TR the expectation is that measurements are available for at or above 30 Hz for synchronous generator buses and at or above 60 Hz for IBR connected busses. Per PRC 028 it is expected to have DDRs available at IBR connected busses and therefore the DDR reading can provide the required measurement continuously (PRC-028-1 R4) independently of any triggering conditions.

Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

No

Document Name

Comment

EEl does not have any significant concerns but offers the following suggestions for DT consideration:

EEl notes that on page 2, the paper references 4 suggested documents for those interested in reviewing more information on recommended methods and procedures for system Model validation. EEl suggest the following for two of the referenced documents:

Item 3: Guidelines for Validation of Powerflow and Dynamic Cases for MOD-033-1 (WECC), 2016 – developed by the WECC Model Validation Working Group (MVWG) – This document is nearly 10 years old and not easily found on the WECC website. Please add a reliable link to the document or if the document is no longer available please remove this referenced document.

Item 4: System-Wide Model Validation 3002005746 (EPRI) – This document is 10 years old and still available on the EPRI website, however, it is also only freely available to EPRI members. EEl suggests either finding an open reference document or removing this reference from the Technical Rationale.

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT has removed item 3, as it is not a publicly available document. EPRI has confirmed it has made the “*System-Wide Model Validation 3002005746*” document publicly available.

Israel Perez - Israel Perez On Behalf of: Laura Somak, Salt River Project, 3, 5, 6, 1; Mathew Weber, Salt River Project, 3, 5, 6, 1; Matthew Jaramilla, Salt River Project, 3, 5, 6, 1; Timothy Singh, Salt River Project, 3, 5, 6, 1; - Israel Perez

Answer No

Document Name

Comment

There is no justification in the rationale for the inclusion of the footnotes.

Likes 0

Dislikes 0

Response

Thank you for your comment. For clarity, any footnote in a Requirement of NERC Reliability Standards is an integral, mandatory part of the requirement and therefore enforceable. Although footnote 1 has been revised, as noted above, the scope of a footnote is mandatory and enforceable.

James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable

Answer No

Document Name

Comment

The NAGF supports the comments made by EEI: as stated “EEI does not have any significant concerns but offers the following suggestions for DT consideration: EEI notes that on page 2, the paper references 4 suggested documents for those interested in reviewing more information on recommended methods and procedures for system Model validation. EEI suggest the following for two of the referenced documents:

Item 3: Guidelines for Validation of Powerflow and Dynamic Cases for MOD-033-1 (WECC), 2016 – developed by the WECC Model Validation Working Group (MVWG) – This document is nearly 10 years old and not easily found on the WECC website. Please add a reliable link to the document or if the document is no longer available please remove this referenced document.

Item 4: System-Wide Model Validation 3002005746 (EPRI) – This document is 10 years old and still available on the EPRI website, however, it is also only freely available to EPRI members. EEI suggests either finding an open reference document or removing this reference from the Technical Rationale. ”

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT has removed item 3, as it is not a publicly available document. EPRI has confirmed it has made the “System-Wide Model Validation 3002005746” document publicly available.

John Pearson - ISO New England, Inc. - 2

Answer

No

Document Name

Comment

The Technical Rationale states “One approach for power flow case validation is capturing real-time data for conditions that closely align with existing planning models and/or represents the most critical conditions.” This would allow Planning Coordinators to perform a very simple review for steady state with almost no effort. At a minimum, the planning model case should be dispatched to the actual system conditions for steady state comparison (see first paragraph of response to Question 1).

Likes 0

Dislikes 0

Response

Thank you for your comment. The Drafting Team has accepted your recommendation. Please see the revised document.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Yes

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO

Answer

Yes

Document Name

Comment

The MH agrees that the Technical Rationale addresses key modifications to the standard.

Likes 0

Dislikes 0

Response

Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group

Answer

Yes

Document Name

Comment

The MRO NSRF agrees that the Technical Rationale addresses key modifications to the standard.

Likes 0

Dislikes	0
Response	
Josh Schumacher - Black Hills Corporation - 6, Group Name Black Hills Corporation Segments 1, 3, 5, 6	
Answer	Yes
Document Name	
Comment	
Black Hills Corporation agrees with EEI's comments regarding the Technical Rationale. We agree with their suggestion of making the suggested documents, specifically Item 3 & 4 on page 2, easier to find and more openly available to everyone.	
Likes	0
Dislikes	0
Response	
Thank you for your comment. The DT has removed item 3, as it is not a publicly available document. EPRI has confirmed it has made the "System-Wide Model Validation 3002005746" document publicly available.	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1	
Answer	Yes
Document Name	
Comment	
None	
Likes	0
Dislikes	0
Response	

Sharon Darwin - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	
Southern Company supports EEI comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The DT has removed item 3, as it is not a publicly available document. EPRI has confirmed it has made the “System-Wide Model Validation 3002005746” document publicly available.	
Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples	
Answer	Yes
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) on question 7	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The DT has removed item 3, as it is not a publicly available document. EPRI has confirmed it has made the “System-Wide Model Validation 3002005746” document publicly available.	
Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers	

Answer	Yes
Document Name	
Comment	
Ameren agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The DT has removed item 3, as it is not a publicly available document. EPRI has confirmed it has made the "System-Wide Model Validation 3002005746" document publicly available.	
Daniel Gacek - Exelon - 1, Group Name Exelon	
Answer	Yes
Document Name	
Comment	
Exelon agrees with the comments submitted by the EEI.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. The DT has removed item 3, as it is not a publicly available document. EPRI has confirmed it has made the "System-Wide Model Validation 3002005746" document publicly available.	
Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott	
Answer	Yes
Document Name	

Comment

ITC supports comments submitted by NSRF

Likes 0

Dislikes 0

Response

Thank you for your comment.

Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebe, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc. , 6; - Joseph Gatten

Answer

Yes

Document Name

Comment

While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. The DT has removed item 3, as it is not a publicly available document. EPRI has confirmed it has made the "System-Wide Model Validation 3002005746" document publicly available.

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

Yes

Document Name

Comment

Likes 0	
Dislikes 0	
Response	
Mohamad Elhousseini - DTE Energy - Detroit Edison Company - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Western Power Pool - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Alyssia Rhoads - Public Utility District No. 1 of Snohomish County - 1	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Flanary - Midwest Reliability Organization - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Daren Brubaker - Seattle City Light - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Robert Jones - Seattle City Light - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Zenon O'young-Chu - Seattle City Light - 3	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC**Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Pirouz Honarmand - Independent Electricity System Operator - 2****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes	0
Response	
Bob Cardle - Bob Cardle On Behalf of: Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Mary Smith - Southern Indiana Gas and Electric Co. - 3,5,6 - RF	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Taddeucci - NiSource - Northern Indiana Public Service Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Barbara Marion - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Greg Sorenson - ReliabilityFirst - 10 - RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Karen Weaver - Tallahassee Electric (City of Tallahassee, FL) - 5	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ben Hammer - Western Area Power Administration - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Carver Powers - Utility Services, Inc. - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allele - Minnesota Power, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Scott Thompson - TXNM Energy - 1,3	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Ruchi Shah - AES - AES Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sing Tay - AES - Indianapolis Power and Light Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Adrian Harris - Adrian Harris On Behalf of: Kirsten Rowley, Midcontinent ISO, Inc., 2; - Adrian Harris	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joshua Phillips - Southwest Power Pool, Inc. (RTO) - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mike Magruder - Avista - Avista Corporation - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Julie Hall - Entergy - 6, Group Name Entergy	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 - WECC	
Answer	
Document Name	
Comment	
See Utility Services and SMUD Comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. Utility Services and SMUD did not provide comments to Q7	

8. Do you agree with the proposed Implementation Plan? If not, please provide the basis for your disagreement and your proposed revisions.

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF

Answer

No

Document Name

Comment

It is the opinion of ACES that the proposed Implementation Plan does not give the Planning Coordinator sufficient time to collect additional data that may be required for any unregistered IBRs and aggregate DERs present on the System. We recommend modifying the Implementation Plan as follows:

Where approval by an applicable governmental authority is required, Reliability Standard MOD-033-3 shall become effective on the first day of the first calendar quarter that is six (6) months after the effective date of the applicable governmental authority's order approving the standard or order approving the proposed definitions of Model Validation and Distributed Energy Resources, whichever date is later, or as otherwise provided for by the applicable governmental authority.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the updated implementation plan.

James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable

Answer

No

Document Name

Comment

The NAGF supports the comments made by EEI: as stated "Please note our comments contained in Question 2 (above), which address our concerns with Footnote 1 and its impact on the proposed Implementation Plan, negate our ability to provide our support for the

proposed Implementation Plan. Specifically, we are of the belief that without changes to Footnote 1, the proposed Implementation Plan is inadequate and will require additional time for PCs to develop and validate models that include unregistered IBRs and aggregated DERS. While our proposed changes to Footnote 1 would avoid these issues and allow the use of the Implementation Plan as proposed.”

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebe, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc., 6; - Joseph Gatten

Answer

No

Document Name

Comment

While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott

Answer

No

Document Name

Comment

ITC supports comments submitted by NSRF

Likes 0

Dislikes 0

Response

The drafting team appreciates the recommendation to clarify and decouple the effective dates of other standards and definitions from other projects. In response, we will revise the Implementation Plan language to more clearly reflect that this standard depends on the definitions of model validation and model verification being developed by project 2020-06. The definitions of Model Validation and Model Verification have been sent to final ballot and will likely be approved by the time the posting of this standard occurs.

Please refer to the second paragraph under "General Considerations" in the updated implementation plan.

Sing Tay - AES - Indianapolis Power and Light Co. - 3

Answer

No

Document Name

Comment

AES Indiana supports EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Ruchi Shah - AES - AES Corporation - 5

Answer

No

Document Name

Comment

AES supports EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Scott Thompson - TXNM Energy - 1,3

Answer

No

Document Name

Comment

TXNM Energy would like clarity that could be provided regarding the impact of new implementation dates on ongoing 24-month cycles per Requirement R1.2? I.e. is the comparison of performance still based on the previous event or does it reset to 24 months from the new implementation date?

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the second paragraph under "General Considerations" in the updated implementation plan.

Daniel Gacek - Exelon - 1, Group Name Exelon

Answer

No

Document Name

Comment

Exelon agrees with the comments submitted by the EEI.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers

Answer

No

Document Name

Comment

Ameren agrees with EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Hillary Creurer - Allete - Minnesota Power, Inc. - 1

Answer

No

Document Name

Comment

Minnesota Power supports MRO's NERC Standards Review Forum's (NSRF) comments.

Likes 0	
Dislikes 0	
Response	
<p>The drafting team appreciates the recommendation to clarify and decouple the effective dates of other standards and definitions from other projects. In response, we will revise the Implementation Plan language to more clearly reflect that this standard depends on the definitions of model validation and model verification being developed by project 2020-06. The definitions of Model Validation and Model Verification have been sent to final ballot and will likely be approved by the time the posting of this standard occurs.</p> <p>Please refer to the second paragraph under "General Considerations" in the updated implementation plan.</p>	
Ben Hammer - Western Area Power Administration - 1	
Answer	No
Document Name	
Comment	
<p>would recommend separating possible approval dates for definitions from different projects: “shall become effective on the first day of the first calendar quarter after the effective date of the applicable governmental authority’s order approving the standard, order approving the proposed definition of Model Validation, or order approving the proposed definition of Distributed Energy Resources, whichever date is latest”</p>	
Likes 0	
Dislikes 0	
Response	
<p>Thank you for your comment. The drafting team appreciates the recommendation to clarify and decouple the effective dates of other standards and definitions from other projects. In response, we will revise the Implementation Plan language to more clearly reflect that this standard depends on the definitions of model validation and model verification being developed by project 2020-06. The definitions of Model Validation and Model Verification have been sent to final ballot and will likely be approved by the time the posting of this standard occurs.</p>	

Israel Perez - Israel Perez On Behalf of: Laura Somak, Salt River Project, 3, 5, 6, 1; Mathew Weber, Salt River Project, 3, 5, 6, 1; Matthew Jaramilla, Salt River Project, 3, 5, 6, 1; Timothy Singh, Salt River Project, 3, 5, 6, 1; - Israel Perez

Answer No

Document Name

Comment

It is going to take a substantial amount of time to collect the DER models for the behind the meter installations as Transmission Planners need to reach into the DPs to obtain the information. The immediate effective date is unrealistic.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the revised standard as well as the updated implementation plan.

Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples

Answer No

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and the Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 8

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

The drafting team appreciates the recommendation to clarify and decouple the effective dates of other standards and definitions from other projects. In response, we will revise the Implementation Plan language to more clearly reflect that this standard depends on the definitions of model validation and model verification being developed by project 2020-06. The definitions of Model Validation and Model Verification have been sent to final ballot and will likely be approved by the time the posting of this standard occurs.

Please refer to the second paragraph under "General Considerations" in the updated implementation plan.

Barbara Marion - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion

Answer No

Document Name

Comment

Dominion supports EEI's comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Steven Taddeucci - NiSource - Northern Indiana Public Service Co. - 3

Answer No

Document Name

Comment

NIPSCO supports EEI comments. Please note our comments contained in Question 2 (above), which address our concerns with Footnote 1 and its impact on the proposed Implementation Plan, negate our ability to provide our support for the proposed Implementation Plan. Specifically, we are of the belief that without changes to Footnote 1, the proposed Implementation Plan is inadequate and will require additional time for PCs to develop and validate models that include unregistered IBRs and aggregated DERS. While our proposed changes to Footnote 1 would avoid these issues and allow the use of the Implementation Plan as proposed.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Sharon Darwin - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC

Answer

No

Document Name

Comment

Southern Company supports EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Mary Smith - Southern Indiana Gas and Electric Co. - 3,5,6 - RF

Answer

No

Document Name

Comment

SIGE supports the comments as submitted by EEI.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer

No

Document Name

Comment

CEHE supports the comments as submitted by EEI.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer

No

Document Name

Comment

Please note our comments contained in Question 2 (above), which address our concerns with Footnote 1 and its impact on the proposed Implementation Plan, negate our ability to provide our support for the proposed Implementation Plan. Specifically, we are of the belief that without changes to Footnote 1, the proposed Implementation Plan is inadequate and will require additional time for PCs to develop and validate models that include unregistered IBRs and aggregated DERS. While our proposed changes to Footnote 1 would avoid these issues and allow the use of the Implementation Plan as proposed.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

No

Document Name

Comment

Due to the proposed changes in MOD-032-2 from Project 2022-02, we suggest a delayed implementation that aligns with MOD-032-2.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team believes that while MOD-033 depends on models provided by MOD-032, it does not depend on a specific version of MOD-032. Please refer to the revised standard as well as the updated implementation plan.

Daniela Atanasovski - APS - Arizona Public Service Co. - 1

Answer

No

Document Name

Comment

AZPS supports the following comments submitted by EEI on behalf of its members:

Please note our concern identified in Question 2 (above) with Footnote 1 and its impact on the proposed Implementation Plan. Without changes to Footnote 1, the proposed Implementation Plan is inadequate and will require additional time for PCs to develop and validate models that include unregistered IBRs and aggregated DERs. Our proposed changes to Footnote 1 would avoid this issue and allow us to support the use of the Implementation Plan as proposed.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Josh Schumacher - Black Hills Corporation - 6, Group Name Black Hills Corporation Segments 1, 3, 5, 6

Answer

No

Document Name

Comment

Black Hills Corporation agrees with EEI's comments and suggested changes to the Implementation Plan. The concern is around Footnote 1 discussed in the response to question 2 above. If no changes are made to Footnote 1, the proposed implementation plan is inadequate and will require additional time for PCs to develop and validate models. EEI's proposed changes to footnote 1 would avoid this issue and allow us to support the Implementation Plan as currently proposed.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer No

Document Name

Comment

FirstEnergy takes EEI's comments for consideration to clarify the Implementation Plan:

Please note our concern identified in Question 2 (above) with Footnote 1 and its impact on the proposed Implementation Plan. Without changes to Footnote 1, the proposed Implementation Plan is inadequate and will require additional time for PCs to develop and validate models that include unregistered IBRs and aggregated DERs. Our proposed changes to Footnote 1 would avoid this issue and allow us to support the use of the Implementation Plan as proposed.

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised Footnote 1, namely clarifying that models are built in accordance with MOD-032.

Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group

Answer No

Document Name

Comment

The MRO NSRF agrees with the general approach given a lack of substantive changes, but would recommend separating possible approval dates for definitions from different projects:

“shall become effective on the first day of the first calendar quarter after the effective date of the applicable governmental authority’s order approving the standard, order approving the proposed definition of Model Validation, or order approving the proposed definition of Distributed Energy Resources, whichever date is latest”

The MRO NSRF would also appreciate any clarity that could be provided regarding the impact of new implementation dates on ongoing 24-month cycles per Requirement R1.2? I.e. is the comparison of performance still based on the previous event or does it reset to 24 months from the new implementation date?

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised the Effective Date section in the Implementation Plan. Please refer to the second paragraph under "General Considerations" in the updated implementation plan.

Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO

Answer

No

Document Name

Comment

(1) The MH agrees with the general approach given a lack of substantive changes, but would recommend separating possible approval dates for definitions from different projects:

“shall become effective on the first day of the first calendar quarter after the effective date of the applicable governmental authority’s order approving the standard, *order approving the proposed definition of Model Validation*, or order approving the proposed definitions of { remove “ Model Validation and “}Distributed Energy Resources, whichever date is *latest*”

(2) MH would also appreciate any clarity that could be provided regarding the impact of new implementation dates on ongoing 24-month cycles per Requirement R1.2? I.e. is the comparison of performance still based on the previous event or does it reset to 24 months from the new implementation date?

Likes 0

Dislikes 0

Response

Thank you for your comment. The drafting team has revised the Effective Date section in the Implementation Plan.

Please refer to the second paragraph under "General Considerations" in the updated implementation plan.

Pirouz Honarmand - Independent Electricity System Operator - 2

Answer Yes

Document Name

Comment

Yes, after addressing our comments in point #6 above.

Likes 0

Dislikes 0

Response

Thank you for your comment. Please see the response to Q6.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer Yes

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Julie Hall - Entergy - 6, Group Name Entergy	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mike Magruder - Avista - Avista Corporation - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
John Pearson - ISO New England, Inc. - 2	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joshua Phillips - Southwest Power Pool, Inc. (RTO) - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Adrian Harris - Adrian Harris On Behalf of: Kirsten Rowley, Midcontinent ISO, Inc., 2; - Adrian Harris	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Carver Powers - Utility Services, Inc. - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Karen Weaver - Tallahassee Electric (City of Tallahassee, FL) - 5

Answer Yes

Document Name

Comment	
Likes 0	
Dislikes 0	
Response	
Greg Sorenson - ReliabilityFirst - 10 - RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Bob Cardle - Bob Cardle On Behalf of: Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Bryan Bennett - Sempra - San Diego Gas and Electric - 3

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer Yes

Document Name

Comment

Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Zenon O'young-Chu - Seattle City Light - 3**Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Robert Jones - Seattle City Light - 4****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Daren Brubaker - Seattle City Light - 6****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0	
Response	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Flanary - Midwest Reliability Organization - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Alyssia Rhoads - Public Utility District No. 1 of Snohomish County - 1	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Western Power Pool - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mohamad Elhousseini - DTE Energy - Detroit Edison Company - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC**Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Rachel Coyne - Texas Reliability Entity, Inc. - 10****Answer****Document Name****Comment**

Texas RE noticed Requirement Parts 1.2 and 1.3 contain a periodic requirement and states that the comparison shall be done at least once every 24 months. As there has been confusion in the past, Texas RE requests the implementation plan clarify when the first comparison shall be completed and generally recommends establishing an explicit initial performance date upon the effective date of the requirement to avoid delaying compliance obligations an additional 24 months. (Please see Texas RE's response to Question #1 recommending this be changed from 24 months to 12 months.)

Likes 0

Dislikes 0

Response

Thank you for your comment. Please refer to the second paragraph under "General Considerations" in the updated implementation plan.

Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 - WECC

Answer	
Document Name	
Comment	
See Utility Services and SMUD Comments.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment.	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	
Document Name	
Comment	
No Comment	
Likes 0	
Dislikes 0	
Response	

9. Do you agree that MOD-033-3 is cost effective to address the Directives in the FERC Order? If you do not agree, or if you agree but have suggestions for improvement to enable more cost-effective approaches, please provide your recommendation and, if appropriate, technical, or procedural justification.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer No

Document Name

Comment

Until the DT clarifies this draft and its intent, FirstEnergy cannot determine the cost-effectiveness of this draft.

Likes 0

Dislikes 0

Response

Thank you for your comment. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Israel Perez - Israel Perez On Behalf of: Laura Somak, Salt River Project, 3, 5, 6, 1; Mathew Weber, Salt River Project, 3, 5, 6, 1; Matthew Jaramilla, Salt River Project, 3, 5, 6, 1; Timothy Singh, Salt River Project, 3, 5, 6, 1; - Israel Perez

Answer No

Document Name

Comment

It is a full-time job to maintain the transmission level model data for IBRs that aren't registered. To establish and maintain DER modeling data is even more intensive. If the scope were limited to modeling the aggregate DER impact on the BES this would be more palatable.

Likes 0

Dislikes 0

Response

Thank you for your comment. Unregistered and aggregate IBRs will be a part of the system model. Please see the Technical Rationale for additional clarification. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Carver Powers - Utility Services, Inc. - 4

Answer	No
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Document Name	
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Comment

No. As discussed in detail in Question 2, the proposed modifications do not effectively address Order 901's directives; as they are not effective, they cannot be cost-effective. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Likes 1	American Municipal Power, 5, Ritts Amy
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Dislikes 0	
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Response

Thank you for your comment. Please see the consideration of directives document for explanation on how Order 901 directives are addressed. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Sharon Darwin - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC

Answer	Yes
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Document Name	
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Comment

Southern Company agrees MOD-033-3, as proposed, is cost effective to address the Directives in the FERC Order.

Likes 0	
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Dislikes 0	
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Response

Thank you for your comment. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Adrian Harris - Adrian Harris On Behalf of: Kirsten Rowley, Midcontinent ISO, Inc., 2; - Adrian Harris

Answer

Yes

Document Name

Comment

MISO agrees that MOD-033-3 is a cost-effective approach to addressing the directives outlined in the FERC Order. The proposed enhancements support improved modeling accuracy and reliability planning, aligning well with the industry's evolving needs and regulatory expectations.

Likes 0

Dislikes 0

Response

Thank you for your comment. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott

Answer

Yes

Document Name

Comment

ITC supports comments submitted by NSRF

Likes 0

Dislikes 0

Response

Thank you for your comment. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebel, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc. , 6; - Joseph Gatten

Answer Yes

Document Name

Comment

While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Mohamad Elhousseini - DTE Energy - Detroit Edison Company - 5

Answer Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Western Power Pool - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Alyssia Rhoads - Public Utility District No. 1 of Snohomish County - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daren Brubaker - Seattle City Light - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Robert Jones - Seattle City Light - 4	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Zenon O'young-Chu - Seattle City Light - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bryan Bennett - Sempra - San Diego Gas and Electric - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Pirouz Honarmand - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Bob Cardle - Bob Cardle On Behalf of: Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; Tyler Brun, Pacific Gas and Electric Company, 3, 1, 5; - Bob Cardle	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Chris Wagner - Santee Cooper - 1, Group Name Santee Cooper	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Greg Sorenson - ReliabilityFirst - 10 - RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Karen Weaver - Tallahassee Electric (City of Tallahassee, FL) - 5	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Ben Hammer - Western Area Power Administration - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Hillary Creurer - Allete - Minnesota Power, Inc. - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Scott Thompson - TXNM Energy - 1,3

Answer Yes

Document Name

Comment

Likes 0	
Dislikes 0	
Response	
Ruchi Shah - AES - AES Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sing Tay - AES - Indianapolis Power and Light Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
John Pearson - ISO New England, Inc. - 2	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mike Magruder - Avista - Avista Corporation - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response**Julie Hall - Entergy - 6, Group Name** Entergy**Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Mark Flanary - Midwest Reliability Organization - 10****Answer****Document Name****Comment**

Not applicable to MRO.

Likes 0

Dislikes 0

Response**Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF****Answer****Document Name**

Comment

Duke Energy's focus is on electric system reliability.

Likes 0

Dislikes 0

Response

Thank you for your comment. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Josh Schumacher - Black Hills Corporation - 6, Group Name Black Hills Corporation Segments 1, 3, 5, 6

Answer

Document Name

Comment

Black Hills Corporation will not comment on cost effectiveness.

Likes 0

Dislikes 0

Response

Mary Smith - Southern Indiana Gas and Electric Co. - 3,5,6 - RF

Answer

Document Name

Comment

No Comment.

Likes 0	
Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
Answer	
Document Name	
Comment	
WECC provides no comment on cost effectiveness and leaves it up to the applicable entities.	
Likes 0	
Dislikes 0	
Response	
Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 - WECC	
Answer	
Document Name	
Comment	
See Utility Services and SMUD Comments.	
Likes 0	
Dislikes 0	
Response	

Thank you for your comment. The team balanced the potential costs against the need to address reliability with increased IBRs as directed by FERC.

Nick Leathers - Nick Leathers On Behalf of: David Jendras Sr, Ameren - Ameren Services, 3, 6, 1; - Nick Leathers

Answer

Document Name

Comment

Ameren will not comment on the cost effectiveness of the project.

Likes 0

Dislikes 0

Response

James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable

Answer

Document Name

Comment

N/A

Likes 0

Dislikes 0

Response

10. Please provide any additional comments for the drafting team to consider, if desired.

Mike Magruder - Avista - Avista Corporation - 1

Answer

Document Name

Comment

Please consider EEL's comments and suggestions.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF

Answer

Document Name

Comment

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

Response

John Pearson - ISO New England, Inc. - 2**Answer****Document Name****Comment**

The definition of DER as revised in the Standard is not adequate and should include demand reduction. The definition should be changed to:

Distributed Energy Resources: This refers to any generator or energy storage facility located on the distribution system, any subsystem thereof, or behind a customer meter that is capable of providing energy injection, energy withdrawal, regulation or demand reduction

Likes 0

Dislikes 0

Response

Thank you for your comment. This definition is outside of the scope of this group's work. Please refer to Project 2022-02 for modifications to the DER definition.

James Merlo - NAGF - NA - Not Applicable - NA - Not Applicable**Answer****Document Name****Comment**

None.

Likes 0

Dislikes 0

Response

Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2**Answer****Document Name****Comment**

ERCOT joins the comments submitted by the IRC SRC and adopts them as its own.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Joseph Gatten - Joseph Gatten On Behalf of: Nicholas Friebe, Xcel Energy, Inc., 5, 3, 1; Patrick Flaherty, Xcel Energy, Inc. , 6; - Joseph Gatten**Answer****Document Name****Comment**

While Xcel Energy voted in the affirmative, we share EEI's concerns and support EEI comments.

Likes 0

Dislikes 0

Response

Thank you for your comment.

Joshua Phillips - Southwest Power Pool, Inc. (RTO) - 2**Answer****Document Name**

Comment

The SRC asks the drafting team to clarify why the term “model validation” in the purpose statement is lowercase when a formal definition for Model Validation recently achieved a passing ballot in Project No. 2020-06. If the intent is to refer to the formally defined term, the SRC recommends that “model validation” be capitalized. If the intent is to refer to something other than the formally defined term, the SRC recommends that a different term be used to avoid confusion with the defined term Model Validation.

The SRC also recommends that the drafting team clarify the meaning of “comprehensive” as used in the purpose statement, as the proposed requirement language doesn’t currently provide specific guidance on the interpretation of “comprehensive.” It is not clear if this term was intended to encompass the existing scope of work plus DER and smaller unregistered IBRs, or if some other meaning is intended.

Likes 0

Dislikes 0

Response

The Glossary term "Model Validation" is used in all enforceable parts of the Standard such as Requirements, Measures, VSLs, etc. However "model validation" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

The DT has addressed your concern by omitting the term "comprehensive" from the revised Purpose statement.

Gail Elliott - Gail Elliott On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Gail Elliott

Answer

Document Name

Comment

ITC supports comments submitted by NSRF

Likes 0

Dislikes 0

Response	
Thank you for your comment.	
Ruchi Shah - AES - AES Corporation - 5	
Answer	
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	
Response	
Romel Aquino - Edison International - Southern California Edison Company - 3	
Answer	
Document Name	
Comment	
See comments submitted by the Edison Electric Institute	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	
Document Name	

Comment

Minnesota Power supports MRO's NERC Standards Review Forum's (NSRF) comments.

Likes 0

Dislikes 0

Response

The DT has addressed your concerns as suggested by omitting the terms "comprehensive" and "adequate" from the revised Purpose statement.

Further, the Glossary term "System" is now used consistently in all Requirements within the Standard. However "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose. "

Chantal Mazza - Chantal Mazza On Behalf of: Junji Yamaguchi, Hydro-Quebec (HQ), 1, 5; Nicolas Turcotte, Hydro-Quebec (HQ), 1, 5; - Chantal Mazza

Answer

Document Name

Comment

we support NPCC RSC comments.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC

Answer

Document Name	
Comment	
The NPCC Regional Standards Committee supports the project.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Tim Kelley - Tim Kelley On Behalf of: Charles Norton, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Fong Mua, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Kris Kirkegaard, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Ryder Couch, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; Wei Shao, Sacramento Municipal Utility District, 3, 6, 4, 1, 5; - Tim Kelley, Group Name SMUD and BANC	
Answer	
Document Name	
Comment	
The standards drafting team (SDT) should refrain from creating a definition in a footnote. The changes proposed in MOD-032-2 and the initial ballot of MOD-033-3 both define the term “unregistered IBR” in a footnote. This important term could very well be used in additional Standards when the Milestone 4 directives are addressed and, therefore, should be defined in a formal definition included in the Glossary of Terms Used in the NERC Reliability Standards (NERC Glossary).	
A Standards Authorization Request was drafted to create a formal definition for “unregistered IBR”. The SDT should work with NERC and the SDT for MOD-033-3 to ensure the same definition is being used for this term and that it is formally included in the NERC Glossary.	
Also, the SDT should provide some guidance and clarity regarding Requirement R1.2 and the performance of the 24-calendar month comparison using a dynamic local event. Does the clock on the 24-months reset upon the effective date of MOD-033-3 or does it continue since the last dynamic event under MOD-033-2?	
Likes 0	

Dislikes	0
Response	
<p>Thank you for your comments. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. For more information on modeling requirements for unregistered IBRs & IBR-DERs, please refer to the proposed MOD-032-2 under Project 2022-02.</p> <p>There is no reset of the 24-months clock when transitioning from MOD-033-2 to MOD-033-3. This clarification is now explicitly noted in the updated Implementation Plan.</p>	
Mia Wilson - Southwest Power Pool, Inc. (RTO) - 2 - MRO, WECC	
Answer	
Document Name	
Comment	
<p>SPP has statements for the SDT to review around proposed Purpose:</p> <p>SPP asks that the SDT clarify the use of "model validation" (lowercase) within the purpose statement. Specifically, SPP seeks confirmation on whether the purpose intended to reference the definition of "Model Validation" (uppercase) and if there is a distinction between these two terms as used in the standard.</p> <p>SPP ask that the SDT clarify the meaning of "comprehensive" as used in the purpose statement? The proposed requirement language doesn't currently provide specific guidance on the interpretation of "comprehensive." Please clarify if the intent to convey that "comprehensive" encompasses our existing scope of work plus DER and smaller unregistered IBRs?</p>	
Likes	0
Dislikes	0
Response	

"The Glossary term "Model Validation" is used in all enforceable parts of the Standard such as Requirements, Measures, VSLs, etc. However "model validation" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

The DT has addressed your concern by omitting the term "comprehensive"" from the revised Purpose statement.

Ben Hammer - Western Area Power Administration - 1

Answer

Document Name

Comment

some concerns with the changes to the purpose statement, specifically the use of the subjective terms “comprehensive” and “adequate.” The MRO NSRF would recommend the following blend of previous and proposed language as well as FERC Order 901 P161:

To establish a consistent process to coordinate, validate, and keep up-to-date system models.

also requests that “system” is either capitalized or not capitalized consistently throughout the standard.

Likes 0

Dislikes 0

Response

The DT has addressed your concerns as suggested by omitting the terms "comprehensive" and "adequate" from the revised Purpose statement.

Further, the Glossary term "System" is now used consistently in all Requirements within the Standard. However "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE suggests revising the purpose to “To establish a comprehensive process for system model validation **that** facilitates achieving and maintaining adequate model accuracy.”

Likes 0

Dislikes 0

Response

Thank you for your comment. Please review the revised Purpose statement.

Hayden Maples - Hayden Maples On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Hayden Maples

Answer

Document Name

Comment

Evergy supports and incorporates by reference the comments of the Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 10

Likes 0

Dislikes 0

Response

The DT has addressed your concerns as suggested by omitting the terms "comprehensive"" and "adequate" from the revised Purpose statement.

Further, the Glossary term "System" is now used consistently in all Requirements within the Standard. However "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

Mason Jones - Mason Jones On Behalf of: Benjamin Hector, Northern California Power Agency, 4, 3, 5, 6; - Northern California Power Agency - 3,4,5,6 - WECC**Answer****Document Name****Comment**

See Utility Services and SMUD Comments.

Likes 0

Dislikes 0

Response

Thank you for your comment and support.

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC**Answer****Document Name****Comment**

WECC provides two comments:

1. There seems to be some subjective terms in the purpose statement (not enforceable) like "comprehensive" and "adequate." It may not be the best to include such terms.
2. WECC notes that the term "system" is capitalized in some instances and not in others. Is there a reason or should this be consistent?

Likes 0

Dislikes 0

Response

The DT has addressed your concerns as suggested by omitting the terms "comprehensive" and "adequate" from the revised Purpose statement.

Further, the Glossary term "System" is now used consistently in all Requirements within the Standard. However "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

Jennifer Weber - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer

Document Name

Comment

It may be more reasonable for the Planning Coordinator to require various data from 'unregistered IBR's' through existing interconnection requirements than to require that all unregistered IBR's provide this data to the PC. The TP and PC could determine what level of unregistered IBR's could have a material impact on their systems and work directly with those unregistered entities.

It would be untenable to require a Planning Coordinator to obtain and study each "generator or energy storage technology connected to a distribution system that is capable of providing Real Power in a non-isolated parallel operation with the BPS, including those connected behind the meter of an end-use customer that is supplied from a distribution system. (DER)". It's also very likely that Distribution Providers would not know the full extent of the number of these systems, much less the dynamics modeling data being requested.

Likes 0

Dislikes 0

Response

Thank you for your comments. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. For more information on modeling requirements for unregistered IBRs & IBR-DERs, please refer to the proposed MOD-032-2 under Project 2022-02."

Daniela Atanasovski - APS - Arizona Public Service Co. - 1

Answer

Document Name

Comment

None

Likes 0

Dislikes 0

Response

Jennie Wike - Jennie Wike On Behalf of: Hien Ho, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; John Nierenberg, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Ozan Ferrin, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power

Answer**Document Name****Comment**

Tacoma Power encourages the SDT to refrain from creating a definition in a footnote. The changes proposed in MOD-032-2 and MOD-033-3 both define the term “unregistered IBR” in a footnote. This important term could very well be used in additional Standards when the Milestone 4 directives are addressed and, therefore, should be defined in a formal definition included in the Glossary of Terms Used in the NERC Reliability Standards (NERC Glossary).

Likes 0

Dislikes 0

Response

Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. For more information on modeling requirements for unregistered IBRs & IBR-DERs, please refer to the proposed MOD-032-2 under Project 2022-02.

Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter

Answer	
Document Name	
Comment	
No additional comments.	
Likes 0	
Dislikes 0	
Response	
Zenon O'young-Chu - Seattle City Light - 3	
Answer	
Document Name	
Comment	
NA	
Likes 0	
Dislikes 0	
Response	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	
Document Name	2021-01_Unofficial_Comment_Form MRO Draft 05142025.docx
Comment	

While not enforceable, the MRO NSRF has some concerns with the changes to the purpose statement, specifically the use of the subjective terms “comprehensive” and “adequate.” The MRO NSRF would recommend the following blend of previous and proposed language as well as FERC Order 901 P161:

To establish a consistent process to coordinate, validate, and keep up-to-date system models.

The MRO NSRF also requests that “system” is either capitalized or not capitalized consistently throughout the standard.

Likes 0

Dislikes 0

Response

The DT has addressed your concerns as suggested by omitting the terms "comprehensive" and "adequate" from the revised Purpose statement.

Further, the Glossary term "System" is now used consistently in all Requirements within the Standard. However "system" is retained in the Purpose statement to adhere to the de facto practice of avoiding use of Glossary terms in the unenforceable parts of a NERC Standard such as its Purpose.

Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO

Answer

Document Name

Comment

While not enforceable, the MH has some concerns with the changes to the purpose statement, specifically the use of the subjective terms “comprehensive” and “adequate.” MH would recommend the following blend of previous and proposed language as well as FERC Order 901 P161: To establish a consistent process to coordinate, validate, and keep up-to-date system models.

Likes 0

Dislikes 0

Response

The DT has addressed your concerns as suggested by omitting the terms "comprehensive" and "adequate" from the revised Purpose statement.

Donna Wood - Tri-State G and T Association, Inc. - 1

Answer

Document Name

Comment

NA

Likes 0

Dislikes 0

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

Response

Mark Flanary - Midwest Reliability Organization - 10

Answer

Document Name	
Comment	
MRO recommends revising footnote 1 to avoid the use of the term "unregistered Inverter-based Resource". Such a term is inconsistent with the ERO's current practice of using "registered" to refer to entities and not equipment, Facilities, or resources owned by entities.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment. Both R1 and footnote 1 have been revised to clarify that the planning model to be validated must be consistent with the system model resulting from the MOD-032 process. For more information on modeling requirements for unregistered IBRs & IBR-DERs, please refer to the proposed MOD-032-2 under Project 2022-02..	
Kevin Conway - Western Power Pool - 4	
Answer	
Document Name	
Comment	
We appreciate the SDT efforts in reviewing MOD-033 and adding changes to clarify the requirements.	
Likes 0	
Dislikes 0	
Response	
Thank you for your comment and support.	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	
Document Name	
Comment	

In the Purpose statement (A.3), MOD-033 is framed as a “...comprehensive process for system model validation” ... BPA believes ‘System dynamic model validation’ is not complete without coordination with MOD-026 and MOD-027. BPA suggests removing the word “comprehensive” from the Purpose statement (A.3) **OR** create a footnote that states “a ‘comprehensive process for system model validation’ relies heavily on coordination with MOD-026 and MOD-027”.

Likes 0

Dislikes 0

Response

The DT has addressed your concern as suggested by omitting the term "comprehensive" from the revised Purpose statement.

End of Report