

Consideration of Comments on Functional Model Version 5

The Functional Model Working Group thanks all commenters who submitted comments on the draft Functional Model Version 5. This document was posted for a 30-day public comment period from September 25, 2009 through October 26, 2009. The stakeholders were asked to provide feedback on the document through a special Electronic Comment Form. There were 15 sets of comments, including comments from more than 45 different people from over 20 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

<http://www.nerc.com/page.php?cid=2|247|108>

On the question of revisions of the Functional Model to the Generator Owner/Operator and Transmission Owner /Operator regarding the clarification of asset ownership and maintenance:

Stakeholders generally agreed with the proposed revisions. One stakeholder suggested explicitly state that both the Transmission Owner and Generator Owner changes should also address the Protection System coordination in the section "Relationships with Other Functional Entities". The FMWG disagreed as the purpose of the Functional Model is to provide the framework for the development and applicability of NERC's Reliability Standards and not to define the specific requirements of those standards. The functional model is designed to be a high level document and the FMWG believes that this coordination is covered in other tasks in the Model. Another stakeholder suggested that the role of the Generator Operator in frequency support should be included. The FMWG agreed and revised the Model accordingly.

On the question pertaining to revisions to the definitions of the Reliability Coordinator and Balancing Authority in version 5 of the Functional Model:

The consensus of comments received is agreement with the proposed revisions. The drafting team discussed the comment which suggested that the FM should contain the concept of "functional direction" as differentiated from the activities involved in actual operating actions. The concept would apply to Reliability Coordinators in general because many Reliability Coordinators do not directly perform operating actions. The concept could also apply to Transmission Operator and Balancing Authority functions in which the functional entity directs other entities to perform an action rather than performing the action directly. The FMWG concluded that the concept is not appropriate for inclusion in the FM because it deals more with how a functional entity ensures its tasks are performed.

On the question regarding proposed revisions to the Interchange Function and Interchange Coordinator Entity in version 5 of the Functional Mode:

The majority of stakeholders agreed with the revisions to the Interchange Function and Interchange Coordinator Entity. One stakeholder suggested that the Model should recognize that many of the tasks required of the Interchange Authority/Coordinator have aligned with the technical specifications of the Tag Authority Service used under e-tagging by the sink Balancing Authorities and that retaining an Interchange Authority/Coordinator in the Functional Model, as currently presented, conflicts with the approach taken for other functions. The FMWG

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disagrees and maintains that the functions of Balancing and Interchange are distinct, each with its own set of tasks and functional entity relationships.

Two stakeholders suggested that there is a problem with the standards whereby the VO process took tagging process steps from Policy 3 and assigned them to the Interchange Authority and that there is a current standard development project to address this and the functional model will need to be changed once the correction to the standards has been implemented. For Version 5, the FMWG did look at current Interchange Standards and incorporated terminology used in the standards into the Model and Technical Document. The FMWG will review the revised Interchange Standards when approved by NERC to determine if any revisions should be considered for the Functional Model Version 6.

General comments:

Several stakeholders suggested revisions to various sections of the Model. The FMWG felt that many of these suggested revisions were too specific or prescriptive. The functional model is designed to be a high level document so these suggested revisions were declined.

Other stakeholders suggested that the FMWG submit a SAR to make terminology consistent between various NERC documents. The FMWG has proposed coordination of definitions between the Model and the Glossary in Section 11 "Terminology Changes in Version 5" of the Functional Model Technical Document. Version 5 contains terminology changes intended to improve consistency between the Model and the NERC Glossary, the Rules of Procedure (ROP) and Reliability Standards. The FMWG agrees on the need to have consistency in the definitions given in the Model and Glossary, and intends to pursue this once Version 5 has been approved. The FMWG plan to submit a SAR to coordinate the definitions between the documents (as proposed in the table in Section 11) once Version 5 has been approved. Other minor edits were suggested and accepted by the FMWG.

If you feel that your comment has been overlooked, please 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, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

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Index to Questions, Comments, and Responses

1. Do you agree with the proposed revisions in version 5 of the Functional Model to the Generator Owner/Operator (pages 48-51 of Redline version) and Transmission Owner (pages 44-45)/Operator (pages 37-38) regarding the clarification of asset ownership and maintenance? If no, please provide comments in support of your answer in the comment area. 8
2. Do you agree with the proposed revisions to the definitions of the Reliability Coordinator (pages 30-31) and Balancing Authority (pages 33-34) in version 5 of the Functional Model? If no, please provide comments in support of your answer in the comment area. 11
3. Do you agree with the proposed revisions to the Interchange Function (page 40) and Interchange Coordinator Entity (page 41) in version 5 of the Functional Model? If no, please provide comments in support of your answer in the comment area. 14
4. Do you have any other comments regarding the proposed revisions to the Functional Model? If yes, please provide comments in support of your answer in the comment area. 16

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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

		Commenter	Organization	Industry Segment											
				1	2	3	4	5	6	7	8	9	10		
1.	Group	Guy Zito	Northeast Power Coordinating Council												X
Additional Member		Additional Organization		Region		Segment Selection									
1.	Ralph Rufrano	New York Power Authority		NPCC		5									
2.	Alan Adamson	New York State Reliability Council, LLC		NPCC		10									
3.	Gregory Campoli	New York Independent System Operator		NPCC		2									
4.	Roger Champagne	Hydro-Quebec TransEnergie		NPCC		2									
5.	Kurtis Chong	Independent Electricity System Operator		NPCC		2									
6.	Sylvain Clermont	Hydro-Quebec TransEnergie		NPCC		1									
7.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.		NPCC		1									
8.	Brian Evans-Mongeon	Utility Services		NPCC		8									
9.	Mike Garton	Dominion Resources Services, Inc.		NPCC		5									
10.	Brian L. Gooder	Ontario Power Generation Incorporated		NPCC		5									
11.	Kathleen Goodman	ISO - New England		NPCC		2									
12.	David Kiguel	Hdro One Networks Inc.		NPCC		1									
13.	Michael R. Lombardi	Northeast Utilities		NPCC		1									
14.	Randy MacDonald	New Brunswick System Operator		NPCC		2									

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	Commenter	Organization	Industry Segment										
			1	2	3	4	5	6	7	8	9	10	
15.	Greg Mason	Dynegy Generation	NPCC							5			
16.	Bruce Metruck	New York Power Authority	NPCC							6			
17.	Chris Orzel	FPL Energy/NextEra Energy	NPCC							5			
18.	Robert Pellegrini	The United Illuminating Company	NPCC							1			
19.	Saurabh Saksena	National Grid	NPCC							1			
20.	Michael Schiavone	National Grid	NPCC							1			
21.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC							3			
22.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC							10			
23.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC							10			
2.	Group	Sam Ciccone	FirstEnergy	X		X	X	X	X				
		Additional Member	Additional Organization				Region	Segment Selection					
1.	Dave Folk	FirstEnergy	RFC					1, 3, 4, 5, 6					
2.	Doug Hohlbaugh	FirstEnergy	RFC					1, 3, 4, 5, 6					
3.	Group	Denise Koehn	Bonneville Power Administration	X		X		X	X				
		Additional Member	Additional Organization				Region	Segment Selection					
1.	Steve Larson	Office of General Counsel	WECC					1					
2.	Francis Halpin	Power Services Duty Scheduling	WECC					5					
3.	Wes Hutchison	Transmission Operational Analysis & Support	WECC					1					
4.	Group	Philip R. Kleckley	SERC Planning Standards Subcommittee			X							
		Additional Member	Additional Organization				Region	Segment Selection					
1.	John Sullivan	Ameren Services Co.	SERC					1					
2.	Charles Long	Entergy	SERC					1					
3.	Scott Goodwin	Midwest Independent Transmission System Operator	SERC					1					

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	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
4.	James Manning	North Carolina Electric Membership Corporation	SERC								3			
5.	Jim Kelley	PowerSouth Energy Cooperative	SERC								1			
6.	Pat Huntley	SERC Reliability Corporation	SERC								10			
7.	Bob Jones	Southern Company Services, Inc.- Trans	SERC								1			
8.	David Marler	Tennessee Valley Authority	SERC								1			
5.	Individual	William Gallagher	Transmission Access Policy Study Group			X	X						X	
6.	Individual	Martin Bauer	US Bureau of Reclamation					X						
7.	Individual	John Moraski	BGE - Reliability & Compliance Assurance	X										
8.	Individual	Eric Olson	Transmission Agency of Northern California	X										
9.	Individual	Terry Bilke	Midwest ISO		X									
10.	Individual	Russ Schneider	Flathead Electric Cooperative			X								
11.	Individual	James H. Sorrels, Jr.	American Electric Power	X		X		X	X					
12.	Individual	James Starling	SCE&G	X		X		X	X					
13.	Individual	Laura Lee	Duke Energy	X		X		X	X					
14.	Individual	Jason Shaver	American Transmission Company	X										
15.	Individual	Dan Rochester	Independent Electricity System Operator		X									
16.	Group	Ben Li	IRC Standards Review Committee		X									
		Additional Member	Additional Organization	Region					Segment Selection					

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	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
1. Charles Yeung		SPP	SPP Region							2		
2. Matt Goldberg		ISO-NE	NPCC Region							2		
3. Patrick Brown		PJM	RFC Region							2		
4. Bill Phillips		MISO	MRO Region							2		
5. James Castle		NYISO	NPCC Region							2		
6. Steve Myers		ERCOT	ERCOT Region							2		
7. Mark Thompson		AESO	WECC Region							2		
8. Lourdes Estrada-Saliner		CAISO	WECC Region							2		

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1. Do you agree with the proposed revisions in version 5 of the Functional Model to the Generator Owner/Operator (pages 48-51 of Redline version) and Transmission Owner (pages 44-45)/Operator (pages 37-38) regarding the clarification of asset ownership and maintenance? If no, please provide comments in support of your answer in the comment area.

Summary Consideration: Stakeholders generally agreed with the proposed revisions. One stakeholder suggested that both the Transmission Owner and Generator Owner changes should also address the Protection System coordination in the section "Relationships with Other Functional Entities". The FMWG disagreed as the purpose of the Functional Model is to provide the framework for the development and applicability of NERC's Reliability Standards and not to define the specific requirements of those standards. The functional model is designed to be a high level document and the FMWG believes that this coordination is covered in other tasks in the Model.

- **Transmission Owner task 1:** Coordinates with Transmission Planners and the Planning Coordinator, Generator Owners, other Transmission Owners, and Load-Serving Entities desiring to connect with the Bulk Electric System.
- **Generator Owner task 3:** Develops an interconnection agreement with Transmission Owner on a facility basis.

Another stakeholder suggested that the role of the Generator Operator in frequency support should be included. The FMWG agreed and revised the Model accordingly. In the revised model (page 54), the list of Relationships with Other Entities – Ahead of Time, item 4 now reads as follows:

- **Generator Operator task 4.** Reports status of automatic voltage or frequency regulating equipment to Transmission Operators.

Organization	Yes or No	Question 1 Comment
US Bureau of Reclamation	Disagree	Reclamation agrees with the red line changes, but feels that both the Transmission Owner and Generator Owner changes should also address the Protection System coordination in the section "Relationships with Other Functional Entities".
<p>Response: The FMWG thanks you for your comment. The purpose of the Functional Model is to provide the framework for the development and applicability of NERC's Reliability Standards and not to define the specific requirements of those standards. The functional model is designed to be a high level document and the FMWG believes that this coordination is covered in the explicit tasks below:</p> <p>Transmission Owner task 1: Coordinates with Transmission Planners and the Planning Coordinator, Generator Owners, other Transmission Owners, and Load-Serving Entities desiring to connect with the Bulk Electric System.</p> <p>Generator Owner task 3: Develops an interconnection agreement with Transmission Owner on a facility basis.</p>		
Duke Energy	Agree	The role of the Generator Operator in frequency support should be included. For example on page 50, it should be noted that the Generator Operator provides the status of the generator governor in addition to

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Organization	Yes or No	Question 1 Comment
		the status of the automatic voltage regulator.
<p>Response: The FMWG thanks you for your comment. The FMWG agrees and has revised item 4 to: Reports status of automatic voltage or frequency regulation equipment to Transmission Operators.</p>		
American Electric Power	Agree	
American Transmission Company	Agree	
BGE - Reliability & Compliance Assurance	Agree	
Bonneville Power Administration	Agree	
FirstEnergy	Agree	
Flathead Electric Cooperative	Agree	
Independent Electricity System Operator	Agree	
Midwest ISO	Agree	
Northeast Power Coordinating Council	Agree	
SCE&G	Agree	
SERC Planning Standards Subcommittee	Agree	
Transmission Agency of Northern California	Agree	

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Organization	Yes or No	Question 1 Comment
IRC Standards Review Committee	Agree	

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2. Do you agree with the proposed revisions to the definitions of the Reliability Coordinator (pages 30-31) and Balancing Authority (pages 33-34) in version 5 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

Summary Consideration: The consensus of comments received is agreement with the proposed revisions. The drafting team discussed the comment which suggested that the Functional Model should contain the concept of “functional direction” as differentiated from the activities involved in actual operating actions. The concept would apply to Reliability Coordinators in general because many Reliability Coordinators do not directly perform operating actions. The concept could also apply to Transmission Operator and Balancing Authority functions in which the functional entity directs other entities to perform an action rather than performing the action directly. The FMWG concluded that the concept is not appropriate for inclusion in the FM because it deals more with how a functional entity ensures its tasks are performed.

Organization	Yes or No	Question 2 Comment
US Bureau of Reclamation	Disagree	<p>The change to Task 8 of the Balancing Authority which is to "Operate the Balancing Authority Area to contribute to Interconnection frequency" adds confusion. It is suggested that the text read "Operate the Balancing Authority Area to contribute resources to maintain Interconnection frequency".</p> <p>Likewise in the Definition of the Balancing Authority the text "The functional entity that integrates resource plans ahead of time, maintains generation-load interchange-balance within a Balancing Authority Area, and contributes to Interconnection frequency in real time." should be altered to read "The functional entity that integrates resource plans ahead of time, maintains generation-load-interchange-balance within a Balancing Authority Area, to maintain the Interconnection frequency in real time."</p>
<p>Response: The FMWG thanks you for your comment. Task 8 of the Balancing Authority describes the activity of the function. The function, overall, contributes the vital portion of control actions from available resources, the goal of which is to cause resources, load, and interchange to balance in such a way that the system frequency is within tolerances of the scheduled system frequency. The function does not fully maintain interconnection frequency, but contributes a vital part of control actions which, when added to the other components provided by resources scheduled, load frequency characteristics, and interchange schedule contributions, results in the overall control activities.</p> <p>In the definition, the same principle applies. The functional entity is responsible for only the portion of the interconnection that lies within its Balancing Authority Area. Each functional entity cannot, by itself, maintain the frequency of the interconnection, but serves a vital role as described in Task 8, to contribute to interconnection frequency such that is within tolerances of the scheduled system frequency.</p> <p>The FMWG feels that the proposed language is more accurate than your proposed changes.</p>		
Duke Energy	Disagree	<p>The introduction to the Reliability Coordinator Functional Entity should specify that the RC maintains the real-time operating reliability of its RC Area through functional direction. This is an important concept in distinguishing the difference in the responsibilities of the Reliability Coordinator and the Transmission</p>

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Organization	Yes or No	Question 2 Comment
		<p>Operator, which directly maintains reliability for its own defined area, as stated. Since it is stated that the Transmission Operator directly maintains reliability, consistency would dictate the use of the term through functional direction, or indirectly, for the Reliability Coordinator.</p> <p>Duke Energy continues to believe that TTC should be removed from number 12 in the list of ahead of time relationships of the Reliability Coordinator. While the RC may participate in calculation of a TTC, the answer in the Consideration of Comments incorrectly implies that there could be multiple TTCs calculated for a single interface - that calculated by the Transmission Operator and a different one calculated by the RC for a certain path. A responsibility should not be assigned to multiple entities. The reliability standard currently in effect, FAC-013-1, leaves assignment of this responsibility to the RRO and the reliability standard that has been adopted by the Board of Trustees assigns this responsibility to the Transmission Operator. Calculation of TTCs is performed in a longer term horizon than the RC should be concentrating on.</p>
<p>Response: The FMWG thanks you for your comment. The FMWG does not believe it is appropriate to introduce the concept of functional direction.</p> <p>The Reliability Coordinator (RC) may direct the TOPs and BAs within its RC Area to take specific actions. While the FMWG generally agrees that, in the majority of arrangements, the RC does not actually operate system equipment, the RC is not precluded from doing so if its particular operating agreements provide for it to do so. The FM describes the wider-area responsibilities of the RC as compared to that which is typically seen for a TOP area or a BA Area.</p> <p>The FM describes the need for the RC, which has the wider-area view, to determine the TTC for its RC Area and to provide it to TSPs which need it for use in transmission service activities. The RC is responsible for the wider area. However, the RC is not precluded, in some organizational arrangements, from having in place an agreement that a TOP or other entity could make the assessment and calculations for it. The commenter seems to be offering this suggestion from the viewpoint of a specific organizational arrangement in which the RC does not, in fact, make the calculation. Such an arrangement is not precluded.</p> <p>The FM describes the activities that are required in order to ensure reliable operations. From that viewpoint, each functional entity must provide for the performance of its tasks in all applicable timeframes; from long-term planning on into and including real-time operations.</p>		
FirstEnergy	Disagree	<p>The Reliability Coordinator and Balancing Authority definitions proposed in the Functional Model do not match the current NERC Glossary definitions. Is the intent of the Functional Model definitions to drive changes or clarifications to the NERC defined terms? If not, then the FMWG may want to consider using the NERC defined terms in the Functional Model.</p>
<p>Response: The FMWG thanks you for your comment.</p> <p>The FMWG has proposed coordination of definitions between the Model and the Glossary in Section 11 “Terminology Changes in Version 5” of the Functional Model Technical Document. Version 5 contains terminology changes intended to improve consistency between the Model and the NERC Glossary, the Rules of Procedure (ROP) and Reliability Standards. The FMWG agrees on the need to have consistency in the definitions given in the</p>		

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Organization	Yes or No	Question 2 Comment
Model and Glossary, and intends to pursue this once Version 5 has been approved. The FMWG plan to submit a SAR to coordinate the definitions between the documents (as proposed in the table in Section 11) once Version 5 has been approved.		
American Electric Power	Agree	
BGE - Reliability & Compliance Assurance	Agree	
Bonneville Power Administration	Agree	
Flathead Electric Cooperative	Agree	
Independent Electricity System Operator	Agree	
Midwest ISO	Agree	
Northeast Power Coordinating Council	Agree	
SCE&G	Agree	
IRC Standards Review Committee	Agree	

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3. Do you agree with the proposed revisions to the Interchange Function (page 40) and Interchange Coordinator Entity (page 41) in version 5 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

Summary Consideration: The majority of stakeholders agreed with the revisions to the Interchange Function and the Interchange Coordinator Entity. One stakeholder suggested that the Model should recognize that many of the tasks required of the Interchange Authority/Coordinator have aligned with the technical specifications of the Tag Authority Service used under e-tagging by the sink Balancing Authorities and that retaining an Interchange Authority/Coordinator Entity in the Functional Model, as currently presented, conflicts with the approach taken for other functions. The FMWG disagrees and maintains that the functions of Balancing and Interchange are distinct, each with its own set of tasks and functional entity relationships.

Two stakeholders suggested that there is a problem with the standards whereby the V0 process took tagging process steps from Operating Policy 3 and assigned them to the Interchange Authority and that there is a current standard development project to address this and the functional model will need to be changed once the correction to the standards has been implemented. For Version 5, the FMWG did look at current Interchange Standards and incorporated terminology used in the standards into the Model and Technical Document. The FMWG will review the revised Interchange Standards when approved by NERC to determine if any revisions should be considered to the Functional Model for a Version 6.

Organization	Yes or No	Question 3 Comment
Duke Energy	Disagree	<p>It should be recognized that many of the tasks required of the Interchange Authority/Coordinator have aligned with the technical specifications of the Tag Authority Service used under e-tagging by the sink Balancing Authorities. Retaining an Interchange Authority/Coordinator in the Functional Model, as currently presented, conflicts with the approach taken for other functions:</p> <p>a) Reliability Coordinators are responsible for implementation of transmission loading relief procedures; as an industry we haven't attempted to take the technical specifications of what the TLR process does and try to split out a Transmission Loading Relief Authority/Coordinator function.</p> <p>b) BAs must utilize an EMS system in order to gather load, generation, Interchange information and balance resources appropriately; as an industry we haven't attempted to take the technical specifications of what an EMS does and try to split out an EMS Authority/Coordinator. Duke continues to assert that this function is not necessary and should be removed.</p>
<p>Response: The FMWG thanks you for your comment. The FMWG still holds that the functions of Balancing and Interchange are distinct, each with its own set of tasks and functional entity relationships. A corporate entity can directly perform both functions or have one or both functions performed by a third party under contract.</p>		
Midwest ISO	Disagree	We believe this is a movement in the correct direction. Still, there is a problem with the standards whereby the V0

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Organization	Yes or No	Question 3 Comment
		<p>process took tagging process steps from policy 3 and assigned them to the Interchanged Authority. The NERC Interchange Subcommittee is working on a draft standard to address this. Rather than codify the problems in the standards in the functional model, the functional model will need to be changed once the correction to the standards has been implemented.</p>
<p>Response: The FMWG thanks you for your comment. For Version 5, the FMWG did look at current Interchange Standards and incorporated terminology used in the standards into the Model and Technical Document. The FMWG will review the revised Interchange Standards when approved by NERC to determine if any revisions should be considered to the Functional Model for a Version 6.</p>		
<p>IRC Standards Review Committee</p>	<p>Agree and Disagree</p>	<p>We believe this is a movement in the correct direction. There is still a problem with the standards whereby the V0 process took tagging process steps from policy 3 and assigned them to the Interchanged Authority. The NERC Interchange Subcommittee is working on a draft standard to address this. The functional model will need to be changed once the correction to the standards has been implemented.</p>
<p>Response: The FMWG thanks you for your comment. For Version 5, the FMWG did look at current Interchange Standards and incorporated terminology used in the standards into the Model and Technical Document. The FMWG will review the revised Interchange Standards when approved by NERC to determine if any revisions should be considered to the Functional Model for a Version 6.</p>		
<p>American Electric Power</p>	<p>Agree</p>	
<p>Bonneville Power Administration</p>	<p>Agree</p>	
<p>FirstEnergy</p>	<p>Agree</p>	
<p>Independent Electricity System Operator</p>	<p>Agree</p>	
<p>Northeast Power Coordinating Council</p>	<p>Agree</p>	
<p>SCE&G</p>	<p>Agree</p>	
<p>US Bureau of Reclamation</p>	<p>Agree</p>	

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4. Do you have any other comments regarding the proposed revisions to the Functional Model? If yes, please provide comments in support of your answer in the comment area.

Summary Consideration: Several stakeholders suggested revisions to various sections of the Model. The FMWG felt that many of these suggested revisions were too specific or prescriptive. The Functional Model is designed to be a high level document so these suggested revisions were declined.

Other stakeholders suggested that the FMWG submit a SAR to make terminology consistent between various NERC documents. The FMWG has proposed coordination of definitions between the Model and the Glossary in Section 11 "Terminology Changes in Version 5" of the Functional Model Technical Document. Version 5 contains terminology changes intended to improve consistency between the Model and the NERC Glossary, the Rules of Procedure (ROP) and Reliability Standards. The FMWG agrees on the need to have consistency in the definitions given in the Model and Glossary, and intends to pursue this once Version 5 has been approved. The FMWG plan to submit a SAR to coordinate the definitions between the documents (as proposed in the table in Section 11) once Version 5 has been approved. Other minor edits were suggested and accepted by the FMWG.

Organization	Yes or No	Question 4 Comment
SCE&G	Disagree	
Midwest ISO	Disagree	The industry still needs to better define the role of the Planning Coordinator. A survey of the Interconnections and Regions would show there is not a common process or understanding of this function.
<p>Response: The FMWG thanks you for your comment. The FMWG disagrees. The FMWG formed a task force to do an in depth study of planning processes across the continent. The task force included members from each region (including several non-FMWG members) and Interconnection as well as representatives from RTOs. We concur that there is not a common process, but disagree that there is not a common understanding of this function. There are differences across North America in how integrated planning is performed. These are mostly organizationally driven differences. The FMWG's view is that as long as integrated planning is being conducted and done effectively, the Model should not specify one such approach over another. This means that the role of the PC should not be more narrowly defined, because to do so would inevitably conflict with practice in some jurisdictions. This also means that questions of the appropriateness and effectiveness of integrated planning in a particular jurisdiction must be addressed in NERC's reliability assurance and compliance processes, not in the Model.</p>		
Flathead Electric Cooperative	Disagree	I support previous commentators assertion that, "The Functional Model should include only those Functional Entities that exist, i.e. those that are in the NERC registry and must perform reliability tasks that directly impact the BES." I am not convinced it is useful to create additional entities in the functional model beyond required NERC registration functions. Rather than reducing reliability compliance gaps, this creates additional gaps and confusion and does impact compliance. For example in the drafting of PRC-006, "Applicability:4.1. Planning Coordinators4.2. Distribution Providers4.3. Transmission Owners

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Organization	Yes or No	Question 4 Comment
		with end-use Load connected to their Facilities where such end use load is not part of a Distribution Provider's load "In this case, there is no registered Planning Coordinator, so who is the distribution provider supposed to respond to? There is a Planning Authority registered. Why couldn't the model just be consistent with that and use Planning Authority? Creating extra defined terms and acronyms for their own sake, rather than using the existing language in existing reliability documents creates complexity without reliability benefit.
<p>Response: The FMWG thanks you for your comment.</p> <p>The FMWG does not agree on the need for change. The Model, by intent, includes entities that may not be required to register with NERC, such as the Market Operator and Transmission Service Provider, that have a relationship with entities that are required to register, where that relationship has reliability implications. In the FMWG's view, the inclusion of such entities adds clarity, not confusion.</p> <p>The question of the competing terms Planning Coordinator and Planning Authority has been recognized by the FMWG – see Technical Document, Section II, Chapter 11. The FMWG agrees with the commenter on the need for consistency, and believes Planning Coordinator is the more appropriate term. The FMWG intends to pursue the consistent use of PC within NERC once Version 5 has been approved. The NERC Glossary of Terms defines "Planning Coordinator" as "See Planning Authority". The two terms are equivalent in the Glossary.</p>		
Bonneville Power Administration	Disagree	No additional comments.
Northeast Power Coordinating Council	Disagree	No additional comments.
Bonneville Power Administration	Disagree	No additional comments.
Northeast Power Coordinating Council	Disagree	No additional comments.
Duke Energy	Agree	<ol style="list-style-type: none"> 1. SARS or errata changes or some other mechanism should be promptly initiated on approval of these Functional Model changes to align the terminologies used in the Functional Model, the Reliability Standards and the Glossary of Terms Used in Reliability Standards. The lack of this structure will cause confusion for users of these documents. 2. It is not clear what the term reliability related services, used on pages 30, 32, 33, 34, 39, 41, 49, 50, 52, 54, 55, and 56, refers to. This term needs to be defined. 3. There appears to be an inconsistency in the use of Confirmed Interchange v. Arranged Interchange. On page 32, number 21 states that the RC received notification of Confirmed Interchange changes from the BA. Page 35 number 25 states that the BA informs the RC of Arranged Interchange changes - it does not mention providing Confirmed Interchange changes to the RC. Page 42 number 8 states that the IC informs the RC of Confirmed Interchange revisions. The relationships between these three

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Organization	Yes or No	Question 4 Comment
		entities dealing with changes to Confirmed and Arranged Interchange need to be made consistent.
<p>Response: The FMWG thanks you for your comment.</p> <ol style="list-style-type: none"> The FMWG has proposed coordination of definitions between the Model and the Glossary in Section 11 “Terminology Changes in Version 5” of the Functional Model Technical Document. Version 5 contains terminology changes intended to improve consistency between the Model and the NERC Glossary, the Rules of Procedure (ROP) and Reliability Standards. The FMWG agrees on the need to have consistency in the definitions given in the Model and Glossary, and intends to pursue this once Version 5 has been approved. The FMWG plan to submit a SAR to coordinate the definitions between the documents (as proposed in the table in Section 11) once version 5 has been approved. The term “reliability-related services” is clarified in the Technical Document, Section II, Chapter 5. <p>The term "reliability-related services" means those services other than the supply of energy for load that are physically provided by generators, transmitters and loads in order to maintain reliability.</p> <p>Reliability-related services include voltage control and reactive power resources from generators, transmitters and loads. Certain transmission facilities can provide reactive support, but are not considered an Ancillary Service in the open access tariff, rather, they are considered part of basic transmission service. In addition, loads may provide reserves through load-shedding or demand-side management, and may also provide frequency response.</p> We concur and have revised task 25 under the BA from Arranged to Confirmed Interchange. (See page 39 of the redline version.) 		
BGE - Reliability & Compliance Assurance	Agree	<ol style="list-style-type: none"> The NERC Functional Model needs to recognize the use of LCCs under RTO Structures. The NERC Functional Model does not adequately address the roles of the LSE and DP under RTO Structures.
<p>Response: The FMWG thanks you for your comment.</p> <ol style="list-style-type: none"> The FMWG disagrees that the use of LCCs (Local Control Centers) should be recognized in the Model. In earlier versions of the Model, the Technical Document clarified the complementary roles of the LCCs and TOPs in the context of registration and compliance, namely their respective accountability for meeting standards requirements. In Versions 4 and 5 of the Model, registration and compliance matters were removed from the scope of the Model. As a result, it would be inappropriate to make the requested recognition in the Model. Please see the Technical Document, Section II, Chapter 10, regarding the roles of the DP and LSE in retail choice jurisdictions, which includes jurisdictions having an RTO structure. 		
FirstEnergy	Agree	<ol style="list-style-type: none"> We recommend the following revision to the task 5 of the Reliability Assurance Function to improve clarity, "5. Conduct readiness assessments as requested and as needed for certification evaluations."

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Organization	Yes or No	Question 4 Comment
		<p>2. We recommend the following revision to the definition of Planning Coordinator to improve readability, "The functional entity that coordinates, facilitates, integrates, and evaluates (generally one year and beyond) transmission facility, transmission service, and resource plans within a Planning Coordinator area and coordinates those plans with adjoining Planning Coordinator areas."</p> <p>3. With the addition of the phrase "generally one year and beyond" for the Planning Coordinator, Transmission Planner, and Resource Planner functions, the drafting team should consider adding a transmission planning as a task of the Transmission Operator for the time period of day-ahead, real-time, and up to one year beyond real-time.</p> <p>4. Under the INTRODUCTION SECTION (pg. 8 of the red-line) there is the sentence "The work performed to meet the requirements may be self performed or performed by others." It may need to be clarified that if work is "performed by others", the entity that delegates this work to "others" is still responsible for the requirements of the standards.</p> <p>5. Under terms used in the FM (pg. 9 of the red-line) the term "End-use Customer" could include the Distribution Provider as a party that serves the End-use Customer.</p> <p>6. Under the Compliance Enforcement function (pg. 18 of the red-line), another Task might be "Report non-compliance to applicable regulatory authority".</p> <p>7. Regarding Reliability Assurance and Reliability Assurer (pgs. 20 & 21 of red-line), the tasks and relationships specify CIP activities and programs. Although we understand the importance of CIP, the tasks and activities for CIP are already covered under Task #1 "Coordinate reliability assurance..." (pg. 20) and Item #1 "Coordinate reliability assurance..." (pg. 21).</p> <p>8. The capitalized term "Planning Coordinator Area" (pgs. 22 & 23 of red-line) is not defined in the Functional Model or NERC Glossary.</p> <p>9. Definitions - Several definitions of functional entities used in the Functional Model do not match the current NERC Glossary definitions. Is the intent of the Functional Model definitions to drive changes or clarifications to the NERC defined term? If not, then the FMWG may want to consider using the NERC defined term in the Functional Model. The entity definitions that are not consistent with the NERC Glossary include Planning Coordinator, Transmission Planner, Reliability Coordinator, Balancing Authority, Transmission Operator, Distribution Provider, and Purchasing-Selling Entity.</p> <p>10. Several terms used in the text of the Functional Model are not capitalized and may be NERC Glossary defined terms. The FMWG may want to review the document and capitalize certain NERC defined terms that are not currently capitalized. Some examples are the following: Pg. 30 of red-line - "cascading outages" could be changed to the NERC defined term "Cascading"; Pg. 39 of red-line - "real-time" could be changed to "Real-time"; Pg. 44 of red-line - "facility ratings" could be changed to "Facility</p>

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Organization	Yes or No	Question 4 Comment
		Ratings".
<p>Response: The FMWG thanks you for your comment.</p> <ol style="list-style-type: none"> The FMWG has removed bullet 5 as readiness assessments are no longer being performed under the ERO. The requested change is: "The functional entity that coordinates, facilitates, integrates, and evaluates (generally one year and beyond) <u>transmission facility, transmission service</u>, and resource plans within a Planning Coordinator area and coordinates those plans with adjoining Planning Coordinator areas." <p>The existing wording is: "The functional entity that coordinates, facilitates, integrates and evaluates (generally one year and beyond) <u>transmission facility and service plans</u>, and resource plans within a Planning Coordinator area and coordinates those plans with adjoining Planning Coordinator areas."</p> <p>The FMWG disagrees with the need to make the requested change (see underlined portions above). The existing wording adequately captures the types of plans addressed by the PC – transmission facility plans, transmission service plans and resource plans.</p> The FMWG disagrees with the need for the requested change. The request states: "3. With the addition of the phrase "generally one year and beyond" for the Planning Coordinator, Transmission Planner, and Resource Planner functions, the drafting team should consider adding a transmission planning as a task of the Transmission Operator for the time period of day-ahead, real-time, and up to one year beyond real-time." The question is therefore whether the existing Transmission Operation function adequately reflects planning Tasks in the short term, i.e., in the timeframe up to that of the TP. <p>In the current draft of Version 5, the TOP relationships reference the TOP's role with respect to restoration plans, maintenance and construction plans, and contingency plans. In the FMWG's view the TOP's role in planning is adequately recognized.</p> The commenter, in reference to the words: "The work performed to meet the requirements may be self performed or performed by others", states that it may need to be clarified that if work is "performed by others", the entity that delegates this work to "others" is still responsible for the requirements of the standards. <p>The FMWG notes that this is covered in the paragraph above the referenced sentence: "The Functional Model describes a functional entity envisioned to ensure that all of the Tasks related to its Function are performed. The Model, while using the term "functional entity", is a guideline and cannot prescribe responsibility. It is NERC's compliance processes, backed by regulatory authority, that specify the manner in which, a functional entity is "legally responsible" for meeting the standards requirements assigned to that functional entity."</p> The commenter states: "Under terms used in the FM (pg. 9 of the red-line) the term "End-use Customer" could include the Distribution Provider as a party that serves the End-use Customer." <p>The FMWG agrees. The definition was revised (page 11 of the revised redline version) to: "End-use Customer. The party served by a Load-Serving Entity (<u>energy</u>) and Distribution Provider (<u>wire service</u>)."</p> The commenter states: "Under the Compliance Enforcement function (pg. 18 of the red-line), another Task might be "Report non-compliance to applicable regulatory authority"." <p>The FMWG disagrees. While it is true and well understood that a number of governmental authorities have an oversight role respecting NERC and its processes, the FMWG does not believe there would be a benefit in having the Model go beyond describing reliability processes by describing associated regulatory oversight processes.</p> 		

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		<p>7. The commenter states: “Regarding Reliability Assurance and Reliability Assurer (pgs. 20 & 21 of red-line), the tasks and relationships specify CIP activities and programs. Although we understand the importance of CIP, the tasks and activities for CIP are already covered under Task #1 "Coordinate reliability assurance..." (pg. 20) and Item #1 "Coordinate reliability assurance..." (pg. 21).”</p> <p>The FMWG disagrees. The commenter is correct that CIP-related matters are implicit in the other Tasks and Relationships. However, the importance of CIP, and the conceptual difference between CIP threats and traditional threats to reliability (i.e., the actions of external saboteurs versus the actions of BES users, owners, and operators), warrants explicit mention of CIP in the Tasks and Relationships of the Model.</p> <p>8. The commenter states: “The capitalized term "Planning Coordinator Area" (pgs. 22 & 23 of red-line) is not defined in the Functional Model or NERC Glossary.”</p> <p>The FMWG agrees and we have revised the terms to “Planning Coordinator area”. (See pages 25 & 26 of the revised redline.)</p> <p>9. The commenter states: “Definitions - Several definitions of functional entities used in the Functional Model do not match the current NERC Glossary definitions. Is the intent of the Functional Model definitions to drive changes or clarifications to the NERC defined term? If not, then the FMWG may want to consider using the NERC defined term in the Functional Model. The entity definitions that are not consistent with the NERC Glossary include Planning Coordinator, Transmission Planner, Reliability Coordinator, Balancing Authority, Transmission Operator, Distribution Provider, and Purchasing-Selling Entity.”</p> <p>The FMWG has proposed coordination of definitions between the Model and the Glossary in Section 11 “Terminology Changes in Version 5” of the Functional Model Technical Document. Version 5 contains terminology changes intended to improve consistency between the Model and the NERC Glossary, the Rules of Procedure (ROP) and Reliability Standards. The FMWG agrees on the need to have consistency in the definitions given in the Model and Glossary, and intends to pursue this once Version 5 has been approved. The FMWG plans to submit a SAR to coordinate the definitions between the documents (as proposed in the table in Section 11) once Version 5 has been approved.</p> <p>10. The commenter states: “Several terms used in the text of the Functional Model are not capitalized and may be NERC Glossary defined terms. The FMWG may want to review the document and capitalize certain NERC defined terms that are not currently capitalized. Some examples are the following: Pg. 30 of red-line - "cascading outages" could be changed to the NERC defined term "Cascading"; Pg. 39 of red-line - "real-time" could be changed to "Real-time"; Pg. 44 of red-line - "facility ratings" could be changed to "Facility Ratings”.</p> <p>The FMWG agrees and has made the suggested revisions.</p>
Transmission Access Policy Study Group		<p>The Distribution Function includes (at page 46) designing and maintaining UFLS/UVLS equipment and providing and implementing load shedding, and the Distribution Provider Functional Entity description includes (at page 47) “Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority.” Similar characterizations of the DP as implementing UFLS/UVLS permeate the Technical Document. See, e.g., page 59 (“The Distribution Provider provides the facilities that could be used to shed load for emergency action.”); page 20 (“The Distribution Provider provides the switches and reclosers necessary for emergency action.”).</p> <p>TAPS is concerned that the Functional Model's assumption that the DP is the entity that owns and operates UFLS/UVLS equipment is not consistent with actual practice in many areas. For example, in some areas, UFLS/UVLS equipment is owned and operated by TOs, which can be a more efficient and equitable way of addressing involuntary curtailments than requiring each small DP to own and operate</p>

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		<p>UFLS/UVLS equipment that would operate on a far more granular basis than in the surrounding system, resulting in potentially discriminatory application of UFLS/UVLS requirements.</p> <p>In addition, TAPS is also concerned that the DP-focused UFLS/UVLS discussion in the Functional Model and Functional Model Technical Document not prejudice or otherwise affect the ongoing discussion in the UFLS/UVLS SDT regarding how it is determined, in a given area or region, which entity is responsible. Thus, TAPS recommends that the UFLS/UVLS discussions be modified to reflect the fact that in some areas, entities other than the DPs (e.g., TOs) own and operate UFLS/UVLS equipment. In TAPS' comments on the last posting of the Functional Model, submitted on August 19, 2009, TAPS pointed out that, contrary to the Functional Model's assumption, the Distribution Provider does not always own and operate UFLS/UVLS equipment (often it is owned and operated by Transmission Owners). The FMWG replied that it believes that TOs only own and operate UFLS when they are also serving end-use customers, and that in those cases, the Transmission Owners in question are already Distribution Providers by definition. In its response to TAPS' comments, the FMWG stated: "Absent any evidence, we are unable to accept the argument that having the Distribution Provider own and operate UFLS/UVLS equipment is inconsistent with the actual practice in the majority of the areas. "We believe that UFLS/UVLS equipment is generally located at the buses to which end-use customers are directly connected. While there may be situations where such is not the case, and the UFLS/UVLS equipment is located at a Transmission Owner's facilities to which no end-use customers are directly connected, and is by design located at such locations to trip lines/feeders to multiple DP facilities, the Functional Model does not preclude such an arrangement. "In fact, in many areas the DP does not own or operate UFLS/UVLS equipment.</p> <p>TAPS is providing a few examples for the Working Group's reference; this list is by no means exhaustive.</p> <ul style="list-style-type: none"> The Indiana Municipal Power Agency provides power supply service to 53 municipal electric utilities in Indiana and Ohio. None of these municipal utilities owns or operates either UFLS or UVLS equipment. Nor does IMPA own or operate either UFLS or UVLS systems. To the best of our knowledge, there is no UFLS or UVLS equipment connected directly to the feeders that serve any of IMPA's members. Instead, it is our understanding that the loads of IMPA's members have always been considered in the design of the UFLS and UVLS systems of the larger TOs to which these municipal electric utility systems are connected. These TOs include Duke Energy Midwest, Indiana Michigan Power Company, Northern Indiana Public Service Company and Southern Indiana Gas and Electric Company. Similarly, neither the Illinois Municipal Electric Agency, which is registered as a DP, nor any of its 30 members in the Commonwealth Edison and Ameren Services TO areas, own or operate UFLS or UVLS equipment. Commonwealth Edison and Ameren Services have load-shedding programs that, to the best of our information and belief, include consideration

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		<p>of IMEA load.</p> <ul style="list-style-type: none"> • In Lamoille County, VT, several small municipal utility distribution providers are surrounded by larger utility TOs (Green Mountain Power and Central Vermont Public Service Company), which own and operate UFLS equipment covering the municipal utilities on facilities owned and operated by the TOs. • The New Hampshire Electric Cooperative and Jewett City, CT have similar arrangements; load-shedding for NHEC is provided by the Public Service Company of New Hampshire, and load-shedding for Jewett City is provided by Connecticut Light & Power; both PSNH and CL&P are local operating companies of Northeast Utilities, which is the TO for the area. • UFLS for the ten members of the Piedmont Municipal Power Agency in South Carolina is provided by the TO, Duke, at the transmission level, pursuant to Duke Energy Carolinas' tariff. Similarly, the 19 distribution providers that comprise North Carolina Municipal Power Agency 1 do not provide UFLS. Duke Energy Carolinas owns and operates the UFLS Program that covers all loads within its Balancing Authority Area, including the NCMAPA1 members. • For UFLS purposes, the electrical load of the eleven members of the Alabama Municipal Electric Authority is considered part of Southern Company's electrical load. AMEA is covered by the UFLS capability of its TO, Alabama Power Company, under Southern Company Services, Inc.'s UFLS program. • in Iowa, the 33 distribution provider municipal utilities connected to G&T coops (NIPCO, CIPCO and Corn Belt) do not provide UFLS; instead, the TO coops include the municipal utility loads in their UFLS programs. <p>As these examples, which come from all over the Eastern Interconnection, illustrate, the current draft of the Functional Model is both an inaccurate description of how UFLS/UVLS equipment and operations are handled and an inappropriate pre-judgment of which entities should be responsible for load-shedding, which is a question currently under consideration by the SDT in Project 2007-01, Underfrequency Load Shedding.</p> <p>The following sentences should therefore be deleted from the Distribution Function and Distribution Provider Functional Entity portions of the Functional Model, with conforming changes to the Technical Document:</p> <p style="padding-left: 40px;">"Design and maintain protective relaying systems, under-frequency load shedding systems, under-voltage load shedding systems, and Special Protection Systems that interface with the transmission system." "Provide and implement load-shed capability."</p>

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		<p data-bbox="940 261 1990 347">“The Distribution Provider provides the switches and recloses that could be used to shed load for emergency action.” “Implements voltage reduction and sheds load as directed by the Transmission Operator or Balancing Authority. ”</p> <p data-bbox="846 370 2001 607">Deleting these sentences will both remove an incorrect assumption from the Functional Model and avoid prejudging the applicability of the standard being developed in Project 2007-01. Alternatively, if the Functional Model Working Group wishes to retain a description of how UFLS/UVLS functions are performed, the sentences quoted above should be revised to state that the DP “MAY design and maintain protective relaying systems...” “MAY provide and implement load-shed capability,” “MAY provide the switches and recloses that could be used to shed load for emergency action,” and “MAY implement voltage reduction and shed load as directed by the Transmission Operator or Balancing Authority.”</p> <p data-bbox="846 630 1990 1019">Identical language should be added to the Transmission Owner Function and Functional Entity descriptions. With this change, the Functional Model would adopt general language that recognizes the variation in how UFLS/UVLS functions are performed in the real world, would be fully consistent with the Functional Model’s descriptive (rather than prescriptive) purpose, and would be flexible enough to accommodate the outcome of the currently ongoing UFLS standard drafting process, Project 2007-01. As a further alternative, if the Functional Model Working Group feels that the Functional Model must address load shedding responsibility in greater detail, the load-shedding references in the Functional Model could be revised to track the current draft of the UFLS standard being developed in Project 2007-01, which we understand states that the DP provides UFLS unless another entity provides UFLS pursuant to an agreement. This UFLS Standard Drafting Team proposal is expected to be posted for another round of comments by the end of the year. In all events, however, the Functional Model cannot include the currently proposed language, which is not correct.</p>
<p data-bbox="92 1057 2001 1175">Response: The FMWG thanks you for your comment. The commenter states that in many cases it is the TO/TOP, not the DP, who owns/operates UFLS/UVLS. The commenter also states the FMWG’s response on this subject to the first posting of Version 5, including the statement that the entity that is the DP may also be a TO, and that in all or at least the large majority of cases, it is the DP, as the entity owning and operating the wires connecting the load to be shed, that performs the load shed.</p> <p data-bbox="92 1198 1990 1252">The FMWG agrees with your last suggestion that “DP provides UFLS unless another entity provides UFLS pursuant to an agreement.” This is explicitly within the current Model. The Distribution function task 3 states:</p> <p data-bbox="92 1274 1934 1328">3. Design and maintain protective relaying systems, under-frequency load shedding systems, under-voltage load shedding systems, and Special Protection Systems that interface with the transmission system.</p> <p data-bbox="92 1351 1787 1377">The Model also states (see Introduction section): “The work performed to meet the requirements may be self performed or performed by others.”</p>		

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The FMWG therefore believes that the current treatment of load shedding in the model is appropriate.		
SERC Planning Standards Subcommittee	Agree	The revision summary is incomplete in that it does not capture the above mentioned changes.
Response: The FMWG thanks you for your comment. The FMWG has revised the Revision Summary to include revisions mentioned above.		
US Bureau of Reclamation	Agree	The revisions need to bring the sections into similar format. The "Introduction to the..." sections were beneficial and should be developed for all the functions.
Response: The FMWG thanks you for your comment. The "Introduction to the ..." sections were added in previous versions of the Functional Model to those Functional Entities that were judged in greatest need of clarification. The FMWG will consider extending this in Version 6 to all of the Functional Entities in the Model.		
Transmission Agency of Northern California	Agree	The Transmission Agency of Northern California (TANC) believes that the NERC Compliance Registry's dependence on the NERC Functional Model has an adverse impact on entities with unique business models. TANC maintains a culture of compliance, yet TANC's business model does not comport with the Functional Model. For most of the forty-six reliability standards currently applicable to TANC's functional registrations (i.e., Transmission Owner, Transmission Service Provider, Transmission Planner), TANC delegates compliance responsibility to other entities that are also registered for the same functions. TANC has never performed most of the delegated responsibilities, and the entities that have been delegated TANC's compliance responsibilities have, for the most part, always performed these responsibilities. For many of the remaining functionally applicable standards, TANC is compelled to maintain documentation indicating that the standards are not applicable to TANC for a variety of reasons (e.g., TANC does not serve load. TANC does not have a Special Protection System. TANC does not have an Underfrequency Load Shedding program. TANC does not own an Undervoltage Load Shedding program/system.). Due to the Compliance Registry's dependence on the Functional Model, TANC is required to expend significant resources on documentation related activities that do not further reliability of the Bulk-Power System and coordination with other Registered Entities that are already independently obligated to comply with the same reliability standards' requirements.
Response: The FMWG thanks you for your comment. The FMWG recognizes that the Model does not and can not align with all business models. The FMWG, from its beginning, has also made it clear that the Model does not and should not force an entity to change its business model. As a result, for an organization such as TANC there must be a reconciliation of its business model to NERC compliance registry and compliance processes. Of necessity, this must be done within those compliance processes, where the specifics of a particular situation can be addressed, not within the Model. It is unfortunate if this results in organizations such as TANC expending significant resources, but this is not a matter the FMWG can remedy.		

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Independent Electricity System Operator	Agree	We commend the Functional Model Working Group for the significant thought and effort that went into the version 5 revisions. Finally, we have one editorial comment. Regarding Function - Interchange, bullet #3, there is an extra comma after "collect" that needs to be removed.
Response: The FMWG thanks you for your comment. The FMWG agrees, and will remove the comma.		
American Transmission Company		<p>We propose the following comments:</p> <ol style="list-style-type: none"> 1. Add version and date information in the footer area, so that it appears on every page. This will help users of selected hardcopy pages know which version they have. 2. Add the definitions for the Operating Horizon (operating timeframe) and the Planning Horizon (planning timeframe) to the list of terms (see page 9). Then use these terms to add clarity to applicable references in the Function Model and Technical Document. 3. Revise Transmission Planner Relationship #6 to, "Reports and coordinates its Bulk Electric System expansion plans to affected Reliability Assurers, Planning Coordinators, Transmission Planners, Transmission Owners, Resource Planners, Transmission Service Providers, Transmission Operators, and Balancing Authorities." (see page 26). Remove the reference to reporting implementation of plans. Transmission Owners implement BES expansion plans (see related TO comment) and should report the status of its implementation to its Transmission Planner and others. It should not be the task of the Transmission Planner to be the conduit of this information to others. Also, BES expansion plans should be provided to, and coordinated with several additional functional entities. 4. Expand Transmission Ownership Task #4 to, "Design and install owned facilities . . . to implement its Transmission Planner's transmission expansion plans." (see page 45). 5. Add Transmission Ownership Task #6: Monitors transmission expansion plan implementation status. 6. Add Transmission Owner Relationship #12: Reports on and coordinates its Bulk Electric System expansion plan implementation with affected Reliability Assurers, Transmission Planners, Planning Coordinators, Transmission Operators, Reliability Coordinators, Resource Planners, and Transmission Owners. 7. Expand Distribution Task #4 assure awareness that the scope of this task includes both manual and automatic load shedding is with wording like, "Provide and implement both manual and automatic load-shed capability." (see page 47). 8. Revise Planning Coordinator paragraph 3 (page 11, Technical Document) to remove the assertion that 'the Planning Coordinator functional entity may be the Regional Entity'. There must be specific entities that are registered as a "Planning Coordinator" to be accountable for any requirements in the Reliability

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		Standards that apply to the Planning Coordinator. A Regional Entity can not register itself as a Planning Coordinator and be accountable to itself, so it can not be a Planning Coordinator. On the other hand, a Regional Entity may perform actions and produce documents that an accountable Planning Coordinator may use to fulfill its compliance obligation to a Planning Coordinator requirement.
<p>Response: The FMWG thanks you for your comment.</p> <ol style="list-style-type: none"> The FMWG agrees, and will add version and date information in the footer area on each page. The commenter states: “Add the definitions for the Operating Horizon (operating timeframe) and the Planning Horizon (planning timeframe) to the list of terms (see page 9). Then use these terms to add clarity to applicable references in the Function Model and Technical Document.” The FMWG disagrees. None of the terms: Operating Horizon, operating timeframe, Planning Horizon, and planning timeframe are defined terms in the NERC Glossary. The Model uses the term “generally” in describing the time boundary between the operating and planning timeframes, to reflect the fact that there is no single time boundary that is applicable in all circumstances in all jurisdictions. Therefore, the absence of precise definitions provides needed flexibility to accommodate differences between jurisdictions. The commenter states: “Revise Transmission Planner Relationship #6 to, “Reports and coordinates its Bulk Electric System expansion plans to affected Reliability Assurers, Planning Coordinators, Transmission Planners, Transmission Owners, Resource Planners, Transmission Service Providers, Transmission Operators, and Balancing Authorities.” (see page 26). Remove the reference to reporting implementation of plans. Transmission Owners implement BES expansion plans (see related TO comment) and should report the status of its implementation to its Transmission Planner and others. It should not be the task of the Transmission Planner to be the conduit of this information to others. Also, BES expansion plans should be provided to, and coordinated with several additional functional entities.” The current wording is: “Reports on and coordinates its Bulk Electric System expansion plan implementation with affected Transmission Planners, Resource Planners, Transmission Owners, Transmission Operators and Reliability Assurers.” The requested change would therefore add a reference to PCs and TSPs. The FMWG agrees that the PCs and TSPs should be added (we have added them in the Model), but feel that the BA does not use long term planning information. The FMWG disagrees on the requested removal of the reference to the TP reporting on the implementation of plans. Such reporting is a key aspect of communicating updates to the TP’s plans to other entities. In addition, it is noted that another key aspect of transmission planning is the identification of future needed transmission that may not be assignable to a specific TO. The commenter states: “Expand Transmission Ownership Task #4 to, “Design and install owned facilities . . . to implement its Transmission Planner’s transmission expansion plans.” (see page 45).” The current wording is: “Design and install owned facilities classified as transmission and obtain associated rights-of-way.” The FMWG disagrees with the need to add the underlined text, for two reasons. The suggested change, by introducing the TP, is a relationship matter, and we feel this is covered in items 6 and 8 in the Transmission Ownership function. Second, and more fundamentally, the change, by adding specificity, implies that the TP’s plans drive the design and installation of new facilities. This would therefore not include cases where the initiation of the design was by the TO. As a result, the FMWG believes it to be preferable not to add the additional specificity. 		

Consideration of Comments on Functional Model Version 5

Organization	Yes or No	Question 4 Comment
		<p>5. The commenter states: “Add Transmission Ownership Task #6: Monitors transmission expansion plan implementation status.”</p> <p>The FMWG disagrees. The current version of Task 6 is: “Provides transmission expansion plans and changes to the Planning Coordinator and Transmission Planners”. In order to be able to provide such changes the TO must monitor its planned facilities. The requested wording addition therefore need not be made a separate Task.</p> <p>6. The commenter states: “Add Transmission Owner Relationship #12: Reports on and coordinates its Bulk Electric System expansion plan implementation with affected Reliability Assurers, Transmission Planners, Planning Coordinators, Transmission Operators, Reliability Coordinators, Resource Planners, and Transmission Owners.”</p> <p>The FMWG disagrees. The current wording in TO Relationship 6 is: “Provides transmission expansion plans and changes to the Planning Coordinator and Transmission Planners.” The FMWG believes that this is adequate – monitoring is included logically in being able to provide changes (as noted above). In addition, It is not necessary for the TO to communicate with entities other than the PC. The PC and TP are aware of all of the entities that need to be informed. This burden of notification should not be placed on the TO. Note that the Model does not preclude such additional communication; it simply does not specify it.</p> <p>7. The commenter states: “Expand Distribution Task #4 assure awareness that the scope of this task includes both manual and automatic load shedding is with wording like, “Provide and implement both manual and automatic load-shed capability.” (see page 47).”</p> <p>The FMWG disagrees on the need to specify both manual and automatic load shed. From the reliability perspective of the Model the essential aspect is that the load be shed, not the specific means by which this is done.</p> <p>8. The commenter states: “Revise Planning Coordinator paragraph 3 (page 11, Technical Document) to remove the assertion that ‘the Planning Coordinator functional entity may be the Regional Entity’. There must be specific entities that are registered as a “Planning Coordinator” to be accountable for any requirements in the Reliability Standards that apply to the Planning Coordinator. A Regional Entity can not register itself as a Planning Coordinator and be accountable to itself, so it can not be a Planning Coordinator. On the other hand, a Regional Entity may perform actions and produce documents that an accountable Planning Coordinator may use to fulfill its compliance obligation to a Planning Coordinator requirement.”</p> <p>The FMWG disagrees. From the perspective of the Model, a Regional Entity can not be excluded from performing as a PC, and in fact there are examples of this. In such cases, NERC has processes in place to ensure compliance accountability that addresses the type of concern raised. The associated registration process is outside the scope of the Model.</p>
American Electric Power	Agree	