NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name: Vince Kaminski		
Allegheny Electric Cooperative, Inc.		
717-901-4496		
Vince_Kaminski@ccsenergy.com		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☐	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	X	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
X RFC	☐	5 — Electric Generators
☐ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   X Yes

   ☐ No

   Comments Allegheny has no comments on this section at this time.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   X Yes

   ☐

   Comments Allegheny has no comments on this section at this time.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   Comments While the revision shows that the Transmission Owner (TO) may serve as the "Distribution Provider" (DP), it does not put in place, recognize and correct the fact that in RTOs (and possibly other structures) the TO, acting as an "upstream" TO/DP may be performing the functions of certain "downstream" DPs and LSEs—specifically municipal and cooperatives served from the TOs transmission system. Yet under the guidelines of the original NERC functional model, this resulted in many downstream DPs and LSEs being registered for various standards/functions. Consequently two or more entities may be registered to perform the same reliability function. I don't believe this was ever NERC's intent and should be clarified and those downstream DPs/LSEs removed from the registry for those duplicative functions.

   X No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   X Yes

   No

   Comments Allegheny has no comments on this section at this time.

5. 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.

   Yes

   X No

   Comments Allegheny has no comments on this section at this time.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments

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

   ☐ Yes

   ☐ No

   Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	John Sullivan	
Organization:	Ameren	
Telephone:	(314) 554-3833	
E-mail:	JSullivan@ameren.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☐	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☐ **RFC**	☐	5 — Electric Generators
☐ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

5. 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.

   ☐ Yes

☐ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments The language for the Transmission Planner in the Functional Model Technical Document appears to include responsibilities involving resource adequacy. Such responsibility belongs to the Resource Planner. The document should be modified to remove such responsibility from the Transmission Planner.

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

☐ Yes
☐ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Thad Ness	
Organization:	AEP	
Telephone:	614-716-2053	
E-mail:	tkness@aep.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☒ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☒ **RFC** ☐ **SERC** ☒ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☒	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments The V4 concept emphasizes that the fundamental planning process and principles, as detailed in the TPL standards, need to take place at all levels of planning, regardless of industry organizational structures. It also acknowledges that the Transmission Planner (TP) needs to integrate generation resources into the transmission plans in order to ensure Bulk Power System reliability. With this acknowledgement, a separate functional entity is not necessary to ensure that generation resources are integrated into the transmission plans. The concept of the Planning Coordinator (Planning Authority) having a wide-area scope is valid, however, this concept is not readily transferable to all parts of North America. This wide-area scope can be covered in a wide variety of ways, including RTOs/ISOs, Regional Entities and other regional transmission planning processes. V4 states that TPs may group together to provide this wide-area scope. In addition, Order 890 requires an open and coordinated regional transmission planning process that greatly facilitates this wide-area scope. In creating the "enhanced" Transmission Planner function and removing the Planning Coordinator function, the requirements that only apply to the Planning Authority/Planning Coordinator must become applicable to the "enhanced" Transmission Planner. A mechanism to make the appropriate changes to the standards and to ensure that these functions continue to be performed must be developed before these changes are enacted.

   AEP notes that the 1st posting of TPL-001-1 contained a requirement (R5) that addresses wide area coordination. That requirement can readily be changed to assign the requirements to distribute and coordinate assessments to the "enhanced" Transmission Planner. The Regional Entity oversight, combined with these other mechanisms, will ensure that individual transmission plans are coordinated and communicated over a large geographic area. The proposed "enhanced" TP will allow the TPL standard under development to focus on the fundamental planning requirements, without having to assign specific requirements to individual entities that may not align with existing organizational structures.

   There are, however, a few changes in Transmission Planning Function, Tasks 4, 5 and 5.d, which should be modified to avoid confusion. Tasks 4, 5 and 5.d include development and report on implementation of resource plans, which are covered in the responsibility of the Resource Planner. The Transmission Planner receives information on resource plans from the Resource Planner, rather than develop the resource plan. Specifically, AEP suggests the following changes:

   Task 4: Remove "and resource" to read "Coordinate with adjacent and overlapping Transmission Planners so that system models ~~**and resource**~~ and transmission expansion plans take into account modifications made to adjacent and overlapping Transmission Planner Areas".

Task 5: Remove references to "resource" to read "Evaluate, develop, document, and report on ~~**resource and**~~ transmission expansion plans for the reliability area. Verify that the integrated plan meets Reliability Standards, and, if not, report on potential transmission system ~~**and resource**~~ adequacy deficiencies and provide alternative plans to mitigate identified deficiencies"

Task 5.d: Remove "and resource plan" to read "Monitor, evaluate and report on transmission expansion plan ~~**and resource plan**~~ implementation".

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes

☒ No

Comments: Suggested re-write of the LSE description in the Technical document

The Load-Serving Entity (LSE) arranges for the provision of energy to its end-use customers, but does not include distribution services ("wires"). **The LSE defined in the Functional Model is not to be confused with or equated to the LSE as defined in any tariff or market rule.**

Organizations serving as an LSE may; be a Generation Owner and therefore self-provide capacity and energy requirements, have contracts with other Generator Owners for capacity and energy, purchase capacity and energy from a Purchasing-Selling Entity, Competitive Supplier or Market Operator. An LSE may employ a combination of these options to serve the LSE's customers.

The Load-Serving Entity will report a resource plan to serve its load to its Balancing Authority. The Balancing Authority forwards this information to the Reliability Coordinator for day-ahead analysis.

The LSE may self-provide certain reliability-related services or contract for reliability-related services through a Market Operator (if the LSE is part of an Organized Market or Pool) or directly from other reliability-related service providers.

Suggested added distinction to the Functional Model definition

Consider adding a task that says;

Provides, or procures for provision, Provider of Last Resort (POLR) or Default Provider service.

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

5. 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.

☒ Yes
☐ No

Comments The Functional Model should highlight that agreements or formal understandings among "enhanced" Transmission Planners need to be in place to ensure coordination of planning responsibilities and accountabilities.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☒ No

Comments Yes, the Planning Coordinator Entity should be eliminated and the Planning Reliability Function should be expanded. However, the Transmission Planner responsibilities were expanded too much when resource adequacy was included because such responsibilities would be duplicative to the responsibilities of the Resource Planner. The responsibility for resource planning belongs with the Resource Planner and the Transmission Planner should have access to the Resource Planners' plans and include them in the Transmission Planning Process. Several changes in Section 6 - Transmission Planner are required to eliminate this confusion. Below are suggestions that the team should consider:

Paragraph 1:

The Transmission Planner ensures a long-term (generally one year and beyond) plan is available that reflects the integration of the resources determined by the Resource Planner ~~for adequate resources~~ and the transmission needed to deliver those resources to customer loads within its Transmission Planner Area or to other Transmission Planner Areas. The Transmission Area encompasses a defined area and the customer demands therein. It may be smaller than, equal to, or larger than that of a Reliability Coordinator.

Paragraph 3 Last Sentence: It will also evaluate the impact of revised transmission and generator in-service dates on the transmission ~~and resource adequacy~~ plans and the ability of the revised plan to reliably serve the load.

Paragraph 4: Delete the entire paragraph that begins – "In its evaluation of resource plans … ". This paragraph is confusing the relationship between the RP and the TP and implies that the TP is responsible for resource adequacy.

Paragraph 7:
The Transmission Planner is also expected to verify that its plans for new or reinforced facilities meet Reliability Standards or identify the ~~resource or~~ transmission deficiencies. The Transmission Planner is to work with the Resource Planner(s) and other Transmission Planner(s) to identify potential alternative solutions, including transmission and resource solutions proposed by stakeholders to meet interconnected bulk electric system requirements.

Last bullet: The impact of revised transmission and resource in-service dates on transmission ~~and resource~~ adequacy.

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

☒ Yes
☐ No

Comments The Technical Document should highlight that agreements or formal understandings among "enhanced" Transmission Planners need to be in place to ensure coordination of planning responsibilities and accountabilities.

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Jason Shaver	
Organization:	American Transmission Co.	
Telephone:	262 506 6885	
E-mail:	jshaver@atcllc.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☒ **MRO**	☐	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☒ **RFC**	☐	5 — Electric Generators
☐ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments The team needs to further clarify the functions assigned to the Reliability Assurer. For example in the technical document they have the RA listed as performing "readiness evaluations". Is this intended to mean the "NERC Readiness Evaluations"?

   Did the team intend to drop the regional resource adequacy evaluations, evaluations of protection systems, readiness assessments, and disturbance analysis evaluations from the Functional Model as tasks for the Reliability Assurer? Those tasks are listed in the Functional Model Technical Document as to be performed by the Reliability Assurer.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

Comments Overall comment on this change:

ATC does not agree with moving the tasks of the Planning Coordinator (PC) into the Transmission Planner's (TP) role. This change increases the confusion between local planning requirements and regional planning requirements which in our view is the benefit of having a Planning Coordinator and Transmission Planner.

Functionally the change will result in Transmission Planners (both TP and PC) filing exceptions to requirements with their Regional Entities. ATC believes that this is will happen because the 82 entities currently registered as Planning Authorities (PA) (PC is used in standards but PA is used for NERC registration) will be moved into the TP role. Exceptions will be filled on a regional / local planning relationship bases likely with no NERC wide process on how requirements will be divided up.

ATC believes that the Team should do more to develop the PC and TP separately and not work on combining these roles.

Specific Comments:

1) The proposal for a "Layered" Transmission Planner function leads to more ambiguity on who is accountable for the requirements in current and future standards. The functional model should seek to provide clarity of roles, not introduce additional ambiguity. We do not seek an authoritative role for RTO planners, but this proposal provides no function for regional coordination other than the TP function. We found that just about every task and relationship

described was a shared accountability and this is likely to create difficulties in writing future standards.

2) The extra breadth of tasks and relationships for the Transmission Planner to critique, report and propose mitigation plans for Resource Adequacy plans crafted by LSEs and Resource Planners does not fit well with the stand alone transmission owner business model.

3) The broadening of an existing Function (Transmission Planner) with such an extensive revision of tasks creates great concerns for incumbents already registered in that function. Existing TPs have an understanding of the approximate scope and scale of the mandatory requirements expected from them. Future standards requirements may be unreasonably difficult to ballot since there will not be clarity as to which "layer" of TP will be accountable and agreement will not be in place to assign these proposed requirements.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

5. 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.

☒ Yes
☐ No

Comments The document needs to address its role in influencing changes to the NERC Registration Process and existing / future Reliability Standards.

Questions:

Will this version likely result in NERC modifying its registration process for Transmission Planner?

What should happen to those 82 entities that are currently registered as a Planning Authority?

Will approval by the Standards Committee likely trigger the creation of Standard Authorization Requests (SAR) in order to align Standards to the functional model?

Originally the Functional Model Document was used as a reference for assigning NERC Policies to NERC Standards. That effort is now over and NERC has enforceable Standards. It seems that the Functional Model Team is using this version to highlight something that may be wrong with existing NERC standards and NERC's Registration efforts. If the Team believes that something is not correct with approved Standards then they should sponsor a SAR to change what is needed. ATC is concerned that this is a back door way to change/influence Standards.

It is our position that the Functional Model Document serves two fundamental purposes:

1) Documents the responsibilities specified in approved NERC standards
2) Used as a reference document for Standard Drafting Teams to aid in the selection of Applicable entities

Lastly, the NERC Standards Committee recently approved a process for Standard Drafting Teams to get advice from the Functional Model Team when questions in the area of Applicability arise.

How will the Team balance existing applicability responsibilities in approved Standards with proposed applicability responsibilities in proposed standard? (Basically FM Version 3 versus FM Version 4) This ultimately could lead to wide scale confusion within the industry on who will have to comply with NERC Standards.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments See our comments to question 1

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments See our comments to question 2

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

☐ Yes
☐ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments

NERC Reliability Functional Model Version 4
Comments from Bonneville Power Administration
April 4, 2008

Although we realize that the NERC Functional Model is designed to provide guidance to NERC standards drafting teams and does not have compliance requirements, this does not preclude it from having direct impact on how standards are developed. Therefore, we feel that the version 4 tasks for "Reliability Assurer" are very open to interpretation. This could lead to reliability standards drafting teams overlooking important tasks that should get defined in the standards, the ultimate place where duties are defined and assigned.

We find the replacement of "Regional Reliability Organization" with "Reliability Assurer" troubling. The old Regional Reliability Organization term makes more sense and clearly describes the role of Regional Reliability Organization leading up to the Electric Reliability Organization.

Regional Reliability Organizations also have standards that are directly applicable and perform very necessary functions.

The creation of new functional model terms will require changing existing reliability standards to match the new terms. Having differences in terms between the functional model and the standards will lead to confusion for the implementing organizations and standards drafting teams.

We would like to suggest referencing the registration criteria as well as the technical document. The industry has much confusion on how these make a package.

We would like clarification regarding the change between Balancing Authority Area and reliability area. Reliability area needs to be more definitively defined.

Transmission Planning has omitted the system modeling requirements function listed in Version 3. Although we realize that the standards themselves ultimately provide for this task, the guiding principals of the functional model clearly states that the model must be complete, so as to include all reliability Tasks.

We have some concern with regards to Version 4's Load Serving Entity's task of "communicate requests for voluntary load curtailment during emergency conditions as directed by the Balancing Authority, Transmission Operator and Distribution Provider." Depending on the entity, an LSE might not need to communicate requests for voluntary load curtailment. Nor is the task for voluntary load curtailment listed anywhere in the standards. Rather, the LSE is to comply with all directives from the Transmission Operator, unless actions would violate safety equipment, regulatory or statutory requirements. It would be appropriate to remove the "voluntary" from the task.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Hugh Owen	
Organization:	Chelan County Public Utility District	
Telephone:	509 661 4319	
E-mail:	hugh.owen@chelanpud.org	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☒ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

5. 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.

   ☒ Yes

☐ No

Comments

Regarding Responsible Entity – Interchange Authority

Relationship with Other Responsible Entities

Ahead of Time

"1. Receives requests from Purchasing-Selling Entities to implement Interchange Schedules"

is no longer consistent with the relationship defined for the Purchasing- Selling Entity

"2. Submits requests to Interchange Authorities to implement Interchange Transactions."

In one place schedule is used in the other transaction is used. This discrepancy should be resolved.

.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

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

☒ Yes
☐ No

Comments

This a comment about Section 1 subsection 5 - Interchange Authority

The following paragraph should be rewritten/deleted to remove the opinions of the Functional Model Working Group on how this function should be assign to a responsible entity and the subsequent discussion about Sanctions.

"While the approval/denial process may utilize tools (such as computer software and communication protocols), the Model envisages that the Interchange Authority will be assigned to an actual organization. Sanctions for failure to comply with the Interchange Authority standards requirements can only be levied against an organization. A Balancing

Authority may serve as its own Interchange Authority or have this service provided by a separate organization"

The paragraph as written seems to deviate from Guiding Principle #4 of the Functional Model itself that says:

"The Model is a guideline that describes reliability Tasks and interrelationships between the entities that perform them - it is not prescriptive. In particular, the Model does not address requirements for registering or becoming certified as a Responsible Entity, or the delegation or splitting of responsibility for meeting standards requirements."

And from the Technical Document's own text which states in Section 2, subsection 1 General Clarifications of the Functional Model

"The NERC Reliability Functional Model ("the Model") does NOT address:
- *Entity Certification*
- *Registration*
- *Compliance*
- *Sanctions"*

For example, the phase "the Model envisages" is unique to this section of the document. It is probably a euphemism. Perhaps influenced by the opinions expressed in the working group in Section 2, subsection 9- Implementing the Interchange Authority Function where the working group opines that the BA is the logical entity to assign this function and a convenient one to levy a sanction if needed.

The entire text titled "Potential Solutions" in that section (Section 2, subsection 9) under should be eliminated. The working group is advocating for a solution to a problem that is outside the scope of the functional model.

For example, an equally compelling argument could be made that the BA should not be the responsible entity for this function. The ultimate goal of reliability is best served by performing the IA function on an interconnection wide basis. The WECC is well on the way to achieving this result with implementation of the WIT. When performed on a interconnection-wide basis it is no longer within the control or power of an individual BA to ensure that it is performed, without fail, as proscribed by mandatory standards, across the entire interconnection. If the responsibility is given to the BA, the BA may decide that in order to ensure compliance (avoid sanctions), it must back-away from the interconnection-wide IA function and revert back to performing the IA functions only with its neighbors. This would be an unfortunate result. The need to identify a sanctionable entity should not be allowed to diminish the ultimate goal of increased reliability.

But that is for the NERC standards process to sort out.

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Karl Kohlrus	
Organization:	City Water, Light & Power - Springfield, IL	
Telephone:	217-321-1391	
E-mail:	karl.kohlrus@cwlp.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☒ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments I liked the term "Authority" better than "Assurer".

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments Planning should have parallel functions to Operations. The Planning Reliability Function and the Planning Coordinator Entity should not have been eliminated.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

5. 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.

☐ Yes
☒ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments I don't like the term "Assurer". You must be able to come up with a better term, e.g. oversser, etc. Sorry, I'm not much help.

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments Planning should have parallel functions to Operations. The Planning Reliability Function and the Planning Coordinator Entity should not have been eliminated.

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

☐ Yes
☒ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Michael Gildea	
Organization:	Constellation Energy Group	
Telephone:	410 – 470 - 2644	
E-mail:	michael.gildea@constellation.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
X☐ **ERCOT** **X☐ FRCC** **X☐ MRO** **X☐ NPCC** **X☐ RFC** **X☐ SERC** **X☐ SPP** **X☐ WECC** ☐ **NA – Not Applicable**	X☐	1 — Transmission Owners
	☐	2 — RTOs and ISOs
	X	3 — Load-serving Entities
	☐	4 — Transmission-dependent Utilities
	X☐	5 — Electric Generators
	X☐	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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   X☐ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   X☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   X☐ No

Comments

Constellation supports the comments submitted by EPSA and provides the following additional comments. The proposed revisions to the Function Model are patently intended to facilitate changes to the registry criteria that would allow NERC to register competitive retail marketers that do not own or operate physical assets ("CRM") as Load-Serving Entities ("LSEs"). NERC should not pursue this results-oriented modification to the Functional Model until it has completed its assessment of the need for changes to the registry criteria, which may result in an approach other than simply changing definitions in order to force CRMs into the LSE classification. NERC is undertaking a workshop in Houston, Texas on April 15th, 2008 to explore this subject. For NERC to suggest modifications to its functional model dealing with LSEs prior to that workshop presupposes the outcome of that workshop. Constellation Energy intends to participate in the April 15th workshop and hopes that this workshop focuses on first identifying any "reliability gaps" that may exist and, if they do exist, then discuss how best to address such gaps.

It is difficult to make meaningful changes to the functional model or registration criteria without first identifying any problem areas that motivate the need to change the funtional model or registration criteria. NERC has yet to explicitly identify the perceived reliability gap that it

claims exist without including CRMs in the LSE segment. Constellation Energy has closely examined each LSE Requirement and has not yet been able to identify any reliability gaps that would be filled by registering CRMs. Indeed, our inspections of non-asset owning competitive retail operations, which generally are registered as PSEs, displays that the functions they perform are very similar to the functions that large power marketing shops, also registered as PSEs, perform. These activities include buying and selling energy and capacity, purchasing transmission and scheduling power. The main difference lies in the quantities of power involved.

In short, while NERC's early efforts were to develop a Functional Model which then was used to develop registry criteria, the changes proposed here do not reflect an objective assessment of functions, or an understanding of the CRMs' business model, but instead are motivated by a desire to reform the Functional Model in a manner that will support a change to registry criteria that are still under evaluation. This puts the cart before the horse and undermines the processes that NERC has initiated to consider all options to deal with CRM registration issues and which may support alternative changes to the Functional Model, such as modifying the PSE tasks and relationships to incorporate discrete activities that CRMs undertake with respect to end-use customers. Accordingly, NERC should delay consideration of revisions to the LSE elements of the Functional Model until it completes its assessment of the registration issues surrounding CRMs.

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

5. 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.

   ☐ Yes
   ☐ No

   Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

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

   ☐ Yes
   ☐ No

   Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name: Charles W. Rogers		
Comsumers Energy		
(517) 788-0027		
E-mail: cwrogers@cmsenergy.com		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments This change removes the entity and responsibility for wide-area Planning oversight. The Transmission Planner is a far-more constrained entity, and, while it has the responsibility to coordinate with other nearby Transmission Planners, it does not have the responsibility, or even ability, to effectively assure that the Planning functions address wider-area concerns. In the operating realm, the GO and TO perform the local-area operating functions, and, among other responsibilities, the RC assures that their actions are proper and acceptable in the wider-area perspective. A similar oversight/coordination responsibility needs to remain for the planning realm.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments Since we disagree with the removal of the Planning Coordinator function and responsibilities, we also disagree with the removal of the reference to that function within TO.

5. 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.

☐ Yes
☒ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments The Transmission Planner alone is not capable of providing wide-are Planning Reliability, no more than the Transmission Operator is capable of providing wide-area Operating Reliability. We understand that the DT feels that the proposed Transmission Planner definition incorporates tiered functional responsibility, but we feel instead that a wide-area planning responsibility must be specifically defined within the FM.

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

☐ Yes
☐ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments We feel that the responsibility for Protection Systems does not receive the proper emphasis, currently being reflected as minor mention within the TO and GO functions. This has the effect of burying the responsibility for these highly critical components of the BES into entities that otherwise have little understanding for the impact of these systems, and certainly make the applicability of the PRC-series standards more difficult to define.

We recommend instead that the FM explicitly define a new entity, that of Protection System Owner. A suggested definition of this entity is included here (we are confident that the NERC System

Protection and Control Task Force, reporting to the Planning Committee, would be pleased to assist the DT with further fleshing out this definition and the associated responsibility description) :

Protection System Owner – Entities that own and/or operate protective relaying and/or control systems including one or more of the following elements:

- ◊ Relaying systems applied to protect transmission facilities operated at 100 kV and above, including transformer banks with low-voltage terminals operated at 100 kV and above.
- ◊ Underfrequency load shedding systems applied within the associated Regional underfrequency load shedding programs.
- ◊ Undervoltage load shedding systems applied to augment the reliability of the interconnected system.
- ◊ Special Protective Systems applied within Regional criteria.
- ◊ Generator Protection systems.
- ◊ Generation control systems that directly affect generating plant availability and capability, such as excitation systems.

Depending on the local system topology, the contractual agreements in place, and the location of protective relaying and control equipment, the organizations responsible for this function may include organizations responsible for the other functional model entities of Balancing Authority, Transmission Operator, Generation Operator, Generator Owner, Transmission Owner, Distribution Provider, and Load-Serving Entity.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Jeanne Kurzynowski	
Organization:	Consumers Energy Company	
Telephone:	517-788-1110	
E-mail:	jmkurzyn@cmsenergy.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☐	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☒	3 — Load-serving Entities
☐ **NPCC**	☒	4 — Transmission-dependent Utilities
☒ **RFC**	☒	5 — Electric Generators
☐ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments This change removes the entity and responsibility for wide-area Planning oversight. The Transmission Planner is a far-more constrained entity, and, while it has the responsibility to coordinate with other nearby Transmission Planners, it does not have the responsibility, or even ability, to effectively assure that the Planning functions address wider-area concerns. In the operating realm, the GO and TO perform the local-area operating functions, and, among other responsibilities, the RC assures that their actions are proper and acceptable in the wider-area perspective. A similar oversight/coordination responsibility needs to remain for the planning realm.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments Since we disagree with the removal of the Planning Coordinator function and responsibilities, we also disagree with the removal of the reference to that function within TO.

5. 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.

☒ Yes
☐ No

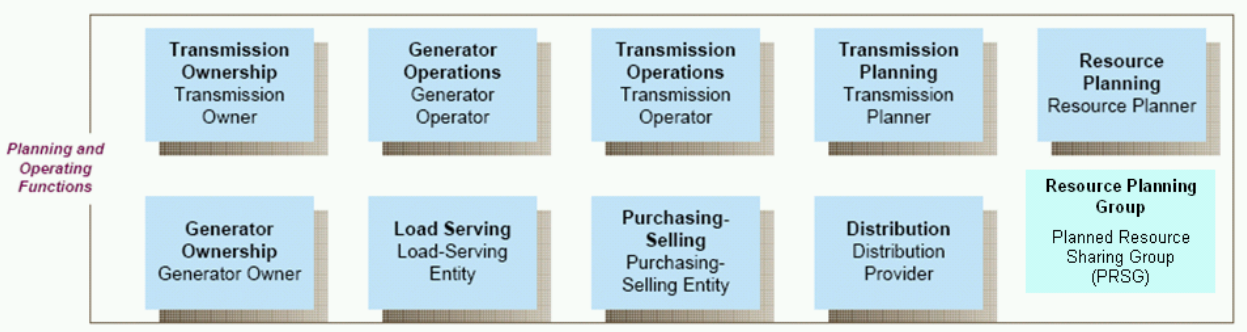
Comments There have been many comments in the industry for the need to define a Planned Resource Sharing Group (PRSG) within the Functional Model. Reference the "Standard MOD-004-1 — Capacity Benefit Margin" ballot results on webpage: https://standards.nerc.net/BallotResults.aspx?BallotGUID=7a01aa1f-cbd3-4f85-af86-ba98ee407836.

Function

Resource Planning Group

Responsible Entity

Planned Resource Sharing Group (PRSG): A group of Load-Serving Entities who have agreed to jointly meet their resource adequacy requirements.



6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments The Transmission Planner alone is not capable of providing wide-are Planning Reliability, no more than the Transmission Operator is capable of providing wide-area Operating

Reliability. We understand that the DT feels that the proposed Transmission Planner definition incorporates tiered functional responsibility, but we feel instead that a wide-area planning responsibility must be specifically defined within the FM.

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

☐ Yes

☒ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments We feel that the responsibility for Protection Systems does not receive the proper emphasis, currently being reflected as minor mention within the TO and GO functions. This has the effect of burying the responsibility for these highly critical components of the BES into entities that otherwise have little understanding for the impact of these systems, and certainly make the applicability of the PRC-series standards more difficult to define.

We recommend instead that the FM explicitly define a new entity, that of Protection System Owner. A suggested definition of this entity is included here:

Protection System Owner – Entities that own and/or operate protective relaying and/or control systems including one or more of the following elements:

- ◊ Relaying systems applied to protect transmission facilities operated at 100 kV and above, including transformer banks with low-voltage terminals operated at 100 kV and above.
- ◊ Underfrequency load shedding systems applied within the associated Regional underfrequency load shedding programs.
- ◊ Undervoltage load shedding systems applied to augment the reliability of the interconnected system.
- ◊ Special Protective Systems applied within Regional criteria.
- ◊ Generator Protection systems.
- ◊ Generation control systems that directly affect generating plant availability and capability, such as excitation systems.

Depending on the local system topology, the contractual agreements in place, and the location of protective relaying and control equipment, the organizations responsible for this function may include organizations responsible for the other functional model entities of Balancing Authority, Transmission Operator, Generation Operator, Generator Owner, Transmission Owner, Distribution Provider, and Load-Serving Entity.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization: Dominion Resources services, Inc.		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☐	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☒ **MRO**	☒	3 — Load-serving Entities
☒ **NPCC**	☐	4 — Transmission-dependent Utilities
☒ **RFC**	☒	5 — Electric Generators
☒ **SERC**	☒	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact: **Jalal Babik**

Contact Organization:

Contact Segment: **3,5,6**

Contact Telephone: **804-273-4109**

Contact E-mail: Jalal.Babik@dom.com

Additional Member Name	Additional Member Organization	Region*	Segment*
Harold Adams		**MRO, NPCC,RFC,SERC**	3,5,6
Ronald Hart		**MRO, NPCC**	3,5,6
Louis Slade		**RFC, SERC**	3,5,6

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments: The use of the term reliability area is confusing here and throughout the document. As used throughout the document, the "reliability area" appears in some places to be the same as the boundaries of a Balancing Authority, but in other places appears to be used differently. If "reliability area" is intended to reflect the boundaries of a BA, it should be explicitly stated. If that is not the intent, then different terms may be needed to improve clarity. If the desire is to use a single term throughout the document, then the terms 'assigned area' or 'area of geographic responsibility' may be better.

   The term "Reliability Area" is used once in the accompanying Technical Document, indicating that this is a formal definition, but no definition is provided in either document, and the term is not capitalized when used in the Functional Model.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments Same issue with the term 'reliability area' as above.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments

   End use customers must be connected to either transmission or distribution facilities. The planners for these facilities must understand all aspects of the end use customers' electric needs (capacity, energy, ancillary services, interconnections, etc.) in order to insure reliable delivery of these products. In many cases, these are the entities that are most aware of the economic conditions and indicators used in the determination of load forecasts. Therefore from a reliability planning standpoint, it may make more sense to associate the load forecasting function with the Distribution Provider than with the LSE. In areas served by vertically integrated utilities, co-ops or municipalities, LSE and DP

functions are performed by the same entity. In areas served by RTOs, load forecasting used for reliability planning is independently provided by the RTO. Load forecasts provided by LSEs that do not own assets have no value in reliability planning, since such LSEs typically operate in deregulated markets and their load forecasts reflect shifts in market share rather than changes in absolute load levels. The latter is needed for reliability planning and operations.

In many states, retail choice is primarily a short-term (billing cycle) contract between the end use customer and an energy supplier. In these circumstances, this energy supplier 'forecasts' its demand based upon some combination of customer applications and its estimate of future market share. The Load Serving function as described in the functional model does not accurately capture the nature if this relationship. In the circumstance so described, the energy supplier is better described as the PSE.

If NERC desires to keep the term LSE, it should acknowledge these facts and define the term as the entity that, by state or federal regulation, is responsible for insuring that adequate capacity, energy, ancillary services and infrastructure are procured on behalf of the end use customer. In many states, this entity is referred to as the 'default supplier' or 'provider of last resort'. Where there is no state or federal regulation, the end use customer is the LSE unless they enter into a contract for the provision of these services.

Finally, responsibilities related to under-frequency load shedding and under-voltage load shedding should be assigned to the DP and TP. Load shedding systems are not within the primary scope of the definition of the Load Serving function as written. See further comment under Question 5 below.

We believe that additional work is needed on the draft of the LSE function and that the supporting section in the Technical Document to capture the concepts described above.

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes

☒ No

Comments Proposed revisions (redline) to language in document is shown below.

TO should be required to coordinate, develop agreements, and provide facility ratings to Distribution Providers and should be required to provide construction and maintenance plans and schedules to affected generator owners and operators, and distribution providers.

GO should monitor generation plant protective relaying systems and associated protective relaying systems applicable to the interconnecting point between the generation plant and the Distribution Provider (using term in Functional Model). GO also Develops an interconnection agreement with the Distribution Provider (using term in Functional Model) on a facility basis and Provides reliability related services to Purchasing-Selling Entity pursuant to agreement. Delete 4 on page 51 "Receives approval or denial of transmission service request from Transmission Service". In many cases, the GO doesn't make such request. Transmission services needed to deliver energy from the generator to the end use customer are usually procured through the

PSE or by designation as a network resource pursuant to the Transmission Provider's tariff.

5. 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.

☒ Yes
☐ No

Comments

The following references page numbers in the redline document.

Page 24 – Delete item 2d because Transmission Service Providers do not procure these products, may not have this information, and therefore should not bear responsibility for reporting them. These products are typically offered by generator owners and procured by LSEs or PSEs. If 2d is intended to refer to purchases and sales of transmission capacity, then the language should be clarified to reflect this.

In many places throughout the document need to include Distribution Providers since they "deliver electrical energy to the End-use Customer" per page 46 of the Functional Model. The document should be reviewed with respect to include Distribution Providers where applicable.

Page 54 – need to revise Load Serving function definition to read "Secures capacity, energy, and transmission services (including necessary reliability-related services) to serve the End-use Customer.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

Page 7 – Use of term **Regional Reliability Organization** should be changed to **Reliability Assurer** to be compatible with the Functional Model document**.**

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments

Page 10 - The sentence that reads "The Resource Planner and the Transmission Planner may be the same entity, for example, in those markets where there are no entities responsible or obligated to serve load." should be deleted or modified to read "The Resource Planner and the Transmission Planner may be the same entity where no other entity has a regulatory obligation

to provide for capacity and energy service to load." There must be some entity responsible or obligated to serve the load even if that entity is the end use customer (LSE).

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

☒ Yes

☐ No

Comments Proposed revisions (redline) to language in document is shown below.

Page 8 - Generation commitment and schedules ~~from Load-Serving Entities~~. The Balancing Authority receives generation dispatch plans ~~from the Market Operator~~ and/or generator commitment and dispatch schedules from any, or a combination of, the following entities Load-Serving Entities, Purchasing-Selling Entity, Generator Operator, Generator Owner, that have bilateral arrangements for generation within the market or the Balancing Authority Area.

Page 23 – Suggest changing sentence to read "The Generator Operator receives notification of transmission system problems affecting its generator from the Transmission Operator or Reliability Coordinator." In some cases, the TO is prohibited from communicating with GO by Standards/Codes of Conduct.

Page 24 – Suggest changing sentence that reads "In many cases, the Generator Owner has contracts or interconnection agreements with Transmission Providers or Distribution Providers that detail the terms of the interconnection between these parties."

Page 25 – Suggest changing sentence to read "The Purchasing-Selling Entity (PSE) arranges for and takes title to energy products (capacity, energy and ancillary services) that it secures from a resource for delivery to a Load-Serving Entity (LSE). The PSE also arranges for transmission service with the Transmission Service Provider that provides transmission service to the LSE under the Open Access Transmission Tariff.." Comment: Some LSEs do not own assets and function similarly to PSEs. Thus a load served by such an LSE may be connected to the transmission and distribution system, but the LSE itself is not.

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Jack Cashin/Barry Green	
Organization:	EPSA	
Telephone:	202-349-0155/647-426-3410	
E-mail:	JCashin@epsa.org/bgreenconsulting@rogers.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☐	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☐	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☐ **RFC**	X	5 — Electric Generators
☐ **SERC**	X	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
X NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   X Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   X No

   Comments We believe that the previous model, that separated a transmission/resources coordination function from the transmission planning function was more appropriate. While in some jurisdictions these two functions are performed simultaneously, we do not believe that this is universally true and, more importantly, we believe that they do represent separate functions. For example, in an RTO environment, some elements of the transmission planning function would typically be performed by the Transmission Owners, reflecting their needs to supply their native loads. However, other aspects of this function would typically be carried out by the RTO, reflecting considerations which could include reduction of congestion or enhancement of reliability on a regional basis. This latter role would, in our view, appropriately be an integration-type function which should be done by a Planning Coordinator, with access to all necessary resource planning information. Because the Planning Coordinator entity will need access to all of the available resource planning information across a broad region, codes of conduct for that entity will be more important than for a pure transmission planner. This would be one of the key aspects of this function that distinguishes it from the transmission planning function. To the extent that the model in place in particular jurisdictions has these functions "rolled-up" that can certainly be accommodated within the Functional Model. In summary, the Planning Coordinator/Transmission Planner relationship in the planning environment is analogous to the Reliability Coordinator/Transmission Operator relationship in the operating environment. The Planning Coordinator would need a regional view of the planning variables, which could encompass the region covered by several Transmission Planners.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes

X No

Comments The use of the term "LSE" in the Functional Model, a term whose definition, as explained in the Technical Document, is different from the common usage of the term in the industry is confusing and should be avoided. The term Regional Reliability Organization was changed to Regional Reliability Assurer, in part, to avoid analogous confusion.

More fundamentally however, it is unclear what role this function serves in a reliability context and whether or not the Functional Model needs to define a Load Serving Function. There is a very large overlap between the defintion of the "Purchasing-Selling Function" and that of the "Load Serving Function". The two main distinctions seem to be that the PSE "purchases or sells" energy, capacity, etc. whereas the LSE "secures" those same services. It is unclear exactly what the distinction is between those two definitions in that regard. Additionally, the LSE's functions are "to serve an end-user" whereas the PSE is often involved in wholesale transactions.

Since, as noted in the question on the comment form, the intent is that the LSE would be an entity without electricity-related assets, we could view the LSE as being a retailer. Such an entity would have contractual relationships with its customers (who would be end-users) but such contracts have no BES reliability implications. These contracts amount to a financial obligation on the retailer to price energy to the end user at an agreed price. The physical obligation to deliver the energy, including the obligation to forecast the quantity required, the tasks that do have reliability implications, rest with the Distribution Provider. In looking at the defined tasks for the Load Serving Function, we note that:

Tasks 1 and 5, as discussed, dealing with load forecasting, are commercial imperatives for such an entity. However for reliability purposes the requirements appropriately rest with the Distribution Provider that has the obligation to deliver the physical energy.

Tasks 4, 6 and 7 dealing with resource and transmission acquistion are analogous to Tasks 1 and 3 for PSEs and therefore, when being performed on behalf of a retailer, whether it be the retailer or another entity on their behalf, they are acting as a PSE, not an LSE, at that time and would need to register as a PSE.

Task 2 which is to "identify the capability for voluntary load curtailments" would also not have reliability implications with respect to the role of the retailer. The implementation of a voluntary load curtailment program has two key aspects. One is the identification of the desire to participate and the other is the real time physical interruption of supply. The physical interruption of supply, which would

require physical facilities, would be the responsibility of a Distribution Provider or in some circumstances a Transmission Provider. The identification of a desire to participate, would normally require enrolling in a program. That might be done by the customer themselves; it might be done by a retailer on behalf of a customer or a group of customers if an aggregation service is being provided. In either event it represents a contractual arrangement between the customer, or its agent, and the administrator of the voluntary curtailment program, and is not a reliability impactive responsibility.

Finally with respect to task 3, which is to "participate in under-frequency and under-voltage load shedding systems", it is the Reliability Coordinator, Transmission Operator and Distribution Providers that will identify the need for and carry out load shedding. It is unclear what role the LSE, with no facilities, could or would play in these systems, other than managing the contractual issues related to load shedding, which is not reliability-impactive.

In summary, in examining the Tasks identifed by NERC for the Load Serving Function, EPSA sees no tasks performed by a retailer, as we would define the LSE function, that have reliability implications. To the extent that such an entity purchases or sells physical energy or capacity, arranges for transmission services or arranges interchange transactions, it would be performing the functions of a PSE and would be registered as such.

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

X Yes

☐ No

Comments We agree with these proposed revisions. However, see question 9 below for additional comments on the relationship between Transmission Owner/Operators and Generation Owner/Operators which, in EPSA's opinion, requires further changes to the Functional Model.

5. 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.

☐ Yes

☐ No

Comments See Response to Question 9 below

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

X Yes

☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

X No

Comments See Response to Question 2 above

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

☐ Yes

X No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments EPSA has one additional area of significant concern with respect to the Functional Model that we believe needs to be addressed expeditiously. There are currently a number of challenges filed with NERC, and in some cases FERC, with respect to entity registration in NERC's compliance registry. We acknowledge that the Functional Model documentation, in a number of places, attempts to distinguish between the model and the registration/compliance process. However, these two processes are in our view, inextricably linked, such that changes in the Functional Model will automatically flow through to the obligations an entity undertakes in the compliance world. In the Version 4 document, in the Introduction on page 6, it states that "in the context of the model, there is responsibility for ensuring tasks are performed but the responsibility is not backed by sanctions". In the foreward of the document, on page 5, it states that building the Functional Model "…involved breaking down the previous reliability functions more finely, such that all organizations involved in ensuring reliability …can identify those functions they perform and register with NERC as one or more of the Responsible Entities." Under EPAct, once registered, an entity has an obligation to meet all of the identified requirements for such a Responsible Entity, subject to substantial financial penalties for non-compliance and one can only register in the categories

identified in the Functional Model. Therefore, the distinction that compliance with the Functional Model is not backed by sanctions, while true in theory, is irrelevant in practice. Furthermore, NERC has recognized this situation in attempting to redefine the roles of Distribution Provider and LSE in response to FERC's review of a specific application of the Functional Model. Although we have stated above some specific concerns with the proposal, we applaud NERC's attempt to deal with the LSE issues raised by FERC in the Functional Model and believe it is no less important to do so with respect to the generation/transmission interface issues.

The situation is with the defined role for some generators as Transmission Owners and Operators based on their interconnection facilities. There is no question that all generators own "transmission-like" facilities in order to deliver their power to the grid. These facilities encompass, in some cases, a connection to an immediately adjacent switchyard, in other cases, it might encompass a few spans of transmission or in a few situations, it encompasses several miles of high voltage transmission. In all cases, however, the function of the facility is to deliver power from a generator to the Bulk Electric System. The specific "transmission" facility is only a part of the BES to the same extent as the generator is. The unavailability of the "transmission", for any reason, is of great commercial impact to the generator as it is no longer able to deliver its product to its market. However, as long as the "transmission" has no other loads or generation connected to it, from a reliability perspective, its loss should be of no greater concern than the loss of the generator itself, for which reserve requirements exist.

In examining the transmission operation tasks (page 32), it is clear that many of them, with an appropriate definition would naturally be provided by the generator with respect to its interconnection facility. For example, in providing maintenance schedules, a commercially responsible entity will be coordinating its generator maintenance with the maintenance of its "transmission" facilities. However, in any event, it is likely of no material difference to the BES operator whether the outage is transmission or generation related since the only relevant impact is that generation is unavailable to the grid. Similarly, deploying reactive resources to meet voltage requirements is already an obligation on generators. Other tasks, such as developing system operating limits, emergency procedures and system restoration plans are not the purview of generators. Rather, it is the obligation of generators, as documented in appropriate NERC standards, to follow directions from a Transmission Operator or Reliability Coordinator in these matters.

While it is not our intent to redraft the Functional Model in these comments, it is our view that although generators will have certain obligations that mirror those of a transmission operator with respect to any interconnection facilities that it owns, specifying such obligations by way of declaring them to be transmission operators, as that term is defined in the Functional Model, and therefore forcing on them the obligations that flow from the related standards, is totally inappropriate.

Resolution of this critical deficiency is urgently required. While there are a number of alternative amendments to the reliabilty framework that could resolve this issue (such as changes to the registration process), changes to the Functional Model as NERC is attempting with the Distribution/LSE functional descritptions, is one possible approach. Therefore EPSA offers the above comments to aid in that process.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Entergy Comments April 4, 2008 – Ed Davis	
Organization:	Entergy Services, Inc	
Telephone:	504-576-3029	
E-mail:	edavis@entergy.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☐	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☐ **RFC**	☐	5 — Electric Generators
☒ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments

   The Regional Reliability Assurance function is confusing, too vague, many of the regional aspects of this function seem to have been removed, and the Reliability Assurer seems to be some unspecified authority over Responsible Entities on less than a Regional basis. We can not agree with this functionality until it is better defined.

   Statements in the technical document indicate the tasks of this function will not necessarily be on a regional basis, and that the function will have some authority over other Responsible Entities. That statement indicates it is envisioned the Reliability Assurer will do something for less than the Region, like maybe a sub-Region, or a BA, or a Transmission Owner, or, ….? Also, if the Reliability Assurer is a Responsible Entity itself, then it does not seem reasonable that the Reliability Assurer should have authority over other Responsible Entities.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

Item 1 of the Transmission Owner on page 44 of the redlined version contains reference to the Planning Coordinator. Should that reference be deleted?

5. 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.

☒ Yes
☐ No

Comments

The Introduction contains a discussion of two ways to understand the term “Responsible” in Responsible Entity. One understanding is there is a “legal” responsibility to meet the standard requirements if an entity performs those functions identified in this Functional Model; the other understanding is the entity performs the tasks but that responsibility is not backed by sanctions. This reader is left hanging as to which interpretation will be used in the Functional Model; or, if not in the Functional Model, then in the industry’s application of the Functional Model. Please elaborate on which understanding is expected to be used in which arena.

The term “reliability area” is new to the FM and is used in many places. However it is not a defined term and no implied definition is provided. It will be very important the Responsible Entities and the industry to understand the exact meaning of this term because participants will be required to perform tasks and meet standard requirements for some “reliability area”. Please provide an explicit definition of this term for each of the functional entities.

Item 7 of the Resource Planner contains the term Regional Reliability Organization. Should that be changed to Reliability Assurer?

Item 19 of the Reliability Coordinator, page 30 of the redline version, contains the term Regional Entities. Please define the term “Regional Entities”.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments

The Regional Reliability Assurance function is confusing, too vague, many of the regional aspects of this function seem to have been removed, and there seems to be some unspecified authority over Responsible Entities on less than a Regional basis. We can not agree with this functionality until it is better defined.

Statements in the technical document indicate the tasks of this function will not necessarily be on a regional basis, and that the function will have some authority over other Responsible Entities. That statement indicates it is envisioned the Reliability Assurer will do something for less than the Region, like maybe a sub-Region, or a BA, or a Transmission Owner, or, ….? Also, if the Reliability Assurer is a Responsible Entity itself, then it does not seem reasonable that the Reliability Assurer should have authority over other Responsible Entities.

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

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

☒ Yes
☐ No

Comments

Resource Planner

The Resource Planner, page 10 of the redline version, contains the statement that the RP develops plans for the “resource adequacy of specific loads”. Our understanding may be incorrect, so we would appreciate an explanation of why the RP develops long-range plans for the limited scope of “specific loads” contributing to resource adequacy. Our reaching this interpretation is a result of the multiple use and application of the term “resources” and “resource adequacy”, sometimes applying to generation only and other times applying to generation and “load as a resource”.

It seems the RP should be planning resource adequacy to “serve”, or “meet”, specific load. If this is the case then please add the term “serve” or “meet” to the planning responsibility.

Clarify Meaning of “New Capacity”

The Resource Planner, page 10 of the redline version, in bullet 4 of the first set of bullets contains the statement “Information on existing and proposed new capacity purchases and sales from Purchasing Selling entities”. In the general context of resources as used in this document, does the use of the term “new capacity” mean “new generation capacity”, or “new load and generation capacity”, or something else. Please add a modifier to “capacity” to clarify our understanding in this context.

Load Resources to Meet Load

The Resource Planner, page 10 of the redline version, in bullet 3 of the second set of bullets contains the statement "Verify that resource plans meet adequacy resource requirements". Can "load resources" be used as "resource adequacy" to serve the load?

Commercially-driven Resource Planning

The Resource Planner, last paragraph on page 11 of the redline version, contains the statement:

"However, commercially-driven resource planning clearly will have an impact on resource adequacy." We suggest the value judgment term "will" be softened to "may". Resource planning conducted by regulation order, etc., may be sufficient to meet resource adequacy requirements.

Interchange Authority

It is not clear in the FM that the IA is an entity and not a tool. The Technical Document contains an explicit statement that the IA is an entity and not a tool. Please be more specific in the FM that the IA is an entity.

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

Change Name of Resource Planner

Please consider changing the name of the "Resource Planner". A reader places his own interpretation of "Resource" onto the activities of that function. Is the Resource Planner "Generation Planner", "Information Technology Resource Planner", "All Resources Other Than Transmission"? We suggest the name be changed to something more descriptive and less open to interpretation, like "Generation Planner".

"Load as a Resource"

We also suggest the industry re-think its use of "load as a resource". The concept and wording is getting very convoluted. For instance, Item 2 Balancing Authority contains the concept that "load" is a resource used for "load-following". One can not use "load" to follow "load". "Load" can be controlled but it is not a resource (generator). Generators are the "resource" that follow (serve) the "load". "Load" can not serve "load".

> **Load-following through generator dispatch and demand-side management**. The organization that serves as the Balancing Authority will in general also perform the generator commitment and economic dispatch. Included in the commitment and dispatch tasks is the designation of those resources, both load and resources, that are available for Ancillary Services.

We are also very aware that markets are defining products based on "load" control to compensate "load" for being served by generation, or not being on the system so it is not served by generation, to maintain the generation-load balance in real time.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Chris Scanlon	
Organization:	Exelon	
Telephone:	630-576-6926	
E-mail:	christopher.scanlon@exeloncorp.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	X	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☐	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
X RFC	☐	5 — Electric Generators
☐ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

5. 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.

   X Yes

☐ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

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

☐ Yes
☐ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments Exelon appreciates the work of the Functional Model Working Group in producing version 4 of the Functional Model and the Technical Document. The efforts to address the varied relationships between Transmission Owners, Planners, Operators, Balancing Authority and Reliability Coordinators are welcome. The distinction between "Responsibilities" in the Model (task performance) versus "Responsibility" for standards requirements (registration / sanctions) is especially important. We believe this version of the Model will perform as it is intended and that the task definitions and interrelationships contained in the Model will provide useful guidance in the development of Reliability Standards

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Rob Martinko	
Organization:	FirstEnergy	
Telephone:	330-384-5457	
E-mail:	martinkor@firstenergycorp.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☒	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☒ **RFC**	☒	5 — Electric Generators
☐ **SERC**	☒	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: FirstEnergy

Lead Contact: Rob Martinko

Contact Organization:

Contact Segment: 1, 3, 5, 6

Contact Telephone: 330-384-5457

Contact E-mail: martinkor@firstenergycorp.com

Additional Member Name	Additional Member Organization	Region*	Segment*
Doug Hohlbaugh	FE	RFC	1, 3, 5, 6
Dave Folk	FE	RFC	1, 3, 5, 6
Dick Kovacs	FE	RFC	1

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Thanks to the FMWG for continuing to enhance this important document. FirstEnergy believes that the Functional Model is a key vehicle to inform the ongoing evolution and provides clarity to the industry of the ERO's Compliance Registry Criteria and Reliability Standards. It is so important in such purpose, that the Model ought to be clearly focused on the depiction of the Users, Owners and Operators of the Bulk Power System and the essential tasks they perform and place content in a separate document containing information that may have served an earlier purpose while transitioning to the mandatory enforce compliance era. Therefore, our comments below stem from this view and particularly encourage the FMWG to eliminate certain entities that are not self-evidently either a user, owner or operator of the BPS, eliminate the introduction of concepts that do not inform the constitution of the Compliance Registry or Reliability Standards, and eliminate the discussion of activity that is addressed in the ERO's own rules of procedure, the ERO's delegation agreements with Regional Entities or in the FERC's own regulations. Anything more than a brief reference to some of the periphery topics only invites duplicate effort of maintaining multiple documentation and the potential for inconsistency.

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments:

   It is not clear to FE how the Reliability Assurer is a "user, owner or operator" of the bulk electric system and what reliability function they are expected to perform. The definition of the Reliability Assurance Function indicates "Monitors and evaluates the activities related to planning and operations, and coordinates activities of Responsible Entities to secure reliability of the Bulk Electric System within a reliability area and adjacent areas." This effort seems to be duplicative of the existing Reliability Coordinator and Planning Coordinator roles.

   Additionally, the concept of a "reliability area" as it applies to of the Reliability Assurer is very unclear.

   It is FE's opinion that the Reliability Assurer is not needed entity within the Functional Model.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☒ No

Comments:

The proposed Functional Model V4 removes an important aspect that currently exists in the V3 – the need for a wide-area review and coordination for planning of the Bulk Electric System. It is our opinion that the Planning Coordinator (PC) role provides a clearer landscape related to planning of the bulk electric transmission system.

Eliminating the role of the PC is essentially reducing the effectiveness that this function has in coordinating seams planning. The PC plays an important role in reviewing potentially competing transmission reinforcement projects, to ensure transmission system reliability encompasses a much broader footprint beyond a given Transmission Planner (TP)'s neighboring system ties with a much greater presence of the wide area use of the transmission grid.

The PC also is responsible for maintaining and developing consistent methodologies and tools for the analysis and simulation of transmission systems. The PC, under FAC-010, has a sole responsibility for developing and distributing a consistent approach for identifying SOLs and the subset SOLs that identify potential IROLs. Eliminating the PC and leaving this to individual TPs is a step back from where we are today.

The Functional Model V4 introduces Guiding Principles for the Model; which are a nice addition to the Model. Item 3 of the Guiding Principles states, "Areas are defined in term of the individual transmission, generator and customer equipment assets that collectively constitute the Bulk Electric System. For example, each Bulk Electric System asset has one Reliability Coordinator, one Balancing Authority, and one Transmission Operator. Regarding overlaps for planning, as described in the Technical Document, it is not always possible to achieve this in the case of planning Functions, where there may be overlapping levels of responsibility for given assets." It is FE's view that removing the PC invites confusion related to the planning of transmission assets and that one and only one TP should have ultimate responsibility of a given asset and that the PC provides a needed coordinating role covering a wide-area view.

The FMWG indicates that part of their reason for removing the PC is that presently the TP and Resource Planner (RP) independently evaluate plans needed for transmission and resource adequacy and that the TP may not be aware of new resource requests prior to the PC's consolidation of the TP and RP plans. However, the existing TP expectations under V3 do account for this role. TP Function, Task 4, indicates that the TP is to evaluate and plan for all requests regarding new End-use Customer (load), generation and transmission. Item 4 of the TP's Relationship with other entities addresses this task. However, the RP is not listed among the responsible entities. Although the RP is not listed, the function is covered as the TP is expected to coordinate with the GOs and LSEs.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes

☒ No

Comments

The proposed changes in the LSE function and entity are a move in the right direction but do not go far enough to eliminate all tasks that an LSE is incapable of performing. For example, it is not reasonable to expect that a load-serving entity in and of itself would have any capability to shed load or participate in load shedding. The functional model must be mindful that while the LSE function impacts reliability, the LSE is primarily a commercial entity in that it requires no electrical facilities to perform its function. It's only reliability impact stems from the need for an LSE to secure energy and transmission service.

Thus, it is reasonable to expect an LSE to verify to a Transmission Service Provider that it has in fact secured such services reliably. This could involve tasks such as submitting data on load and resources, including information to support resource plans.

Accordingly, it appears that many, if not all, tasks currently described as those of the Resource Planner (RP) can be transferred to the LSE, and the RP can be retired from the Functional Model. In other words, the RP and the LSE are one entity in the same. If one is serving load, it must be planning resources. Conversely, if one is not serving load, it has no need to plan resources.

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes

☒ No

Comments

Task 2 under Generator Ownership tasks assigns responsibility for "protective relaying systems on the transmission lines connecting the generation plant to the transmission system" to the generator owner. This may not be true in all cases. Often Generator Ownership responsibility stops at the Generator Step-up Transformer or at the breakers connecting the Generator Step-up Transformer to the substation equipment. In these cases, the Generator Owner has no responsibility for the transmission line protective systems. The wording of this item should be changed to reflect this relationship

5. 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.

   ☐ Yes
   ☐ No

   Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

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

   ☐ Yes
   ☐ No

   Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

- The FMWG stated above that the changes proposed in version 4 were based on feedback received by the Standards Committee (SC), the Operating Committee (OC) and Standards Drafting Teams (SDTs). Since a significant change is proposed related to the planning aspects of the Transmission Planner (TP) and Planning Coordinator (PC), we recommend explicitly obtaining input from and obtaining concurrence with the NERC Planning Committee.

- There are many instances where the Functional Model and Standards are not aligned which have led to confusion related to Registration. It is suggested that once the industry has reached consensus on a new FM, that a work team be put in place to map where within the standards each core Functional Model Entity Task is covered. This effort would benefit the industry by identifying any gaps that may exist as well as well as an opportunity to further reduce duplicative requirements within the standards. The outcome would result in a more concise set of standards, which are better aligned to the FM and reduce industry uncertainty regarding appropriate Registration.

- Interchange Authority – The FMWG should give consideration to removing the IA from the FM. The IA Tasks should be re-oriented as needed to the TSP and/or BA entities. The IA does not appear to be a self evident entity to the extent that registration to the IA function will occur. The IDC should be viewed as a tool, not a Functional Model entity, used by the TSP and/or BA to accomplish the described tasks.

- In the FM under the section titled “Areas”, does not included reference to “reliability area” that is used in the Reliability Assurer. If the Reliability Assurer is retained a reference to and definition of the “reliability area” should be added. As stated above in question 1, FE questions the need for the Reliability Assurer.

- In the FM under the section titled “General” we suggest the term Responsible Entity be reclassified as Functional Entity. The FM should remove the concept of a responsible entity. By changing the reference to Functional Entity, the FM can delete all discussion of responsibility, which is occasionally hard to follow, and leave any discussion of responsibility to the compliance monitor enforcement and standards regime - that is, to the compliance registry and the standards, which are documented in NERC and FERC rules and regulations. It also suggested that the last sentence of the definition be deleted.

- In the FM under the section titled “General” we suggest that the Definition of “Customer” be deleted and replaced with new definitions of “User”, “Owner” and “Operator” and that the appropriate Functional Entities be referenced within these categories. This change would bring greater alignment with the FM and the expectations of the FERC. All other functions within the FM that can not be classified within these groupings should be eliminated so that the FM is focused on reliability tasks addressed through the NERC standards.

- In the FM under the section titled “General”, the definition of “End-use Customer” should be revised to say “The party served by a Load Serving Entity and connected to either Transmission Owner or Distribution Provider facilities.”

- The section titled “Purpose of the Functional Model” should be revised to indicate two primary purposes: 1) A framework for Reliability Standards developed through the NERC Standards Development Process and 2) Guidance for Organizational Registration. It is suggested that the Standards Development Process document could be “hyper-linked” and that all additional reference and discussion related to the Standard Developer be removed.

- The functional model defines a Function as a “set of reliability Tasks so closely related to one another that separating those Tasks, by assigning them to different organizations, would threaten to impair the integrity of the Function.” This definition implies that task delegation or assignment should never take place under the functional model. This definition is not consistent with the way the industry operates in particular to a market RTO setting. Many of the functions have tasks assigned to them in the functional model that are not performed by one and only one organization

- Under the Resource Planning function, resources are generally accepted to be defined as generation assets, but this is not clearly stated. A very broad definition of resources would include real and reactive resources; however, not all reactive resources are generators. Other dynamic and static reactive resources are planned by the Planning Coordinator and Transmission Planner. The tasks of all of these functions should reflect this relationship.

- Item 12 of the Balancing Authority Function section of Relationships with Other Responsible Entities – Ahead of Time should reflect their role of receiving “unit maintenance, retirement plans, and new installations.”

- Item 8 of the Transmission Operator section of Relationships with Other Responsible Entities – ahead of Time should have the phrase, “(or direction of)” revised to state, “(or under the direction of)” to improve readability.

- The proposed version of the functional model does not address or recognize the functional tasks and responsibilities associated with Local Control Centers in a market RTO setting. We propose addressing this through a clearly defined function of Local Control Center or a redefined Transmission Operator Function that encompasses the tasks performed by the Local Control Centers. It is undesirable for a group with physical control of a large segment of the BES through supervisory and switching control and thus the ability to have a profound effect on the reliability of the BES to continue to not be explicitly addressed in the functional model any longer.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: FRCC

Lead Contact: Linda Campbell

Contact Organization: FRCC

Contact Segment: 10

Contact Telephone: (813) 207-7961 or (813) 207- 7985

Contact E-mail: lcampbell@frcc.com **or jodom@frcc.com**

Additional Member Name	Additional Member Organization	Region*	Segment*
John Odom	FRCC	FRCC	10
Alan Gale	City of Tallahassee	FRCC	5
Don Gilbert	JEA	FRCC	5
Keith Mutters	Orlando Utilities Commission	FRCC	3

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments We understand the changes made, but really are not convinced that this function needs to be in the Functional Model at all. Standards can not be written applicable to this function as it is not a owner, operator or user of the bulk power system. Also, since there is no guidance on who the Reliability Assurer is, it seems to be wide open to much interpretation. How does it really help?

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments The V4 concept emphasizes that the fundamental planning process and principles, as detailed in the TPL standards, need to take place at all levels of planning, regardless of industry organizational structures. It also acknowledges that the Transmission Planner needs to integrate generation resources into the transmission plans in order to ensure Bulk Power System reliability. With this acknowledgement, a separate functional entity is not necessary to ensure that generation resources are integrated into the transmission plans. The concept of the Planning Coordinator (Planning Authority) having a wide-area scope is valid, however, this concept is not readily transferable to all parts of North America. This wide-area scope can be covered in a wide variety of ways, including RTOs/ISOs, Regional Entities and other regional transmission planning processes. V4 states that TPs may group together to provide this wide-area scope. In addition, Order 890 requires an open and coordinated regional transmission planning process that greatly facilitates this wide-area scope. In addition, the 1st posting of TPL-001-1 contained a requirement (R5) that addresses wide area coordination. That requirement can readily be changed to assign the requirements to distribute and coordinate assessments to the Transmission Planner. The Regional Entity oversight, combined with these other mechanisms, will ensure that individual transmission plans are coordinated and communicated over a large geographic area. The proposed enhanced TP will allow the TPL standard under development to focus on the fundamental planning requirements, without having to assign specific requirements to individual entities that may not align with existing organizational structures.

   We are somewhat confused however by the “area” terms. The Introduction section identifies Transmission Planning Area, but has not defined it. There is no definition for this in the NERC Glossary of Terms associated with the reliability standards. The Transmission Planner section uses Transmission Planner Area, rather than Transmission Planning Area. There is also introduction of a new term “reliability area” that is also not defined in either the Glossary or the FM, and it is used in several places in the document. The model should be consistent is its use of terms and should identify where a definition exists, or if there is none, include it.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments V4 clarifies that the Distribution Provider, not the Load Serving Entity, will own the equipment to meet the functions within the model.

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments V4 clarifies that the GO and the TO are responsible for the maintenance of the facilities but may not actually be the entity performing the maintenance.

5. 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.

   ☒ Yes

   ☐ No

   Comments The Introduction section states “While the Model is not a standard, and does not have compliance requirements, it is intended and expected that the Task definitions and interrelationships contained in the Model will guide the development of Reliability Standards. The Purpose Section states “Provide a framework for Reliability Standards through the NERC standards development process that will apply to certain Tasks defined in the Functional Model.” We believe the real purpose of the Functional Model is to generally describe the reliability functions so that standard drafting teams may identify the appropriate responsible entities in the applicability of standards requirements.

   Also, in the Guiding Principles section, it states “ ….the Model provides the framework on which the NERC Reliability Standards are developed, administered and enforced.” This is just not true. The Reliability Standards are developed using the functional entity descriptions to determine applicability, however, the NERC Rules of Procedure provides the framework for administering and enforcing the standards. Also in this section, item 1 states that any reliability requirement arising in a Reliability Standard will have a corresponding Task in the Model. Is this really a true statement? Why is this a must? We do not necessarily agree with this concept.

   In the Section Responsible Entity – Standards Developer, there is a statement that indicates that the FM is intended to serve as the framework for the development and enforcement of the Reliability Standards. We believe this is also incorrect. FERC approves the reliability standards for mandatory enforcement and the framework for development and enforcement is outlined in the NERC Rules of Procedure. The FM is not the mechanism to define this.

For the Compliance Enforcement Function, should a task be added that speaks to the Development of the NERC Statement of Compliance Registry Criteria? The Registry criteria goes beyond what the FM defines for several of the functions (i.e. DP, LSE, GO) in terms of size. The only way that standards can be enforced is to have an entity registered according to the criteria.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments See comments to Q1.

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☒ No

Comments Yes, the Planning Coordinated Entity should be eliminated and the Planning Reliability Function should be expanded. However, the Transmission Planner responsibilities were changed to include resource adequacy which is duplicative to the responsibilities of the Resource Planner. This responsibility belongs with the Resource Planner and the Transmission Planner should have access to the Resource Planners plans and include them in the Transmission Planning Process. Several changes in Section 6 - Transmission Planner are required to eliminate this confusion. Below are suggestions that the team should consider:

Paragraph 1:

The Transmission Planner ensures a long-term (generally one year and beyond) plan is available that reflects the integration of the resources developed by the Resource Planner ~~for adequate resources~~ and the transmission needed to deliver those resources within its Transmission Planner Area. That area encompasses a defined area and the customer demands therein. It may be smaller than, equal to, or larger than that of a Reliability Coordinator.

Paragraph 3 Last Sentence: It will also evaluate the impact of revised transmission and generator in-service dates on the transmission ~~and resource adequacy~~plans and the ability of the revised plan to reliably serve the load.

Paragraph 4: Delete the entire paragraph that begins – "In its evaluation of resource plans … ". This paragraph is confusing the relationship between the RP and implies that the TP is responsible for resource adequacy.

Paragraph 7:

The Transmission Planner is also expected to verify that its plans for new or reinforced facilities meet Reliability Standards or identify the ~~resource or~~ transmission deficiencies. The Transmission Planner is to work with the Resource Planner(s) and other Transmission Planner(s) to identify potential alternative solutions, including solutions proposed by stakeholders to meet interconnected bulk electric system requirements.

Last bullet: The impact of revised transmission and resource in-service dates on transmission ~~and resource~~ adequacy.

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

☐ Yes
☒ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	David Kiguel	
Organization:	Hydro One Networks Inc.	
Telephone:	416-345-5313	
E-mail:	David.Kiguel@HydroOne.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☒ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☒	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments:

   Hydro One believes that eliminating the Planning Coordinator (PC) function in the FM is unnecessary. The three functions PC, Transmission Planner (TP) and Resources Planner (RP) have distinct and well defined responsibilities in the planning of the system. Keeping these three entities provides clarity and better understanding on “who does what” and the activities that take place at all levels of planning in order to ensure Bulk Power System reliability.

   A strong reason to keep the PC function is that in some areas, the TP function responsibilities are assigned to more than one entity. Typically, the PC (usually the same as the RC) will identify needs and assess system impact of transmission plans developed by the TPs (usually the TOs). The activities of the TPs involve transmission planning in greater detail on facilities, with more analytical rigour. Thus, the PC role is one of a higher level, coordinating among the various Transmission Planners and the Resources Planner.

   The proposed V4 removes an important aspect that currently exists in the V3 - the need for a wide-area review and coordination for planning of the Bulk Electric System. It is our opinion that the Planning Coordinator role provides a clearer landscape related to planning of the bulk electric transmission system.

   Eliminating the role of the PC reduces the effectiveness that this function has in coordinating planning between RTOs. This widens the gap to effectively planning the interconnected bulk electric transmission system. The PC plays an important role in reviewing potentially competing transmission reinforcement projects and to ensure transmission system reliability encompasses a much broader footprint beyond a given TP’s neighbouring system ties.

   The PC is also responsible for maintaining and developing consistent methodologies and tools for the analysis and simulation of transmission systems. The PC, under FAC-010, has a sole responsibility for developing and distributing a consistent approach for identifying SOLs and the subset SOLs that identify potential IROLs. Eliminating the PC and leaving this to individual TPs is a step back from where we are today.

   The Functional Model V4 introduces Guiding Principles for the Model. This addition is important. Within the Guiding Principles, it is indicated that the planning of the bulk electric system includes overlaps, coordination and basically defines a "defense in depth" approach with regard to

transmission planning. While we agree, we believe that the FMWG may have gone too far in the last sentence of bullet number 3 indicating that there is an overlapping level of responsibility for a given asset. It is our view that the TP has ultimate asset responsibility to ensure planning requirements are met.

We concur that the TP must be aware of generation plans and consider them in their planning. However, the existing TP expectations under V3 do account for this role. TP Function, Task 4, indicates that the TP is to evaluate and plan for all requests regarding new End-use Customer (load), generation and transmission. Item 4 of the TP's Relationship with other entities addresses this task. However, the RP is not listed among the responsible entities. Although the RP is not listed, the function is covered as the TP is expected to coordinate with the GOs and LSEs.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

5. 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.

☒ Yes
☐ No

We believe that there still exist in many instances where the Functional Model, Standards and Registration simply do not line up. The FM has set forth guidelines for the industry that have received NERC Board approval but, again, in many instances, the Standards addressing reliable operation of the BES have not reflected specific information contained in the Model resulting in confusion in both registration and compliance.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments: Please see our comments on question 2.

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

☐ Yes
☒ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments:

We commend the FMWG for the work they have done and the dedication of its members.

Recognition must be given to the fact that the allocation of responsibilities varies from jurisdiction to jurisdiction. Given the above, the FM cannot fully represent the actual accountabilities alignment in every jurisdiction. Thus, it should be treated as a reference document providing general guidelines on the activities that functional entities perform.

As written, the model does not address issues such as having multiple TPs or TOPs for the same assets in an area. In many jurisdictions, responsibilities have been assigned in a manner that requirements that the Standards assign to one FM entity (e.g. TP, TOP, etc) are in performed by multiple entities. This is not a delegation of tasks from one entity to another, but rather an assignment of responsibilities that is particular to a given jurisdiction framework. This is a common situation in many jurisdictions and the FM should include proper recognition of this fact.

The Functional Model Introduction states the following: "While the Model is not a standard, and does not have compliance requirements, it is intended and expected that the Task definitions and interrelationships contained in the Model will guide the development of Reliability Standards. The Model is a guideline, not a NERC requirement – standards developers are not required to include tasks envisioned in the model, nor are the developers precluded from developing Reliability Standards that conflict with the Model. If it comes down to a choice, the needs of the Reliability Standards themselves take precedence over the Model. The Model is independent of any particular organization or market structure. An organization may perform more than one Function and register as the corresponding Responsible Entities."

The above Introduction has several caveats including stating the model does not have compliance requirements, yet as the parent document that describes the foundation for entity registrations and the assignment of reliability standards requirements, it has significant implications and consequences, including up to a million dollars per day in fines. If developers are not precluded from developing Reliability Standards that conflict with the Model, why have a model?

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Roger Champagne	
Organization:	Hydro-Québec TransÉnergie (HQT)	
Telephone:	514 289-2211, X 2766	
E-mail:	champagne.roger.2@hydro.qc.ca	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☒ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☒	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments:

   Task No. 1 under Reliability Assurance should eliminate the reference to “within an Interconnection”. NPCC’s Region includes two (2) Interconnections.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments:

   HQT is concerned that the deletion of the Planning Coordinator entity, which currently holds a critical oversight and coordination function between transmission planners, has been lost. The authority to direct changes and set assumptions and expectations is no longer explicit therefore the FMWG needs to consider retaining the Planning Coordinator Function in conjunction with keeping both the Transmission and Resource Planning Functions as well. From a Regional, ISO/RTO,TOP and TO perspective, the three functions would provide additional clarity for understanding who does what and who registers for what. There are examples within NPCC as a result of the tasks originally associated with the Planning Coordinator having been incorporated into the Transmission Planning Function where additional confusion and ambiguity have resulted over and above that which had existed in Version 3 of the Functional Model.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

5. 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.

   ☒ Yes
   ☐ No

   Comments:

   HQT believe that there still exists many instances where the Functional Model, Standards and Registration simply do not line up. The FM has set forth guidelines for the industry that has received NERC Board approval but, again, in many instances, the Standards addressing reliable operation of the BES have not reflected specific information contained in the Model resulting in confusion in both registration and compliance

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments:

   There is an issue of authority that may have been lost with the deletion of the Planning Coordinator entity. It is recognized that coordination will still exist, however there seems to be a lack of responsibility for the overall authority in coordination of transmission planner studies for facilities that affect the operations of neighboring entities. HQT supports a much more detailed discussion on the interrelationships for the three proposed planning functions that have been recommended for inclusion.

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

☒ Yes

☐ No Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments:

It is clear that inconsistencies between the NERC Reliability Functional Model and the NERC Reliability Standards are increasing. With enforceable monetary sanctions now in place, NERC cannot support a document which contradicts the Standards and registration process. NERC must resolve this disjoint and clarify the relationship between the RFM, the Reliability Standards and the registration process.

The Functional Model Introduction states the following: "While the Model is not a standard, and does not have compliance requirements, it is intended and expected that the Task definitions and interrelationships contained in the Model will guide the development of Reliability Standards. The Model is a guideline, not a NERC requirement – standards developers are not required to include tasks envisioned in the model, nor are the developers precluded from developing Reliability Standards that conflict with the Model. If it comes down to a choice, the needs of the Reliability Standards themselves take precedence over the Model. The Model is independent of any particular organization or market structure. An organization may perform more than one Function and register as the corresponding Responsible Entities."

The above Introduction has several caveats including stating the model does not have compliance requirements, yet as the parent document that describes the foundation for entity registrations and the assignment of reliability standards requirements, it has significant implications and consequences, including up to a million dollars per day in fines. If developers are not precluded from developing Reliability Standards that conflict with the Model, why have a model?

On page 10 of the redline version of the Functional Model, «Transmission Planning Area» should be replaced by «Transmission Planner Area» to be consistent with the other «responsible entities» area's. This should be changed whenever it is mentioned in both documents submitted for comments.

On page 10 under the section «General», there should be some reference to the fact that in Canada, responsible entities would be «responsible» to their respective regulatory bodies.

On page 22 and following, the «defined Transmission's Planner Area» is simply replaced by «reliability area». How is that last area determined?

It should be made clear in both documents that the Transmission Planner, and the Planning Coordinator if it is retained, are not responsible for developing resource plan for compliance with reliability standards; this is the Resource Planner responsibility. The TP and PC do not have to develop or use tools and models for resource planning.

The version 4 propose to replace the Regional Reliability Organization (RRO) with the Reliability Assurer. Any reference to the RRO (see page 27, item 7, etc.) should be made consistent with the change proposed.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Ron Falsetti	
Organization:	Ontario IESO	
Telephone:	905-855-6187	
E-mail:	ron.falsetti@ieso.ca	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☒ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☒	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☒ No

   Comments:

   We agree with the removal of the Planning Coordinator (PC) role and the underlying explanation provided in the document. It reflects the current models of transmission and resource planning in North America. We are however concerned about applicability of standards which have the Planning Coordinator (PC) as a responsible entity. There could be perceived gaps while analyzing all the standards when identifying which PC requirement would apply to either the "enhanced" Transmission Planner (TP) or Resource Planner (RP) or both. We feel that the absence of such a gap analysis is of concern especially from a compliance and enforcement point of view.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

☐ No

Comments

5. 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.

☐ Yes
☒ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☒ No

Comments: **See comments to #2**

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

☒ Yes
☐ No

Comments:

1. **<u>3 – Resource Planner</u>: A resource planner may need to work and coordinate with multiple transmission planners for a single transmission planner area – this aspect needs to be identified in the technical document.**
2. **<u>6 – Transmission Planner</u>: The document identifies two types of transmission planners – the "detailed" planner and the "high-level" planner. It further goes on to stress the need for delineation of roles. Who would assume the role (manage) of developing and maintaining such a delineation process? It is important that one planner, most probably the one with the "high-level" planning who should be responsible for managing and coordination roles and responsibilities of multiple transmission planners in a given area. This also begs the**

question of who would be held non-compliant for not meeting standards, if there are multiple entities involved.

3. **Some of the interface model illustrations (eg: the diagram depicting interface between market and reliability models) on the document are not readable and should be dropped.**

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Kathleen Goodman	
Organization:	ISO New England Inc.	
Telephone:	413-535-4111	
E-mail:	kgoodman@iso-ne.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☒ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☒	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments: Task No. 1 under Reliability Assurance should eliminate the reference to "within an Interconnection". NPCC's Region includes two (2) Interconnections.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments: ISO New England is concerned that the deletion of the Planning Coordinator entity, which currently holds a critical oversight and coordination function between transmission planners, has been lost. The authority to direct changes and set assumptions and expectations is no longer explicit and therefore the FMWG needs to consider the retention of the Planning Coordination Function in conjunction with keeping both the Transmission and Resource Planning Functions as well. From a Regional, ISO/RTO, TOP and TO perspective, the three functions would provide additional clarity for understanding who does what and who registers for what. There are examples within NPCC as a result of the tasks originally associated with the Planning Coordinator having been incorporated into the Transmission Planning Function where additional confusion and ambiguity have resulted over and above that which had existed in Version 3 of the Functional Model.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments:

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments:

5. 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.

   ☒ Yes
   ☐ No

   Comments: ISO New England believes that there are many instances of existing situations where the Functional Model, Standards and Registration simply do not line up. The FM has set forth guidelines for the industry that has received NERC Board approval but, again, in many instances, the Standards addressing reliable operation of the BES have not reflected specific information contained in the Model resulting in confusion in both registration and compliance.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments:

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments: There is an issue of authority that may have been lost with the deletion of the Planning Coordinator entity.

   The proposed revision to the Functional Model, creating a consolidated singular function, creates a void as to who has the ultimate authority and responsibility to ensure an integrated Transmission/Resource Plan in the sub-region of interest. This need of a clearly identified planning authority is similar to that authority afforded the Reliability Coordinator for Control Area operations. The model needs to recognize an assignment of responsibility and overall authority for the coordination of transmission planner studies for facilities that affect the reliable operation of intra-regional and inter-regional transmission systems.

   Regarding the Planning Reliability Function and Planning Coordinator that have been addressed under question #2, ISO New England supports a much more detailed discussion on the interrelationships for the three proposed planning functions that have been recommended for inclusion by NPCC.

.

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

☐ Yes

☒ No

Comments:

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments: It is clear that inconsistencies between the NERC Reliability Functional Model and the NERC Reliability Standards are increasing. With enforceable monetary sanctions now in place, NERC cannot support a document which contradicts the Standards and registration process. NERC must resolve this disjoint and clarify the relationship between the RFM, the Reliability Standards and the Registration process.

The Functional Model Introduction states the following: "While the Model is not a standard, and does not have compliance requirements, it is intended and expected that the Task definitions and interrelationships contained in the Model will guide the development of Reliability Standards. The Model is a guideline, not a NERC requirement – standards developers are not required to include tasks envisioned in the model, nor are the developers precluded from developing Reliability Standards that conflict with the Model. If it comes down to a choice, the needs of the Reliability Standards themselves take precedence over the Model. The Model is independent of any particular organization or market structure. An organization may perform more than one Function and register as the corresponding Responsible Entities."

The above Introduction has several caveats including stating the model does not have compliance requirements, yet as the parent document that describes the foundation for entity registrations and the assignment of reliability standards requirements, it has significant implications and consequences, including up to a million dollars per day in fines. If developers are not precluded from developing Reliability Standards that conflict with the Model, why have a model?

Inconsistencies between the Functional Model, the Registration process, and the Reliability Standards exist, on top of Regional differences in conducting electric industry business, making it difficult for a clean one-size-fits-all approach. ISO New England encourages an enhanced effort to clearly delineate who the responsible entity is in the individual requirements of each Standard.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: ISO RTO Council/Standards Review Committee (SRC)

Lead Contact: Charles Yeung

Contact Organization: Southwest Power Pool

Contact Segment: 2

Contact Telephone: 832-724-6142

Contact E-mail: cyeung@spp.org

Additional Member Name	Additional Member Organization	Region*	Segment*
Patrick Brown	PJM	**RFC / SERC**	2
Jim Castle	NYISO	**NPCC**	2
Ron Falsetti	IESO	**NPCC**	2
Matt Goldberg	ISO-NE	**NPCC**	2
Brent Kingsford	CAISO	**WECC**	2
Anita Lee	AESO	**WECC**	2
Steve Myers	ERCOT	**ERCOT**	2
Bill Phillips	MISO	RFC/SERC/MRO/SPP	2

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

5. 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.

   ☒ Yes

☐ No

Comments The SRC supports the FMWG's concern that the industry and, perhaps some individuals at NERC believe that the Functional Model should be relied on to dictate the registration of Functional Entities who are required to comply with the Standards. The SRC appreciates the FMWG reiterating that the Functional Model was developed simply to define the various Reliability Tasks that are performed under various Entities (i.e. TOP, TP, RC, etc.) and NOT intended to dictate/mandate registration of such entities. Further, NERC must inform the industry that the compliance registry criterion is not bound to the functional entities defined in the Functional Model.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments

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

   ☐ Yes

   ☒ No

   Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Brian Thumm	
Organization:	ITC Holdings Corp.	
Telephone:	248.946.3506	
E-mail:	bthumm@itctransco.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☐	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☒ **RFC**	☐	5 — Electric Generators
☐ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

Comments

ITC does not feel combining the roles of Planning Coordinator and Transmission Planner will alleviate confusion in the Reliability Standards, and may in fact create additional burden for the delineation of duties between "layers" of transmission planners for the same reliability area.

There is now – and will continue to be – a distinction between those transmission plans developed for local areas, and those transmission plans developed for a wider area. Necessarily, those functions are often performed by separate entities. It seems, therefore, appropriate to retain separate entities in the functional model, but to revise the Reliability Standards in a fashion which more explicitly separates the functions performed by Planning Coordinators and by Transmission Planners.

Ostensibly, one of the desires to modify the Functional Model is to provide clarity between the roles of Planning Coordinator and Transmission Planner. It has been pointed out in many forums that the Planning Standards generally apply to both the Planning Coordinator and the Transmission Planner, and it is left to the individual entities to designate requirements between them where each does not fulfill all of the duties specified by the Standard. This revision to the Functional Model attempts to mitigate confusion by changing all of the requirements to be applicable to a single function – the Transmission Planner. On its face, it might appear that this would alleviate confusion, since there would be no argument as to whether a particular standard applies to the PC or the TP. However, on closer inspection, there is additional confusion created. There are no fewer entities performing the functions laid out in the Standards; rather, the same entities are now simply called the same thing. One must fully understand the roles of the two entities in order to understand the delineation of responsibilities. There is no longer the apparent or inherent division between the roles of a Planning Coordinator and a Transmission Planner.

Finally, the changes to the Functional Model do not integrate well with the independent transmission company model. The new functional model will require the transmission planner to take a more active role in the integration of resource and transmission plans. While this function can still be designated to a "higher level" transmission planner (e.g., and RTO) the new model creates additional challenges for maintaining an outward appearance of independence.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

5. 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.

   ☒ Yes
   ☐ No

Comments

The team should develop a comprehensive implementation plan for the functional model changes, or at the very least, describe how they intend to propagate the changes to the affected Reliability Standards. There is likely to be a high amout of anxiety about how the changes will affect individual entities who are registered for one or both of the functions.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

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

   ☐ Yes
   ☐ No

   Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Jim Useldinger	
Organization:	Kansas City Power & Light	
Telephone:	816-654-1212	
E-mail:	jim.useldinger@kcpl.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☐	3 — Load-serving Entities
☒ **NPCC**	☐	4 — Transmission-dependent Utilities
☐ **RFC**	☐	5 — Electric Generators
☐ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments: The Planning Coordinator (PC), Transmission Planner (TP) and Resource Planner (RP) have distinct and well defined responsibilities in planning the transmission system. All three are needed to provide clarity with the PC ensuring a higher level of coordination among the various TP's and RP's. The PC plays an important role in reviewing potentially competing transmission reinforcement projects and is also responsible for maintaining and developing consistent methodologies for planning a reliable Bulk Electric System.

   Eliminating the role of the PC reduces the effectiveness in coordinated transmission planning between RTO's and across the regional seams. This will result in a widening of the gap to effectively planning the interconnected electric system and is taking a step backward from where we are today.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

5. 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.

☒ Yes
☐ No

Clarification needs to be made between the responsibilities of the entities as described in the Functional Model with the responsibilities that will actually apply to an organization within the NERC Reliability Standards. It is uncertain now if the Reliability Standards will need to be changed to eliminate the PC responsibilities or if the NERC registration, certification and compliance programs will change. The registration does not line up with the FM.

The FM Introduction states that the model does not have compliance requirements, yet as the parent document that describes the foundation for entity registrations and the assignment of reliability standards requirements, it has significant implications and consequences, including penalties.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments: Please see comments on question 2.

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

☐ Yes
☒ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments:

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Michelle Rheault	
Organization:	Manitoba Hydro	
Telephone:	204-4875445	
E-mail:	mdrheault@hydro.mb.ca	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☒ **MRO**	☒	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☐ **RFC**	☒	5 — Electric Generators
☐ **SERC**	☒	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

1. Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

   These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments

   1. The definition of the Reliability Assurance Function and the corresponding Task 3 description refers to activities "related to planning". Should this say operational planning? There should be a reference to the time horizon. The Reliability Assurer has no long-term planning function.
   2. This change will result in a misalignment between the Functional Model and the NERC standards.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments

   Manitoba Hydro agrees that one of the tasks of the Transmission Planning Function is to integrate the resources and loads with transmission. However, Manitoba Hydro disagrees with Task 1, which states that the Transmission Planning Function includes the "development of resource adequacy plans." The Planning Coordinator in the former model had this task. With the elimination of the PC, this development task should go to Resource Planner.

   The elimination of the Planning Coordinator removes any oversight function for resource adequacy.

   The Transmission Planning Function does not "provide alternative plans to mitigate identified deficiencies" (Task 5) for resource adequacy deficiencies.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

5. 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.

   ☒ Yes

   ☐ No

   Comments

   1. The functional model should recognize that there is no NERC Standard for adequacy, only a requirement to assess adequacy. The Resource Planning Function tasks should include a requirement to provide resource adequacy plans to the Transmission Planner.
   2. Resource Planner
      - Task 8 – Manitoba Hydro disagrees with the role of the Transmission Planner in "identifying potential alternative solutions to meet resource requirements."
      - Task 9 – What is meant by "from the Transmission Planner"? What methodologies and tools are the transmission planners expected to provide?

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments While Manitoba Hydro does not disagree with the idea of de-coupling reliability assurance and regions, we are concerned about the introduction of new terminology. It is unclear how this change will affect the existing standards. At this time, organizations who want to understand the applicability of a standard refer to the functional model for a description of the various responsible entities. This change will create a disconnect between the Functional Model and the standards.

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

   Manitoba Hydro agrees with the concepts in the technical document.

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

   ☐ Yes

   ☐ No

   Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Tom Mielnik	
Organization:	MidAmerican Energy Company	
Telephone:	563-333-8129	
E-mail:	tcmielnik@midamerican.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☒ **MRO**	☒	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☐ **RFC**	☒	5 — Electric Generators
☐ **SERC**	☒	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments MidAmerican Energy agrees that this function needs to be separated from the RRO. The RRO cannot perform this function while performing standards compliance. MidAmerican Energy sees that organizations in some cases will need to step up and serve as the provider for the Reliability Assurer thus possibly resulting in developments that may require future changes to the functional model. However, the drafting team has taken the first step in clarifying this function in the proposed revisions and the drafting team is to be commended for these improvements to the functional model.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments MidAmerican Energy agrees that the Transmission Planner needs to integrate generation resources into transmission plans at all levels of transmission planning so that it is not practical to provide for coordination of resource plans only at an area-wide Planning Coordinator level. Also, the functions conducted by area wide organizations such as RTOs or regional coordinating planning organizations such as MAPP, are similar to the functions conducting by individual transmission planners: coordination of planning and plans with neighbors and the conduct of transmission planning and development of transmission plans. Therefore, MidAmerican Energy supports the changes made with regard to the Planning Reliability Function and the Planning Coordinator Entity.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☒ No

   Comments MidAmerican Energy believes that the drafting team has improved the Distribution Provider and Load Serving Entity functions. However, the use of the term voluntary load shed is confusing. While it is true that the load shedding is voluntary in the sense that end-use customers volunteer to participate in the program in return for economic incentives, once the customers volunteer to participate, they must comply with requests to shed load. This should be clarified in the document.

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

5. 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.

   ☒ Yes

   ☐ No

   Comments 1. On Page 13 of the NERC Reliability Functional Model version 4 red-line there is a sentence that states, "1. Provide a framework for Reliability Standards developed through the NERC standards development process that will apply to certain Tasks defined in the Functional Model." MidAmerican Energy does not understand this sentence. The team should either completely reword this sentence to convey some sort of information about the functional model or delete the sentence.

   2. On page 22 of the NERC Reliability Functional Model the term "total transfer capability" is left in 5 c. as a task for Transmission Planning while "total" of "total transfer capability" is deleted on page 25 of the NERC Functional Model. The drafting team should either delete the total on page 22 or clarify why this is not a discrepancy in the document.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments Again, MidAmerican Energy looks forward to further developments of organizations which are Reliability Assurers but that we believe this is a good first step to clarifying the roles of RROs versus those organizations that would serve the role of Reliabilty Assurer.

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☒ No

   Comments MidAmerican Energy generally agrees with proposed revisions to the Technical Document which deletes the Planning Coordinator Entity while expanding the Planning Reliability Function; however, we believe that the resource adequacy portions of the Planning Reliability Function is somewhat confusing given that resource adequacy is covered by the Resource Planner. MidAmerican Energy asks that the team consider

further clarifying the resource adequacy function of the Planning Reliability Function to include only integrating resources into the transmission plans and not refer to adequate resources, resource adequacy, or resource deficiencies.

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

☐ Yes
☒ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: **Midwest ISO**

Lead Contact: **Marie Knox**

Contact Organization: **Midwest ISO**

Contact Segment: **2**

Contact Telephone: **317-249-5264**

Contact E-mail: **mknox@midwestiso.org**

Additional Member Name	Additional Member Organization	Region*	Segment*
Terry Bilke	MISO	RFC, SERC, MRO, SPP	2
Scott Goodwin	MISO	RFC, SERC, MRO, SPP	2

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments

   The Midwest ISO disagrees with NERC's decision to eliminate the Functional role of Planning Coordinator and have it replaced with Transmission Planner for several reasons.

   1) In an open access environment, the TP (typical utility) cannot adequately integrate his transmission plans with separate generation resource planners.

   2) A planning coordinator that has a broad regional view of dispersed resource development and load needs, is needed to coordinate with the balkanized transmission plans of TPs. This was recognized by FERC when RTOs were formed and NERC got it right the first time.

   3) The Midwest ISO approach to transmission planning has undergone fundamental and significant changes. These changes were in response to not only the Midwest ISO energy market, but also to evolving energy policy related decisions at both the federal and state levels, FERC initiatives to promote improved regionally coordinated planning, and developing structures for more equitable transmission pricing policies.

   4) In the FERC Order 890 Final Rule, Preventing Undue Discrimination and Preference in Transmission Service, the Commission requires that Transmission Providers participate in a coordinated, open and transparent planning process on both a local and regional level.

      The Final Rule also notes that "The coordination of planning on a regional basis will also increase efficiency through the coordination of transmission upgrades that have region-wide benefits, as opposed to pursuing transmission expansion on a piecemeal basis." The Commission noted the intent of its coordination policies to support the congestion relief efforts of the DOE in stating that "new section 217 of the FPA requires the Commission to exercise its jurisdiction in a manner that facilitates the planning and expansion of transmission facilities to meet the reasonable needs of LSEs. A more transparent and coordinated regional planning process will further these priorities, as well as support the

DOE's responsibilities under EPAct 2005 section 1221 to study transmission congestion and issue reports designating National Interest Electric Transmission Corridors and the Commission's responsibilities under EPAct 2005 section 1223.

The Final Rule references the final report in 2005 of the Transmission Infrastructure Forum of the Consumer Energy Council of America (CECA), in which CECA concluded that regional transmission planning is needed to ensure the development of a robust transmission system capable of meeting consumer needs reliably and at reasonable cost over time. The CECA Report stresses that regional transmission planning must address inter-regional coordination, the need for both reliability and economic upgrades to the system, and critical infrastructure to support national security and environmental concerns.

Again, the Midwest ISO feels as if the elimination of the Planning Coordinator as a Functional role and replaced with a Transmission Planner is taking a step backwards just at a time when our coordinating role was gaining broader understanding and acceptance in the industry and local states.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

5. 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.

☐ Yes
☒ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☒ No

Comments

See response to Question 9.

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments

See comments to Question 2.

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

☒ Yes
☐ No

Comments

We are concerned about one particular definition in the document: Function!

Function—a set of reliability Tasks so closely related to one another that separating those Tasks, by assigning them to different organizations, would threaten to impair the integrity of the Function.

This nullifies the concept of joint registration. The definition should state:

Function—a set of closely related tasks done to support reliability.

The Functional Model Clarification Service is not a BES function and should be in a charter of the FMWG, not in this document.

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

We appreciate the contribution the Functional Model makes to the understanding of the relationships and high level tasks that must be performed to maintain reliability.

We understand that the Functional Model is a guideline and not an official determiner of registration and standards. Still, if there is a suggestion to eliminate a function, it would help to provide a recommendation on disposition of that function in the standards. This is needed to make an informed decision on whether or not something should be eliminated. If the suggestion is that the PA/PC would be accountable for every requirement currently done by resource and transmission planners, this just confuses the issue more. There are entities that do high-level coordination of transmission plans. Examples are RTOs/ISOs and also Regions where there are not established markets. We believe there is a place for the PA/PC. The problem lies in how the V0 and subsequent translation of standards blurred the distinction between PA and TP.

As for the Technical Document, there was added wording to the Interchange Authority that did not exist before. The original wording in the previous version of the function model implied that this function ensured balanced schedules and distributed them appropriately. In other words, it was the tag service. The technical document now includes an "approval" function. This is the responsibility of the BA, not the IA. If consideration shall be made towards the elimination of a function in the Model then consideration should be made towards the elimination of Interchange Authority.

Page 37 of the redline technical document says:
Alternatively, NERC may direct Regional Entities to develop a regional reliability standard in order to implement a NERC Reliability Standard. Such a regional reliability standard, upon approval by NERC, becomes part of the NERC Reliability Standard.
What this the source or driver for this statement? Standards are developed and approved through the NERC standards development process, not an ERO to RE directive.

We disagree with the suggested changes to resolve the IA function in the technical document. It is clear that the original wording pointed toward the tagging agent. The changed wording tries to shift this responsibility to the sink BA. The sink BA's responsibilities are already clearly defined in the INT standards. This wording change will result in a ripple effect that tries to fix a problem in the conversion of Policy 3 to the V0 standards. This is not a "find and replace" issue, whereby the solution is thought to be to the BA responsibilities that were tagging process steps in Policy 3. The technical document says the BAs would be held accountable if the Tag Agent service had a problem. This makes the BA responsible for something over which they have no direct control. If we are to follow this path, which entity will we hold accountable for failure of the SDX, IDC, GADS, etc.?

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☒ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: **MRO NERC Review Subcommittee**

Lead Contact: **Michael Brytowski**

Contact Organization: **MRO**

Contact Segment: **10**

Contact Telephone: **651-855-1728**

Contact E-mail: **mj.brytowski@midwestreliability.org**

Additional Member Name	Additional Member Organization	Region*	Segment*
Neal Balu	WPS	**10**	3,4,5,6
Terry Bilke	MISO	**10**	2
Carol Gerou	MP	**10**	1,3,5,6
Jim Haigh	WAPA	**10**	1,6
Ken Goldsmith	ALTW	**10**	4
Pam Oreschnick	XCEL	**10**	1,3,5,6
Dave Rudolph	BEPC	**10**	1,3,5,6
Eric Ruskamp	LES	**10**	1,3,5,6
Joseph Knight	GRE	**10**	1,3,5,6
Joseph Depoorter	MGE	**10**	3,4,5,6
Larry Brusseau	MRO	**10**	10
Michael Brytowski	MRO	**10**	10
Marie Knox	MISO	**10**	2
Wayne Guttormson	Sask Power	**10**	1,3,5,6

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☒ No

   Comments:

   A. The MRO NSRS agrees that this function needs to be separated. However we ask that the team further clarifies the functions assigned to the Reliability Assurer. For example in the technical document they have the RA listed as performing "readiness evaluations". Is this intended to mean the "NERC Readiness Evaluations"?

   B. Did the team intend to drop the regional resource adequacy evaluations, evaluations of protection systems, readiness assessments, and disturbance analysis evaluations from the Functional Model as tasks for the Reliability Assurer? Those tasks are listed in the Functional Model Technical Document as to be performed by the Reliability Assurer.

   C. The MRO is concerned that this role is somewhat ill-defined by the functional model and may cause more confusion. The MRO also notes that most if not all of the representative tasks listed in the technical document seem like planning or reliability coordinator type functions. The MRO asks the team if they have suggestion on who might fill function.

   D. The MRO is unsure of having references to compliance in this function.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☒ No

   Comments:

   A. The Transmission Planner needs to integrate generation resources into transmission plans at all levels of transmission planning so that it is not practical to provide for coordination of resource plans only at an area-wide Planning Coordinator level. Also, the functions conducted by area wide organizations such as RTOs or regional coordinating planning organizations such as MAPP, are similar to the functions conducting by individual transmission planners: coordination of planning and plans with neighbors and the conduct of transmission planning and development of transmission plans. Therefore, the MRO NSRS supports the changes made with regard to the Planning Reliability Function and the Planning Coordinator Entity.

   B. The MRO believes the approach of merging the PC functions into the TP does not seem to be applied consistently in the functional model. For example is not the RC just a larger version of a TOP? If so why not do the same with the RC function? And perhaps some of the other functions?

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☒ No

   Comments:

   The MRO NSRS believes that the drafting team has improved the Distribution Provider and Load Serving Entity functions. The use of the term voluntary load shed is confusing. While it is true that the load shedding is voluntary in the sense that end-use customers volunteer to participate in the program in return for economic incentives, once the customers volunteer to participate, they must comply with requests to shed load. This should be clarified in the document.

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☒ No

   Comments:

   The MRO does not understand why the high level functions of the GO and TO would not be the same. For example, task 2 in the GO. "Design and authorize maintenance of generation plant protective relaying systems, protective relaying systems on the transmission lines connecting the generation plant to the transmission system, and Special Protection Systems." Why would you not have a similar task in the TO, substituting 'transmission' for 'generation'?

5. 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.

   ☒ Yes

   ☐ No

   Comments

   A. On Page 13 of the NERC Reliability Functional Model version 4 red-line there is a sentence that states, "1. Provide a framework for Reliability Standards developed through the NERC standards development process that will apply to certain Tasks defined in the Functional Model." The MRO NSRS does not understand this sentence. The team should either completely reword this sentence to convey some sort of information about the functional model or delete the sentence.

   B. On page 22 of the NERC Reliability Functional Model the term "total transfer capability" is left in 5 c. as a task for Transmission Planning while "total" of "total transfer capability" is deleted on page 25 of the NERC Functional Model. The drafting team should either delete the total on page 22 or clarify why this is not a discrepancy in the document.

   C. Clarify who performs the Compliance Audits and who performs the Readiness Evaluations. The red-line version of the Functional Model page 18. Has deleted task 2 "Perform compliance audits" and on page 20, has deleted task 7 "Participate in readiness assessments."

   D. Changing from Compliance Monitoring to Compliance Enforcement. It appears that there is not a function to provide the compliance monitoring.

E. The MRO recommends that if the team is suggesting eliminating a function, it would sure help to hear if they have a recommendation with regards to standards that apply to that function. This is needed to make an informed decision on whether or not something is eliminated. If the suggestion is that the PA/PC would be accountable for every requirement currently done by resource and transmission planners and then NERC registers all PAs as TPs, this would be problematic.

F. The Functional Model Clarification Service is not a BES function and should be in a charter of the FMWG, not in this document.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes

☐ No

Comments:

A. Again, the MRO NSRS looks forward to further developments of organizations which are Reliability Assurers but that we believe this is a good first step to clarifying the roles of RROs versus those organizations that would serve the role of Reliability Assurer.

B. The Regional Councils (RC) agreed to perform studies since the Reliability Assurer will be taking on the duties of the RC, who is responsible for these studies? Are they covered under “processes” in task #1 on page 20 of the redlined Functional model version 4.0?

C. The MRO is concerned that this role is somewhat ill-defined by the functional model and may cause more confusion. The MRO also notes that most if not all of the representative tasks listed in the technical document seem like planning or reliability coordinator type functions.

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes

☒ No

Comments:

A. The MRO NSRS generally agrees with proposed revisions to the Technical Document which deletes the Planning Coordinator Entity while expanding the Planning Reliability Function; however, we believe that the resource adequacy portions of the Planning Reliability Function is somewhat confusing given that resource adequacy is covered by the Resource Planner. The MRO NSRS asks that the team consider further clarifying the resource adequacy function of the Planning Reliability Function to include only integrating resources into the transmission plans and not refer to adequate resources, resource adequacy, or resource deficiencies.

B. The Transmission Planning Function/Transmission Planner and the Resource Planning function/Resource planner need to be clarified. Plus, the transmission planning function needs more clarification as to describe what is an acceptable layered planner process. For example, who has what acceptable tasks?

C. The MRO believes the approach of merging the PC functions into the TP does not seem to be applied consistently in the functional model. For example is not the RC just a larger version of a TOP? If so why not do the same with the RC function? And perhaps some of the other functions?

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

☒ Yes

☐ No

Comments

A. Currently the way that the function, "Transmission Planning" is described is not clear. Please describe what is needed if planners chose to use a 'layered transmission planning' or 'global transmission planning'. For example, transmission planners need to work with planning coordinators they also need to work on System Protection projects whether they impact locally or impact a wide-area. Resource Planning is just one area.

B. The MRO NSRS has a question about who is going to be assigned the role of "Interchange Authority". Currently this role is being performed by the "Tagging Services".

C. The Technical Document added wording to the Interchange Authority that did not exist before. The original wording in the function model implied this function ensured balanced schedules and distributed them appropriately. The technical document now appears to include an "approval" function. This is the responsibility of the BA, not the IA.

D. Page 37 of the redline technical document says:

Alternatively, NERC may direct Regional Entities to develop a regional reliability standard in order to implement a NERC Reliability Standard. Such a regional reliability standard, upon approval by NERC, becomes part of the NERC Reliability Standard.
What this the source or driver for this statement? Standards are developed and approved through the NERC standards development process, not an ERO to RE directive.

E. We disagree with the suggested changes to resolve the IA function in the technical document. It is clear that the original wording pointed toward the tagging agent. The changed wording tries to shift this responsibility to the sink BA. The sink BA's responsibilities are already clearly defined in the INT standards. This wording change will result in a ripple effect (NERC will do a "find and replace" in the INT standards) and assign to the BA responsibilities that were tagging process steps in Policy 3. The technical document says the BAs would be held accountable if the Tag Agent service had a problem. This makes the BA responsible for something over which they have no direct control. If we are to follow this path, which entity will we hold accountable for failure of the SDX, IDC, GADS, etc.?

F. On Page 6 in the technical document there is a reference to the RRO that should be reviewed to see if it is still relevant

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

The MRO has a concern in the definitions section:

Function. A set of reliability Tasks so closely related to one another that separating those Tasks, by assigning them to different organizations, would threaten to impair the integrity of the Function.

This nullifies the concept of joint registration

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Dana Walters	
Organization:	National Grid	
Telephone:	508-389-3678	
E-mail:	dana.walters@us.ngrid.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☐	3 — Load-serving Entities
☒ **NPCC**	☐	4 — Transmission-dependent Utilities
☐ **RFC**	☐	5 — Electric Generators
☐ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☐ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☒ No

   Comments: National Grid operates within an RTO/ISO framework. As such, the Transmission Coordinator has a role, which we would prefer to maintain. However, we acknowledge that the role of a Planning Coordinator is not required in all situations. Therefore National Grid can accept the elimination of the role provided a agreements or formal understandings are in place to define the different responsibilities and authorities between the Transmission Planners.

   Aside from the Planning Coordinator issue, there are a few changes in Transmission Planning Function, Tasks 4, 5 and 5.d, which we believe should be modified to avoid confusion. Tasks 4, 5 and 5.d include development and report on implementation of resource plans, which are covered in the responsibility of the Resource Planner. Transmission Planner receives information on resource plans from the Resource Planner and does not develop the resource plan. Specifically, we suggest the following changes:

   Task 4: Remove "and resource" to read "Coordinate with adjacent and overlapping Transmission Planners so that system models **~~and resource~~** and transmission expansion plan**~~s~~** take into account modifications made to adjacent and overlapping Transmission Planner Areas".

   Task 5: Remove references to "resource" and to read "Evaluate, develop, document, and report on **~~resource and~~** transmission expansion plans for the reliability area. Verify that the integrated plan meets Reliability Standards, and, if not, report on potential transmission system **~~and resource~~** adequacy deficiencies and provide alternative plans to mitigate identified deficiencies"

   Task 5.d: Remove "and resource plan" to read "Monitor, evaluate and report on transmission expansion plan **~~and resource plan~~** implementation".

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

☐ No

Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☒ Yes

☐ No

Comments

5. 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.

☒ Yes

☐ No

Comments The Functional Model should highlight that agreements or formal understandings among "enhanced" Transmission Planners need to be in place to ensure coordination of planning responsibilities and accountabilities.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes

☒ No

Comments: National Grid would prefer to retain the Planning Coordinator, but can accept elimination of the role if agreements or formal understandings are in place to delineate the various responsibilities and authorities of the Transmission Planners. However, the Transmission Planner responsibilities were expanded too much when resource adequacy was included because such responsibilities would be duplicative to the responsibilities of the Resource Planner. The responsibility for resource adequacy belongs with the Resource Planner, and the Transmission Planner should have access to the Resource Planners plans and include them in the Transmission Planning Process. Several changes in Section 6 - Transmission Planner are required to eliminate this confusion. Below are suggestions that the team should consider:

Paragraph 1:

Comment:

Delete 'resources and'
"The Transmission Planner ensures a long-term (generally one year and beyond) plan is available for adequate ~~resources and~~ transmission within its Transmission Planner Area. That area encompasses a defined area and the customer demand therein. It may be smaller than, equal to, or larger than that of a Reliability Coordinator."

References to 'Transmission Planner Area' are suggestive of geographic areas, which is inappropriate. It would be clearer if the reference was to 'Transmission Planner reliability area'. This is consistent with our comments to questions 5 & 8, where the Transmission Planner's responsibilities need to be defined through agreements or formal understandings.

We suggest that this paragraph be revised to avoid these potential misunderstandings.

Paragraph 3 Last Sentence: It will also evaluate the impact of revised transmission and generator in-service dates on the transmission ~~and resource adequacy~~ plans and the ability of the revised plan to reliably serve the load.

Paragraph 4: Delete the entire paragraph that begins – "In its evaluation of resource plans … ". This paragraph is confusing the relationship between the RP and implies that the TP is responsible for resource adequacy.

Paragraph 7:
The Transmission Planner has to consider both resource solutions and transmission solutions, but they need to approach them differently.

Suggestion:
'The Transmission Planner is also expected to verify that its plans for new or reinforced facilities meet Reliability Standards or identify ~~the resource or~~ transmission deficiencies. The Transmission Planner is to work with the Resource Planner(s) and other Transmission Planner(s) to ~~identify potential~~ evaluate alternative resource solutions, including solutions proposed by stakeholders and identifying potential alternative transmission solutions consistent with ~~to meet~~ interconnected bulk electric system requirements.'

The focus of the last bullet should be on Transmission.
'The impact of revised transmission and resource in-service dates on transmission ~~and resource~~ adequacy.'

We also note that there may be regional differences on whether the FM should be referencing 'transmission adequacy' and/or 'reliable operation of the transmission system'. Some clarity may need to be provided.

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

☒ Yes
☐ No

Comments

1. The Technical Document (page 18) references delineation of Transmission Planner roles in the reliability plan, which doesn't seem appropriate.

In some areas, there may be "layering" of Transmission Planning, that is, two or more Transmission Planners. This will typically involve one Transmission Planner planning in greater detail on facilities and with more analytic rigor; with a second Transmission Planner covering a larger area and planning at a higher level. In these cases, delineation of the role~~-s~~ and reliability relationships of the various Transmission Planners need to be clearly defined in a regional reliability plan or similar document.

The Technical Document should highlight that agreements or formal understanding among "enhanced" Transmission Planners need to be in place to ensure coordination of planning responsibilities and accountabilities.

2. Under 'Resource Planner' on page 11, it indicates the following:

- Planning directed to identifying and realizing commercial opportunities. Such plans will typically be commercially sensitive, may not be made ~~be public~~ before required for the plan to be implemented, and will not be directed to ensuring resource adequacy.

The plans will have to be publicly disclosed prior to plan implementation, which implementation is being interpreted to be approvals and agreements are in place to begin construction. It is the identity of the developer that we were trying to avoid disclosing.

The last sentence of this section isn't clear. Something seems to be missing.

resource planning clearly will have an impact on resource adequacy. The Resource Planner, with its mandate for resource adequacy, must reflect to the extent possible commercially-directed planning affecting its Resource Planner Area.

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Patti Metro	
Organization:	National Rural Electric Cooperative Association (NRECA)	
Telephone:	703-907-5817	
E-mail:	patti.metro@nreca.coop	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** **X NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and ISOs
	X	3 — Load-serving Entities
	X	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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes – ***w/comments***

   ☐ No

   Comments

   NRECA agrees with the changes made to the Regional Reliability Assurance Function and Regional Reliability Organization Entity. With these changes, the Applicability for many of the existing FERC approved Reliability Standards, NERC BOT approved Reliability Standards and Reliability Standards under development will require modification. An Implementation Plan for version 4 of the Functional Model must be developed to incorporate the proposed changes in the NERC Reliability Standards Workplan. NRECA understands the need for the flexibility of utilizing the Reliability Assurer, however, is concerned about how this will be implemented by NERC. It appears in most cases the Reliability Assurer will be the existing Regional Entities, but in some cases could be NERC. How will this be managed?

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes ***w/comments***

   ☐ No

   Comments

   NRECA agrees with the changes made to the Planning Reliability Function and the Planning Coordinator with the consolidation of the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.. With these changes, the Applicability for many of the existing FERC approved Reliability Standards, NERC BOT approved Reliability Standards and Reliability Standards under development will require modification. An Implementation Plan for version 4 of the Functional Model must be developed to incorporate the proposed changes in the NERC Reliability Standards Workplan and the existing NERC Compliance Registry.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

5. 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.

   ☐ Yes
   ☒ No

   Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

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

   ☐ Yes
   ☒ No

   Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: Certain members of Assess Transmission Future Needs SDT (ATFNSDT)

Lead Contact: John Odom

Contact Organization: FRCC

Contact Segment: 10

Contact Telephone: (813)207-7985

Contact E-mail: jodom@frcc.com

Additional Member Name	Additional Member Organization	Region*	Segment*
Paul Rocha	CenterPoint Energy	ERCOT	1
Bill Harm	PJM	RFC	2
Robert Millard	RFC	RFC	10
Bob Williams	Florida Municipal Power Authority (FMPA)	FRCC	6
Bob Jones	Southern Company Transmission	SERC	1
Bernie Pasternack	AEP Service Corp	RFC/ERCOT/SPP	1
Chifong Thomas	Pacific Gas & Electric	WECC	1
Thomas Gentile	Quanta Technology - Observer	NA	7
Bob Pierce	Duke Energy Carolinas	SERC	1

Note: These comments are being submitted on behalf of a sub-set of the ATFNSDT, however, there are members that do not agree with the positions taken in these comments and there are observers and members who have not participated in these discussions. Those members and observers have not added their name in support of the comments.

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments The V4 concept emphasizes that the fundamental planning process and principles, as detailed in the TPL standards, need to take place at all levels of planning, regardless of industry organizational structures. It also acknowledges that the Transmission Planner (TP) needs to integrate generation resources into the transmission plans in order to ensure Bulk Power System reliability. With this acknowledgement, a separate functional entity is not necessary to ensure that generation resources are integrated into the transmission plans. The concept of the Planning Coordinator (Planning Authority) having a wide-area scope is valid, however, this concept is not readily transferable to all parts of North America. This wide-area scope can be covered in a wide variety of ways, including RTOs/ISOs, Regional Entities and other regional transmission planning processes. V4 states that TPs may group together to provide this wide-area scope. In addition, Order 890 requires an open and coordinated regional transmission planning process that greatly facilitates this wide-area scope. In creating the "enhanced" Transmission Planner function and removing the Planning Coordinator function, the requirements that only apply to the Planning Authority/Planning Coordinator must become applicable to the "enhanced" Transmission Planner. A mechanism to make the appropriate changes to the standards and to ensure that these functions continue to be performed must be developed before these changes are enacted.

   The 1st posting of TPL-001-1 contained a requirement (R5) that addresses wide area coordination. That requirement can readily be changed to assign the requirements to distribute and coordinate assessments to the "enhanced" Transmission Planner. The Regional Entity oversight, combined with these other mechanisms, will ensure that individual transmission plans are coordinated and communicated over a large geographic area. The proposed "enhanced" TP will allow the TPL standard under development to focus on the fundamental planning requirements, without having to assign specific requirements to individual entities that may not align with existing organizational structures.

   There are, however, a few changes in Transmission Planning Function, Tasks 4, 5 and 5.d, which we believe should be modified to avoid confusion. Tasks 4, 5 and 5.d include development and report on implementation of resource plans, which are covered in the responsibility of the Resource Planner. The Transmission Planner receives information on resource plan from the Resource Planner, rather than develop the resource plan. Specifically, we suggest the following changes:

Task 4: Remove "and resource" to read "Coordinate with adjacent and overlapping Transmission Planners so that system models ~~**and resource**~~ and transmission expansion plans take into account modifications made to adjacent and overlapping Transmission Planner Areas".

Task 5: Remove references to "resource" and to read "Evaluate, develop, document, and report on ~~**resource and**~~ transmission expansion plans for the reliability area. Verify that the integrated plan meets Reliability Standards, and, if not, report on potential transmission system ~~**and resource**~~ adequacy deficiencies and provide alternative plans to mitigate identified deficiencies"

Task 5.d: Remove "and resource plan" to read "Monitor, evaluate and report on transmission expansion plan ~~**and resource plan**~~ implementation".

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments

5. 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.

☒ Yes

☐ No

Comments The Functional Model should highlight that agreements or formal understandings among "enhanced" Transmission Planners need to be in place to ensure coordination of planning responsibilities and accountabilities.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes

☒ No

Comments Yes, the Planning Coordinator Entity should be eliminated and the Planning Reliability Function should be expanded. However, the Transmission Planner responsibilities were expanded too much when resource adequacy was included because such responsibilities would be duplicative to the responsibilities of the Resource Planner. The responsibility for resource planning belongs with the Resource Planner and the Transmission Planner should have access to the Resource Planners plans and include them in the Transmission Planning Process. Several changes in Section 6 - Transmission Planner are required to eliminate this confusion. Below are suggestions that the team should consider:

Paragraph 1:

The Transmission Planner ensures a long-term (generally one year and beyond) plan is available that reflects the resources determined by the Resource Planner ~~for adequate resources~~ and the transmission needed to integrate those resources and customer loads within its Transmission Planner Area or to other Transmission Planner Areas. The Transmission Area encompasses a defined area and the customer demands therein. It may be smaller than, equal to, or larger than that of a Reliability Coordinator.

Paragraph 3 Last Sentence: It will also evaluate the impact of revised transmission and generator in-service dates on the transmission ~~and resource adequacy~~plans and the ability of the revised plan to reliably serve the load.

Paragraph 4: Delete the entire paragraph that begins – "In its evaluation of resource plans … ". This paragraph is confusing the relationship between the RP and implies that the TP is responsible for resource adequacy.

Paragraph 7:

The Transmission Planner is also expected to verify that its plans for new or reinforced facilities meet Reliability Standards or identify the ~~resource or~~ transmission deficiencies. The Transmission Planner is to work with the Resource Planner(s) and other Transmission Planner(s) to identify potential alternative solutions, including transmission and resource solutions proposed by stakeholders to meet interconnected bulk electric system requirements.

Last bullet: The impact of revised transmission and resource in-service dates on transmission ~~and resource~~ adequacy.

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

☒ Yes

☐ No

Comments The Technical Document should highlight that agreements or formal understandings among "enhanced" Transmission Planners need to be in place to ensure coordination of planning responsibilities and accountabilities.

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

   Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Rick White	
Organization:	Northeast Utilities	
Telephone:	860-665-2572	
E-mail:	whitefb@nu.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** **X NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	**X**	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   X Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   X No

   Comments

   The FMWG needs to consider retaining the Planning Coordinator Function in conjunction with keeping both the Transmission and Resource Planning Functions. From a Regional, ISO/RTO, TOP, and TO perspective; the three functions provide additional clarity for understanding who does what and who registers for what.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   X Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   X Yes

   ☐ No

   Comments

5. 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.

   X Yes

   ☐ No

   Comments

   There still exist situations where the Functional Model, Standards and Registration simply do not line up. The FM has set forth guidelines for the industry that has received NERC Board approval but, again, in many instances, the Standards addressing reliable operation of the BES have not reflected specific information contained in the Model, resulting in confusion in both registration and compliance.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   X Yes

   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   X No

   Comments

   Comments in regards to the Planning Reliability Function and Planning Coordinator have been addressed under question #2.

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

   ☐ Yes

   X No

   Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

The Functional Model Introduction states the following: "While the Model is not a standard, and does not have compliance requirements, it is intended and expected that the Task definitions and interrelationships contained in the Model will guide the development of Reliability Standards. The Model is a guideline, not a NERC requirement – standards developers are not required to include tasks envisioned in the model, nor are the developers

precluded from developing Reliability Standards that conflict with the Model. If it comes down to a choice, the needs of the Reliability Standards themselves take precedence over the Model. The Model is independent of any particular organization or market structure. An organization may perform more than one Function and register as the corresponding Responsible Entities."

The above Introduction has several caveats including stating the model does not have compliance requirements, yet as the parent document that describes the foundation for entity registrations and the assignment of reliability standards requirements, it has significant implications and consequences, including up to a million dollars per day in fines. If developers are not precluded from developing Reliability Standards that conflict with the Model, why have a model?

The current draft NERC Organization and Registration and Certification Manual refers to "entities are defined in the NERC Glossary of Terms...." and makes no mention of the Functional Model. Again, why have a model?

Inconsistencies between the Functional Model, the Registration process, and the Reliability Standards exist, on top of Regional differences in conducting electric industry business, making it difficult for a clean one-size-fits-all approach. Registered entities with overlapping standards responsibilities, and those who have responsibility for less than 100% of those requirements for a given registration, are forced to outline in a matrix those specific requirements they are accountable for to show the auditors. The FMWG must resolve these foundational programmatic conflicts; clarify the relationships between the Functional Model, reliability standards and registration process; and provide direction for how exceptions to standard requirements responsibilities should be documented consistently across the industry.

Combining the Functional Model and Statement of Compliance Registry into one document should be considered as one step of a solution for eliminating inconsistencies and confusion.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☒ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: **NPCC Regional Standards Committee, RSC**

Lead Contact: **Guy V. Zito**

Contact Organization: **Northeast Power Coordinating Council**

Contact Segment: **10**

Contact Telephone: **212-840-1070**

Contact E-mail: **gzito@npcc.org**

Additional Member Name	Additional Member Organization	Region*	Segment*
Lee Pedowicz	NPCC	**NPCC**	10
Kathleen Goodman	ISO New England	**NPCC**	2
David Kiguel	Hydro One	**NPCC**	1, 3
Biju Gopi	Ontario Independent Electricity System Operator	**NPCC**	2
Michael Ranalli	National Grid	**NPCC**	3
Alan Adamson	New York State Reliability Council	**NPCC**	10

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments:

   Task No. 1 under Reliability Assurance should eliminate the reference to “within an Interconnection”. NPCC’s Region includes two (2) Interconnections.

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments:

   Participating Members of NPCC hold a concern that the deletion of the Planning Coordinator entity, which currently holds a critical oversight and coordination function between transmission planners, has been lost. The authority to direct changes and set assumptions and expectations and is no longer explicit therefore the FMWG needs to consider retaining the Planning Coordinator Function in conjunction with keeping both the Transmission and Resource Planning Functions as well. From a Regional, ISO/RTO,TOP and TO perspective, the three functions would provide additional clarity for understanding who does what and who registers for what. There are examples within NPCC as a result of the tasks originally associated with the Planning Coordinator having been incorporated into the Transmission Planning Function where additional confusion and ambiguity have resulted over and above that which had existed in Version 3 of the Functional Model.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

5. 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.

   ☒ Yes
   ☐ No

   Comments:

   Participating Members of NPCC commend the FMWG on the work they have done towards providing additional clarity to the FM. We believe, however, that there still exists in many instances where the Functional Model, Standards and Registration simply do not line up. The FM has set forth guidelines for the industry that has received NERC Board approval but, again, in many instances, the Standards addressing reliable operation of the BES have not reflected specific information contained in the Model resulting in confusion in both registration and compliance

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments:

   There is an issue of authority that may have been lost with the deletion of the Planning Coordinator entity. It is recognized that coordination will still exist, however there seems to be a lack of responsibility for the overall authority in coordination of transmission planner studies for facilities that affect the operations of neighboring entities. NPCC supports a much more detailed discussion on the interrelationships for the three proposed planning functions that have been recommended for inclusion by NPCC.

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

☐ Yes

☒ No Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments:

It is clear that inconsistencies between the NERC Reliability Functional Model and the NERC Reliability Standards are increasing. With enforceable monetary sanctions now in place, NERC cannot support a document which contradicts the Standards and registration process. NERC must resolve this disjoint and clarify the relationship between the RFM, the Reliability Standards and the registration process.

The Functional Model Introduction states the following: "While the Model is not a standard, and does not have compliance requirements, it is intended and expected that the Task definitions and interrelationships contained in the Model will guide the development of Reliability Standards. The Model is a guideline, not a NERC requirement – standards developers are not required to include tasks envisioned in the model, nor are the developers precluded from developing Reliability Standards that conflict with the Model. If it comes down to a choice, the needs of the Reliability Standards themselves take precedence over the Model. The Model is independent of any particular organization or market structure. An organization may perform more than one Function and register as the corresponding Responsible Entities."

The above Introduction has several caveats including stating the model does not have compliance requirements, yet as the parent document that describes the foundation for entity registrations and the assignment of reliability standards requirements, it has significant implications and consequences, including up to a million dollars per day in fines. If developers are not precluded from developing Reliability Standards that conflict with the Model, why have a model?

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: PJM Interconnection

Lead Contact: Patrick Brown

Contact Organization: PJM Interconnection

Contact Segment: 2

Contact Telephone: 610-666-4597

Contact E-mail: brownp@pjm.com

Additional Member Name	Additional Member Organization	Region*	Segment*
Albert DiCAprio	PJM	RFC / SERC	2

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

5. 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.

   ☐ Yes

☒ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

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

☐ Yes
☒ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Thomas J Bradish	
Organization:	Reliant Energy, Inc.	
Telephone:	724-597-8593	
E-mail:	tbradish@reliant.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
X ERCOT	☐	1 — Transmission Owners
X FRCC	☐	2 — RTOs and ISOs
☐ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
X RFC	X	5 — Electric Generators
X SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
X WECC	☐	8 — Small Electricity End Users
☐ NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments: No Comment

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments: No Comment

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments: No Comment

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   X Yes

   ☐ No

Comments

The generator owner (GO) changes made to the Functional Model are an improvement over Version 3. A further improvement would be to remove any mention of facility ratings from the GO entity description (Task 4 in the FM). The GO holds title to the generating facility. They invested millions of dollars in the asset. They have a vested interest in making sure that the facility is operated and maintained correctly to protect their investment. The generator owner has made a significant investment to provide energy to the market. The owner would be the entity that would have contractual arrangements with a TO, ISO, LSE and maybe a generator operator. A contract to operate the facility would most likely be the case when the generator is a joint owned facility and when the generator owner is a non-traditional owner such as a bank

or other financial institution. This arrangement is recognized by the functional model. The owner would specify facility ratings initially but the verification of those rating more appropriately belongs with the operator. Why?
The Generator Operator (GOP) would be the entity conducting or supervising any verification of a facility rating. This would include any black-start testing, verification of steady state data and dynamic data, verification of real and reactive data and any system protection system testing. The GOP is most likely the entity responsible for maintenance of unit equipment so the GOP would be most familiar with equipment limits, ratings and capabilities.
Other factors that support assigning the verification of facility ratings to the GOP include:

1. How a facility is operated has more impact on reliability than ownership of a facility. Reliability is not a function of ownership but rather it is a function of operation. Reliability Standards should not have any influence over generating plant ownership. Competition is enhanced by a diversity of ownership of generating facilities. New owners bring new ideas to the industry. If the new owner does not have the expertise to operate the facility these owners typically contract operation responsibilities to entities with operating experience. The operating entity will more fully understand the importance of reliability and would be in a better position to comply with standards. Requiring the GO to be responsible for standard compliance may in some cases discourage non-traditional entities from owning generating assets, which will hinder competition in the market.

2. Removing the Generator Owner from responsibility for generator verification standards will more clearly define who is responsible for standard compliance at jointly-owned facilities. If the owner is responsible this can easily create problems if one owner has a little different perspective on how the verifications should be conducted. This could lead to multiple ratings for the same facility. The standards do not contain enough detail to avoid these types of differences. For jointly-owned facilities, this change eliminates the need for each owner to make redundant submittals and streamlines the administration of compliance reports for each Regional Entity. It also eliminates the need for costly legal documents that transfer the responsibility from the owners to the operator. If it's going to end up with the operator then why not make it the responsibility of the operator in the first place. The argument that the owner needs an incentive to see that the verifications are done is without merit since the owner has a vested interest in making sure that the facility is operated in compliance with all government regulations and in line with good utility practice.
3. In the majority of cases the owner and the operator are the same entity so it is more efficient and cost effective to make the operator responsible for standard compliance and avoid the confusion created when the unit operation is contracted or in the case of joint ownership.

5. 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.

☐ Yes

☐ No

Comments: No Comment

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments: No Commenbt

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments: No Comment

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

☐ Yes

X No

Comments:

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments:

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Thomas J Bradish	
Organization:	Reliant Energy, Inc.	
Telephone:	724-597-8593	
E-mail:	tbradish@reliant.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
X ERCOT	☐	1 — Transmission Owners
X FRCC	☐	2 — RTOs and ISOs
☐ MRO	☐	3 — Load-serving Entities
☐ NPCC	☐	4 — Transmission-dependent Utilities
X RFC	X	5 — Electric Generators
X SERC	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ SPP	☐	7 — Large Electricity End Users
X WECC	☐	8 — Small Electricity End Users
☐ NA – Not Applicable	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments: No Comment

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments: No Comment

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☐ No

   Comments: No Comment

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   X Yes

   ☐ No

Comments

The generator owner (GO) changes made to the Functional Model are an improvement over Version 3. A further improvement would be to remove any mention of facility ratings from the GO entity description (Task 4 in the FM). The GO holds title to the generating facility. They invested millions of dollars in the asset. They have a vested interest in making sure that the facility is operated and maintained correctly to protect their investment. The generator owner has made a significant investment to provide energy to the market. The owner would be the entity that would have contractual arrangements with a TO, ISO, LSE and maybe a generator operator. A contract to operate the facility would most likely be the case when the generator is a joint owned facility and when the generator owner is a non-traditional owner such as a bank

or other financial institution. This arrangement is recognized by the functional model. The owner would specify facility ratings initially but the verification of those rating more appropriately belongs with the operator. Why?
The Generator Operator (GOP) would be the entity conducting or supervising any verification of a facility rating. This would include any black-start testing, verification of steady state data and dynamic data, verification of real and reactive data and any system protection system testing. The GOP is most likely the entity responsible for maintenance of unit equipment so the GOP would be most familiar with equipment limits, ratings and capabilities.
Other factors that support assigning the verification of facility ratings to the GOP include:

1. How a facility is operated has more impact on reliability than ownership of a facility. Reliability is not a function of ownership but rather it is a function of operation. Reliability Standards should not have any influence over generating plant ownership. Competition is enhanced by a diversity of ownership of generating facilities. New owners bring new ideas to the industry. If the new owner does not have the expertise to operate the facility these owners typically contract operation responsibilities to entities with operating experience. The operating entity will more fully understand the importance of reliability and would be in a better position to comply with standards. Requiring the GO to be responsible for standard compliance may in some cases discourage non-traditional entities from owning generating assets, which will hinder competition in the market.

2. Removing the Generator Owner from responsibility for generator verification standards will more clearly define who is responsible for standard compliance at jointly-owned facilities. If the owner is responsible this can easily create problems if one owner has a little different perspective on how the verifications should be conducted. This could lead to multiple ratings for the same facility. The standards do not contain enough detail to avoid these types of differences. For jointly-owned facilities, this change eliminates the need for each owner to make redundant submittals and streamlines the administration of compliance reports for each Regional Entity. It also eliminates the need for costly legal documents that transfer the responsibility from the owners to the operator. If it's going to end up with the operator then why not make it the responsibility of the operator in the first place. The argument that the owner needs an incentive to see that the verifications are done is without merit since the owner has a vested interest in making sure that the facility is operated in compliance with all government regulations and in line with good utility practice.
3. In the majority of cases the owner and the operator are the same entity so it is more efficient and cost effective to make the operator responsible for standard compliance and avoid the confusion created when the unit operation is contracted or in the case of joint ownership.

5. 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.

☐ Yes

☐ No

Comments: No Comment

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments: No Commenbt

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments: No Comment

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

☐ Yes

X No

Comments:

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments:

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Jonathan Sykes	
Organization:	Salt River Project	
Telephone:	602-236-6442	
E-mail:	jonathan.sykes@srpnet.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☒	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☐ **RFC**	☒	5 — Electric Generators
☐ **SERC**	☒	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☒ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes

   ☒ No

   Comments It is not clear how the responsibility of the region or inter-regional Planning function will be performed by the Resource Planner and this responsibility should be clearly delineated. The Transmission Planner of an individual entity is not capable of performing this function.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes

   ☐ No

   Comments

5. 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.

☐ Yes
☒ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments It is not clear how the responsibility of the region or inter-regional Planning function will be performed by the Resource Planner and this responsibility should be clearly delineated. The Transmission Planner of an individual entity is not capable of performing this function.

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

☐ Yes
☐ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments The responsibility of planning, constructing and determining the reliability of Protection Systems needs to be clearly delineated. It is referenced in several entities and is shown in the technical document as the responsibility of the Reliability Assurer but does not appear in the definition of the function model for this same entity.

Clearly some applications of the Protection Systems have been left out of these documents:

- Protection Systems on transformers with low-voltage terminals at 100kV.
- Regional UF programs
- Regional RAS systems
- Generator Protection Systems

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: SERC EC Planning Standards Subcommittee

Lead Contact: Travis Sykes

Contact Organization: Tennessee Valley Authority

Contact Segment: 1

Contact Telephone: 423-751-4162

Contact E-mail: tssykes@tva.gov

Additional Member Name	Additional Member Organization	Region*	Segment*
John Sullivan	Ameren	SERC	1
Charles Long	Entergy	SERC	1
Scott Goodwin	Midwest ISO (MISO)	MRO, RFC,SERC, SPP	2
Pat Huntley	SERC Reliability Corp	SERC	10
Phil Kleckley	SC Electric and Gas	SERC	3
Bob Jones	Southern Company Services	SERC	1

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments This represents a majority position, with the MISO representative dissenting. The MISO representative reported that they plan to file separate comments.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

5. 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.

   ☐ Yes

☒ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☒ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☒ No

Comments The wording describing the TP function has been changed and now seems to imply that the TP is responsible for resource adequacy. This responsibility belongs to the Resource Planner. The Transmission Planner ensures that the long-term transmission plan is adequate to deliver the resources specified by the Resource Planners. The TP does not ensure that adequate resources are planned to meet the demand requirements. The wording needs to be modified to remove this implication.

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

☐ Yes
☒ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	MARILYN FRANZ	
Organization:	SIERRA PACIFIC POWER AND NEVADA POWER COMPANIES	
Telephone:	775-834-5388	
E-mail:	mfranz@sppc.com	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT**	☒	1 — Transmission Owners
☐ **FRCC**	☐	2 — RTOs and ISOs
☐ **MRO**	☐	3 — Load-serving Entities
☐ **NPCC**	☐	4 — Transmission-dependent Utilities
☐ **RFC**	☐	5 — Electric Generators
☐ **SERC**	☐	6 — Electricity Brokers, Aggregators, and Marketers
☐ **SPP**	☐	7 — Large Electricity End Users
☒ **WECC**	☐	8 — Small Electricity End Users
☐ **NA – Not Applicable**	☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: **WECC Functional Model Review Task Force**

Lead Contact: **Marilyn Franz**

Contact Organization: **WECC ISAS**

Contact Segment: **Transmission**

Contact Telephone: **775-834-5388**

Contact E-mail: **mfranz@sppc.com**

Additional Member Name	Additional Member Organization	Region*	Segment*
Gary Nolan	Puget Sound Energy Inc.	**WECC**	1
Raymond Vojdani	WAPA	**WECC**	9
Jennella Battles	Nevada Power/Sierra Power	**WECC**	3,6

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☒ Yes
   ☐ No

   Comments On page 20 in the Definition area the word evaluate need to be changed to evaluates.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments On page 40 Tasks #4 – Approve and deny Interchange Schedules. On page 42 No. 7 – The IA does not approve it should merely be a conduit of the approvals and denials being sent.

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments On page 40 under Real Time #8 both the Balancing Authority and the Transmission Service Providers can issue interruptions.

5. 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.

   ☒ Yes

☐ No

Comments Page 55 #7 - The task of a DP directing load shed was deleted above.

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes

☐ No

Comments

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

☐ Yes

☐ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments Reliability Coordinators should not have the responsibility to approve or deny tags. Reliability Coordinators do not have enough staff to routinely process Interchange Schedules nor do they have enough information to decide on the validity of a tag. Assessments, approval or denial should not be listed as part of the RC function. Changes to the definition and functions of an Interchange Authority are needed. The Interchange Authority should be described as a service.

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Ian Grant	
Organization:	TVA	
Telephone:	423-751-8721	
E-mail:	isgrant@tva.gov	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☒ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☒	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☒ No

   Comments

   This proposed revision appears to be confusing the purpose of the Planning Coordinator function with how it can be achieved.

   The primary purpose of a Planning Coordinator is to ensure that the utility has adequate long range plans to ensure reliability. If the Planning Reliability function is absorbed into the Transmission Planner, then there is no independent entity to set criteria and assess the adequacy of resource and transmission plans. Without a Planning Coordinator or equivalent, the adequacy of the transmission plan is left to the Transmission Planner. This would appear to be a classic case of the fox and the henhouse.

   However, it is correct that transmission plans cannot be developed independent of resource plans and load forecasts, so the Planning Coordinator (PC) cannot integrate the Transmission Planner's transmission plans with the resource plans of the Resource Planner without needlessly duplicating efforts. It is agreed that the present description of the tasks to be performed by the Planning Coordinator is unrealistic, but the need for improving this should not obscure the importance of retaining the independent function.

   In TVA for example, the Functional Model requirements have been achieved by the Planning Coordinator subcontracting the integration of the resource plan into the development of the long term transmission plan to the Transmission Planner. The Planning Coordinator ensures that adequate criteria are in place and that they are followed. This has worked well, although other and more elegant solutions may be available.

   It is recommended that the proposed changes to V3 not be made, and instead that the description of Planning Coordinator responsibilities be revised in a way that recognizes that the actual integrated plans must be developed by the Transmission Planner.

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

5. 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.

   ☐ Yes
   ☐ No

   Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

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

☐ Yes
☐ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:	Jay Seitz	
Organization:	US Bureau of Reclamation	
Telephone:	303-445-2844	
E-mail:	jseitz@do.usbr.gov	
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** **X**☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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
	X ☐	9 — Federal, State, Provincial Regulatory or other Government Entities
	☐	10 — Regional Reliability Organizations and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   X☐ No

Comments The NERC Reliability Functional Model Definitions for Generator Ownership and Transmission Ownership are as proposed in Version 4:
Generator Ownership – Owns and provides for maintenance of generating facilities.
Transmission Ownership – Owns and provides for maintenance of transmission facilities.

These definitions attach significance to an entity that possesses a simple title to a generation or transmission asset. However, none of the standards themselves involve possession of a title. This has lead to the perception that possession of a title, rather than responsibility for performance of tasks,

determines which entity is registered as a TO or GO. In most instances it will be true that the possessor of the title is also the entity responsible for performance of the tasks. But in significant cases this is not true. We recommend the definitions of TO and GO be modified to emphasize the tasks performed rather than possession of title. Possible language may be:

Generator Ownership Definition – Manages access to generation resources and provides for maintenance of generating facilities.
Transmission Ownership Definition – Manages access to transmission system and provides for the maintenance of transmission facilities.

5. 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.

   ☐ Yes
   x☐ No

   Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

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

   ☐ Yes
   ☐ No

   Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Comment Form for Functional Model Version 4 and Associated Technical Reference

Please use this form to submit comments on Version 4 of the Functional Model and its associated Technical Reference. Comments must be submitted by **April 4, 2008.** You may submit the completed form by e-mail to sarcomm@nerc.net with the words "Functional Model" in the subject line. If you have questions please contact Stephen Crutchfield at Stephen.crutchfield@nerc.net or by telephone at 609.651.9455.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		**Registered Ballot Body Segment (check all industry segments in which your company is registered)**
☐ **ERCOT** ☐ **FRCC** ☐ **MRO** ☐ **NPCC** ☐ **RFC** ☐ **SERC** ☐ **SPP** ☐ **WECC** ☐ **NA – Not Applicable**	☐	1 — Transmission Owners
	☐	2 — RTOs and 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 and Regional Entities

Group Comments (Complete this page if comments are from a group.)

Group Name: **WECC Reliability Coordination Comments Work Group**

Lead Contact: **Nancy Bellows**

Contact Organization: **WECC RCCWG**

Contact Segment: **10**

Contact Telephone: **970-461-7246**

Contact E-mail: **bellows@wapa.gov**

Additional Member Name	Additional Member Organization	Region*	Segment*
Terry Baker	PRPA	**WECC**	10
Paul Bleuss	CMRC	**WECC**	10
Greg Campbell	RDRC	**WECC**	10
Mike Gentry	SRP	**WECC**	10
Bob Johnson	PSC	**WECC**	10
Don Pape	WECC RC	**WECC**	10
Linda Perez	WECC RC	**WECC**	10
Dick Schwarz	PNSC	**WECC**	10
Greg Tillitson	CMRC	**WECC**	10

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Background Information:

The Functional Model Working Group (FMWG) began working on revisions to Version 3 of the Functional Model (FM) in August of 2007. The project scope is based on feedback from the Standards Committee (SC), the Operating Committee (OC), and Standard Drafting Teams (SDTs).

Based on stakeholder comments, the FMWG made the following significant changes to the Functional Model (V4) and the Functional Model Technical Document:

- Changed the "Regional Reliability Assurance Function" and the corresponding "Regional Reliability Organization Entity" to "Reliability Assurance Function" and "Reliability Assurer Entity."

  These changes reflect the view that reliability assurance can be performed on other than a regional basis and the responsible entity need not be a Regional Entity.

- Consolidated the Planning Reliability Function and the corresponding Planning Coordinator Responsible Entity into the Transmission Planning Function and the Transmission Planner Entity.

  In Versions 2 and 3 of the Functional Model, the Transmission Planner developed transmission plans, while the Planning Coordinator integrated those transmission plans with the resource plans of the Resource Planner.

  Version 4 recognizes that entities cannot develop transmission plans independent of resource plans and forecast system loads. Transmission, as the enabling resource, must involve integration of resources and loads with transmission. In effect, the Transmission Planner must perform the integration previously assigned to the Planning Coordinator.

  Version 4 of the Functional Model therefore has just two planning Functions –Transmission Planning, and Resource Planning, and two corresponding responsible entities – the (enhanced) Transmission Planner and the Resource Planner.

- Clarified the wording, in a number of instances, to ensure that the Functional Model's tasks and relationships between responsible entities, do not include prescriptive requirements. Reliability Standards and NERC processes specify prescriptive requirements, not the Functional Model.

  For example, references in Version 2 of the Functional Model included a wording that stated a responsible entity "must ensure" or "is required to ensure." In V4 of the Functional Model these phrases were changed to simply "ensures".

- Clarified that the Generator Owner and Transmission Owner provide for the maintenance of their respective assets.

  This recognizes that the owners may assign performance of the maintenance to another party, for example, to a Generator Operator or Transmission Operator.

- Clarified that the Load-serving Entity does not necessarily own assets.

  This resulted from a December 2007 FERC ruling and recognizes that the Distribution Function "Provides facilities that interconnect an End-use Customer load and the electric system for the transfer of electrical energy to the End-use Customer."

Questions:

Please see the Functional Model V4 Redline Version pages 16-17 when answering question 1:

1. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and Regional Reliability Organization Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 18-23 when answering question 2:

2. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in version 4 of the Functional Model? If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 41-42 (DP) and pages 49-50 (LSE) when answering question 3:

3. Do you agree with the proposed revisions to the Distribution Provider and Load Serving Entity in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

Please see the Functional Model V4 Redline Version pages 45-46(GO) and pages 39-40(TO) when answering question 4:

4. Do you agree with the proposed revisions to the Generator Owner and Transmission Owner Functions in version 4 of the Functional Model? These revisions were intended to address the issue of asset ownership. If no, please provide comments in support of your answer in the comment area.

   ☐ Yes
   ☐ No

   Comments

5. 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.

   ☐ Yes

☐ No

Comments

6. Do you agree with the proposed revisions to the Regional Reliability Assurance Function and the Regional Reliability Organization Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

7. Do you agree with the proposed revisions to the Planning Reliability Function and the Planning Coordinator Entity in the Functional Model Technical Document? If no, please provide comments in support of your answer in the comment area.

☐ Yes
☐ No

Comments

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

☐ Yes
☐ No

Comments

9. If there are any other comments you wish to provide to the FMWG that you have not already provided in response to the questions above, please provide them here.

Comments The WECC RCCWG has the following comments regarding the relationships between the Reliability Coordinator with other responsible entities detailed in the "Responsible Entity – Reliability Coordinator" section:

Relationship 7 "Calculates Interconnection Reliability Operating Limits based on Transmission Owners' and Generator Owners' specified equipment ratings and provides to Transmission Operators" should read "Calculates and/or monitors and assesses calculated Interconnection…" to include the process utilized in the WECC.

Relationship 9 "Provides Interchange Transaction denial to Interchange Authorities based on reliability analysis" and Relationship 13 "Receives final approval or denial of Interchange Transactions from Interchange Authority" seem to suggest that the Interchange Authority, not the Reliability Coordinator, has the final determination whether Interchange Transactions occur. If the Reliability Coordinator is the final authority on reliability actions, why does the final approval or denial come from the Interchange Authority? It seems that the Reliability coordinator should receive the Interchange Transaction from the Interchange Authority, and the Reliability Coordinator then can issue a final approval or denial.

Relationship 11 “Directs Generator Operators and Transmission Operators to revise generation and transmission maintenance plans respectively as permitted by agreements” should have the phrase “as permitted by agreements” removed. If there is a reliability concern, the Reliability Coordinator direction needs to be followed. Agreements are not required.

Relationship 14 “Coordinates available transfer capability with Transmission Service Providers” should have the addition “under emergency conditions” at the end of the relationship. The coordination is not necessary under normal operating conditions.

Relationship 15 “Develops operating agreements or procedures with Transmission Owners” should be removed. The standards cover the relationship. Operating procedures can be added to Relationship 16.

Relationship 19, “Issues reliability alerts to Generator Operators, Transmission Operators, Transmission Service Providers, Balancing Authorities, Interchange Authorities, Transmission Planners, Regional Entities and NERC”, contains an undefined phrase. The meaning of “reliability alerts” is not clear. Please define this term or use alternate language.

Relationship 20 “Issues corrective actions and emergency procedures directives (e.g., curtailments or load shedding) to Transmission Operators, Balancing Authorities, and Interchange Authorities” does not list GOP, but does list IA. The IA is not included in standard requirements, but the GOP is.

The intent of Relationship 21 “Specifies reliability requirements to Balancing Authorities” is unclear. The Reliability coordinator applies standards requirements to other functional responsibilities it does not specify the requirements.

Are “schedule interruptions”, referred to in Relationship 23 “Receives notification of Interchange Transaction schedule interruptions from Balancing Authorities”, different from a curtailment? If not, the phrase “schedule curtailments” should be used.