Unofficial Comment Form

Functional Model Advisory Group
Revisions to the Functional Model and Functional Model Technical Document

Do not use this form for submitting comments. Use the electronic form to submit comments on the Reliability Functional Model (FM) and the Reliability Functional Model Technical Document (FMTD). The electronic form must be submitted by 8 p.m. Eastern, Wednesday, September 7, 2016.

Additional information is available on the working group page. If you have questions, contact Lacey Ourso, Standards Developer by email or phone at 404.446.2581.

Background Information

Background regarding the Functional Model and Functional Model Technical Document
The FM is a guideline that identifies the functions that must be performed to ensure that the Bulk Power System (BPS) is planned and operated in a reliable manner. The FM describes, in general terms, the functions that must be performed to ensure reliability, the specific tasks that are necessary to perform each function, and the relationships between functional entities that perform the various tasks. In its capacity of a guideline, the FM serves to provide a framework for NERC Reliability Standards as they are developed through the standard development process. The FM is independent of any particular organizational or market structure. The focus of the FM is solely on identification of reliability-related functions and the associated tasks and relationships. The FM is not a “standard” and does not have compliance effects. If there is a conflict between the FM and Reliability Standards, the Reliability Standards always take precedence. Also, the FM is not intended to identify the entities responsible for NERC registration. The NERC registration process is undertaken by NERC (and the Regional Entities) pursuant to authority from FERC, ultimately derived from the Federal Power Act. The FM has no authority, ability, or intent to impact or influence the NERC Registration process. The FMTD is a companion document to the FM. It serves to elaborate on the manner in which the various functional entities carry out their functions and perform their tasks.

Background regarding the Functional Model Advisory Group
The purpose of the Functional Model Advisory Group (FMAG), as outlined in the FMAG Scope document, is to (1) maintain the FM and FMTD to ensure the model correctly reflects the industry today, and (2) evaluate and incorporate new and emergent reliability-related tasks. The FMAG reports to the Standards Committee (SC), and works with the Planning Committee (PC), Operating Committee (OC), and Critical Infrastructure Protection Committee (CIPC) to obtain consensus regarding any proposed changes to the FM and FMTD. All proposed changes to the FM must be posted for industry comment, obtain consensus agreement from the PC, OC, and CIPC, and, ultimately, approval by the SC.
Overview of the 2016 FMAG project
In December 2015, the FMAG began a comprehensive review and assessment of the FM and FMTD to determine if it correctly reflects the industry today and whether there was a need to incorporate any new or emerging reliability-related tasks. As a result of the review, the FMAG identified many areas in need of revision. Below is a general summary of the type and nature of the revisions proposed by the FMAG.

General Overview of Proposed Revisions

1. **Incorporated defined terms from the NERC Glossary of Terms**: A large majority of the proposed revisions relate to incorporation of definitions from the NERC Glossary of Terms. For each proposed revision, the FMAG undertook a review to determine whether it was appropriate to incorporate the defined term, given the context and usage of the term in the FM. In some instances, the Glossary term was not used because the FMAG did not believe it had the intended meaning of the defined term, as used in the FM. In some instances, the term was simply capitalized to indicate it had the meaning of the Glossary term. In other instances, the word or phrase was replaced with a defined term (i.e., reliability-related services replaced with Interconnected Operations Service).

2. **Consolidated ERO-related functions**: In the current version of the FM (version 5), there are separate functions for Standards Developer, Compliance Enforcement Authority and Reliability Assurance. The FMAG believes that all of these fall under one “function” of ensuring the reliability of the BPS. Therefore, all functions related to reliability assurance were moved to the Reliability Assurance function. The Reliability Assurance function is intended to include any tasks performed by the Electric Reliability Organization (ERO) to ensure the reliability of the BPS, including, for example, development of Reliability Standards, development and implementation of a compliance and enforcement program, and development and maintenance of a program for identifying and registering entities responsible for compliance.

3. **Clarified the planning functions**: Planning Coordinator (PC), Transmission Planner (TP), and Resource Planner (RP): The proposed revisions seek to identify the differences in the various planning functions, the tasks performed by the functional entities, and how the planners work together to ensure the BES has adequate reliability planning.

4. **Clarified how Interchange occurs**: The proposed revisions provide clarity regarding how the various functions and functional entities work together to perform Interchange, including incorporation of appropriate Glossary terms (i.e., Requests for Interchange, Arranged Interchange, Confirmed Interchange).

5. **Added cyber and physical security tasks**: The FMAG is proposing to add two new tasks related to security protections for cyber assets and physical assets, and communication regarding an actual or suspected threat to those assets. The new tasks have been added to the RC, BA, TOP, TO, IC, DP, GO and GOP functions.
45-day informal comment period
The proposed revisions to the FM and FMTD are posted for a 45-day informal comment period. The FMAG will review all comments submitted and incorporate, as appropriate, proposed revisions to the FM and FMTD. In the documents posted for comment, the highlighted language is intended to indicate that the revision relates to a substantive change. The FMAG requests that you focus your comments on these highlighted revisions. Revisions that are not deemed substantive include revisions related to:

- Incorporation of a Glossary term;
- Clarification to the existing language (i.e., use of consistent terminology);
- Changes to the order or manner of presentation of information (i.e., rearrangement of tasks to follow a chronological order of how the tasks are performed);
- Consolidation of related items or removal of redundancies; and
- Changes to reflect how Interchange works, including incorporation of NERC Glossary terms.
Questions

1. **For the Reliability Assurance function:** Do you agree with the proposed revisions to consolidate the ERO-related functions to the Reliability Assurance function? If not, please explain how you believe the functions related to ensuring the reliability of the Bulk Power System should be structured.

☐ Yes
☐ No
Comments:

2. **For the Reliability Assurance function:** Do you agree with the proposed revisions to the Tasks and Relationships with Other Functional Entities sections? If not, please explain your specific concerns, and what revisions you propose to address those concerns.

☐ Yes
☐ No
Comments:

- Task #1: Reliability Assurance does not develop Reliability Standards; stakeholders develop the standards with the support of the Reliability Assurer. Additionally, the last phrase that begins with “and to hold them accountable...” is more appropriate under task #2, which discusses compliance.
- Task #2: Should read ‘North America’ not ‘North American’.
- Task #4: Recommend adding after certification ‘of an entities ability to perform the applicable reliability functions associated with the governmental-approved Reliability Standards.’
- Task #5: Recommend adding after skills “that enable them to reliably operate the BES.” The term BPS/BES should be used to be consistent.
- Task #6: Recommend replacing ‘if necessary’ with ‘as necessary’ for clarity.
- Task #10: Recommend replacing the term ‘present’ with ‘real-time’ to be consistent with terminology in Reliability Standards.

Reliability Assurer definition: Recommend replacing ‘and governmental authorities in Canada’ with ‘and applicable governmental authorities in North America’ to include Mexican authorities.

Relationships with Other Functional Entities:

- #1: Add ‘In collaboration with stakeholders, develop...”
- #3: Replace ‘from’ with ‘for’.

3. **For the Planning Reliability function:** Do you agree with the proposed revisions to the “Tasks” for the Planning Reliability function? If not, please identify the specific Task that you take issue with,
the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No
Comments:
Task #3: Replace “Transmission Planner’s” with “applicable” as a Planning Assessment is not limited to the Transmission Planner by definition.
Add a Task: Design UFLS programs, UVLS programs and RAS as required to maintain system reliability.
Task 5. Evaluate and report on the performance of the consolidated BES Transmission assessments.

4. **For the Planning Reliability function:** Do you agree with the proposed revisions to the “Introduction to the Planning Coordinator” section? Please identify the specific language that you do not support, the technical basis for your position, and the alternative language that you propose to address the issue.

☒ Yes
☐ No
Comments:

5. **For the Planning Reliability function:** Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No
Comments:
Item #2: Recommend removing ‘from the Transmission Planner’ as this limitation could change.
Planning Coordinator Item #5: “Assess the performance of the BES Transmission system, in coordination with Transmission Planners “

6. **For the Transmission Planning function:** Do you agree with the proposed revisions to the “Tasks” for the Transmission Planning function? If not, please identify the specific Task that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.
Task #4: Replace ‘interconnected’ with ‘comprehensive’ to describe the model. The comprehensive model should be of the interconnected system.

Task #1: “…analysis and simulation of the BES Transmission System” (Transmission System is not a defined term)

Task #5: “…BES Transmission System”

7. **For the Transmission Planning function:** Do you agree with the proposed revisions to the “Introduction to the Transmission Planner” section? Please identify the specific language that you do not support, the technical basis for your position, and the alternative language that you propose to address the issue.

   ☐ Yes
   ☒ No

   **Comments:**
   TP should be defined after the first use of the term ‘Transmission Planner’ in the first sentence. The “Definition” section of Transmission Planner (and therefore the NERC Glossary of Terms definition for TP) should be revised to read: “The Transmission Planner is responsible for assessing the longer-term (generally one year and beyond) Transmission system performance **within its Transmission Planner area**.” Not its Planning Authority area.

   The definition should be revised to avoid confusion and to be consistent with the “Introduction to Transmission Planner” section directly following the “Definition” section, which states, “The TP assessment includes the collection of Transmission assets over which the Transmission Planner is responsible for planning (“TP Area”).”

   What does it mean that both terms “Planning Authority” and “Planning Coordinator” are Archived, pursuant to the current NERC Glossary? Shouldn’t this Functional Model document exclusively use “Planning Coordinator”, most current term in the body of the document? If need be, due to references to Planning Authority in other works, the equivalence should be specified in one spot at the beginning of the document.

8. **For the Transmission Planning function:** Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific
Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  ☒ No

Comments:

Item #1: Is the three item list of data meant to be comprehensive or merely be examples? Please add clarity.

Item #2b: Recommend eliminating “from Load-Serving Entities, and Resource Planners.” Load-Serving Entities should not be a registered function and mentioned in the Functional Model as they, quoting a NERC filing on December 11, 2014, “For reliability purposes, NERC has concluded that any responsibilities of Load-Serving Entities that have a reliability impact are duplicative of those performed by other reliability functions.” Suggest adding “from applicable entities”.

9. **For the Resource Planning function**: Do you agree with the proposed revisions to the “Tasks” for the Resource Planning function? If not, please identify the specific Task that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  ☒ No

Comments:

Task #1: change “…specific set of loads” to “for a specific load forecast”

10. **For the Resource Planning function**: Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  ☒ No

Comments:

In the definition, adequacy should be capitalized to remain consistent.

Item #4: Also suggest replacing ‘affiliated’ with ‘relevant’ as affiliated could be construed to include those with a business/financial connection.

11. **For the Reliability Operations function**: Do you agree with the proposed revisions to the “Tasks” for the Reliability Operations function? If not, please identify the specific Task that you take issue
with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  ☒ No

Comments:
Task #2: Recommend replacing ‘violations’ with ‘exceedances’ (i.e. ‘limit violations’ replaced by ‘limit exceedances’ or perhaps ‘SOL exceedances’). Violations are for compliance while exceedances address reliability issues rather than compliance with a standard.
Item #12: Recommend replacing ‘functional’ with ‘registered’ as the responsibility is to monitor registered entities, not entities such as the ERO.
Also recommend revising sequence of tasks to facilitate understanding. For example Task 5 “Perform reliability analysis” should be before Task 2 “Identify, communicate and direct action if necessary to relieve reliability threats ...”

12. **For the Reliability Operations function:** Do you agree with the proposed revisions to the “Introduction to the Reliability Coordinator” section? Please identify the specific language that you do not support, the technical basis for your position, and the alternative language that you propose to address the issue.

☐ Yes  ☒ No

Comments:
Definition: When referring to the entity, the term which, not who is appropriate. Also, a next-day analysis does not have an emergency operating situation but can indicate a possible emergency operating emergency in real-time operations in a subsequent time period. Recommend removing ‘both next-day analysis and’ and adding to the end of the sentence ‘and indicated as a possibility in next-day analysis’.
Footnote 13: ‘area’ should be capitalized as it is part of the defined term.

13. **For the Reliability Operations function:** Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  ☒ No

Comments: Real-time Activity 18: Suggest you add examples provided under the corresponding BA task, for example, “Specify reliability-related requirements (e.g., reactive requirements, location of operating reserves) to Balancing Authorities.”
Real-time Activity 19: Receive verification of implementation of Emergency procedures from BAs
14. **For the Balancing function:** Do you agree with the proposed revisions to the “Tasks” for the Balancing Authority function? If not, please identify the specific Task that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

- **Yes**
- **No**

**Comments:**
- Task #2: Suggest changing ‘the reliability area’ to ‘its BA Area’ as ACE calculations should be within this defined area.
- Task #7: ‘Confirmed Arranged Interchange’ is not a defined term. ‘confirmed Arranged Interchange’ is appropriate.
- Task #10: ‘Confirmed Arranged Interchange’ is not a defined term. ‘confirmed Arranged Interchange’ is appropriate.
- Items #11 and #12: IOS should be defined in #11, not #12.

Regarding Section I, Part2 - BA: Frequency control is in itself a BA task. It should be recognized as such and not be bundled up with Tie-line Bias. For example, the Quebec Interconnection controls frequency using flat frequency control rather than through tie-line bias.

Glossary definition uses the expression “load-interchange-generation balance” whereas Balancing tasks refer to Demand, generation and interchange balance. Either the BA definition or the tasks should be revised for coherence.

15. **For the Balancing function:** Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

- **Yes**
- **No**

**Comments:**
- Item #1: Add ‘resource’ between Facility and plans to add clarity to which plan.
- Item #15: Add ‘and information’ between reports and on to add clarity that information may not necessarily be in a report.

Ahead of time – Activity 1 is not clear as to what plans are required. Suggest using the same terms as the corresponding activity for the GOP i.e. “Receive generation commitment plans from GOPs within the BA Area.”

16. **For the Transmission Operations function:** Do you agree with the proposed revisions to the “Tasks” for the Transmission Operations function? If not, please identify the specific Task that you
take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No
Comments:
Definition: Recommend deleting “local” prior to transmission system as this term is not necessary and could add confusion.
Item #10: TOP should be defined.
There is some confusion regarding the operational role of the TO. The glossary, registration criteria and the functional model define the TO as the entity that owns and maintains transmission facilities but standards EOP-005 and PER-005 seem to allow for the TO to have operational control over the BES or have field-switching personnel that will help restore the BES. The functional model should clarify the extent of the TO’s real-time operational tasks.

17. For the Transmission Operations function: Do you agree with the proposed revisions to the “Introduction to the Transmission Operator” section? Please identify the specific language that you do not support, the technical basis for your position, and the alternative language that you propose to address the issue.

☐ Yes
☒ No
Comments:
‘Wide-area’ should be ‘Wide Area” as a defined term.
18. **For the Transmission Operations function:** Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No

Comments:

Item #5: Is the list meant to be a limitation or merely examples? Clarity would be helpful.
Activity 14: Please provide examples in parentheses of operating agreements or procedures between the TOP and TO.
Transmission Operator: Isn’t relationship 24, “Receive Real-time operating information from Generator Operators.”, the same as relationship 13, “Receive operational data from Generator Operators”? If not, the difference needs to be more clear.

19. **For the Interchange function:** Do you agree with the proposed revisions to the “Tasks” for the Interchange Coordinator function? If not, please identify the specific Task that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No

Comments:

The Interchange Function should be removed from the Functional Model as a reliability entity based on the NERC filing (December 11, 2014) and subsequent FERC approval (March 19, 2015) of the RBR Initiative. The functions are not reliability but market based in nature per the filing and subsequent FERC approval. Recommend treating the Interchange function similar to the Market Operator and create a new section of the document, ‘Market Functions that interface with Reliability Functions’ for Market Operator, Interchange, Load-Serving Entity, and Purchasing-Selling functions.

If Interchange Function is kept, in section I - part 7, RFI must define since it is the first time it is used in the document.

20. **For the Interchange function:** Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take
issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No
Comments:
Functions should be reviewed and all reliability functions allocated to the proper reliability entity (e.g. Distribution Provider, Transmission Operator). Only market functions should remain under the Interchange function.

21. **For the Transmission Service function**: Do you agree with the proposed revisions to the “Tasks” for the Transmission Service function? If not, please identify the specific Task that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☒ Yes
☐ No
Comments:
22. **For the Transmission Service function**: Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☑ No

Comments:
Item #3: Recommend adding ‘or Planning Coordinator(s)’ after Transmission Planner(s) to accommodate regional variance. In the alternative, remove Transmission Planner(s) and replace with ‘applicable entity(ies) to accommodate all possible variations.

23. **For the Transmission Ownership function**: Do you agree with the proposed revisions to the “Tasks” for the Transmission Ownership function? If not, please identify the specific Task that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☑ No

Comments:
Task 5: Design and maintain (rather than authorize maintenance) Transmission/generator protective relaying systems (should the underlined section be replaced by Glossary term “Protection Systems”?) and RAS. According to EOP-005 (and Activity 23 of the TOP functional model), GOPs and TOs have a role to play in the TOP’s system restoration plan. The corresponding activities also need to be added to the GOP and TO Relationship sections in the Reliability Functional Model document.

Task 1: “Develop interconnection Agreements” is NOT universally a Transmission Ownership function; in many cases TSPs, Trans Operators, RCs, or PCs are performing this function.

Furthermore, if an entity is registered as a TO (and not additionally as a TOP) and their Regional Entity has determined they own a Control Center, what Tasks is the TO responsible for? CIP-002-5.1 Impact Rating Criteria 2.12 states: “Each Control Center or backup Control Center, not already performing the functional obligations of the Transmission Operator not include in High Impact Rating (H) above.” This scenario will result in this TO owning Medium Impact BES Cyber Systems. Would this TO then be responsible for all TOP Tasks in the Functional Model? Should the Functional Model be the document that explains this delineation of responsibilities?

24. **For the Transmission Ownership function**: Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific
Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No

Comments:
Item #1: Generator Owner should be added as one of the entities the TO coordinates with.
Item #9: Add ‘other Transmission Owners’ to the list of coordinating entities as interconnection agreements can exists between TOs.

25. **For the Distribution function:** Do you agree with the proposed revisions to the “Tasks” for the Distribution function? If not, please identify the specific Task that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No

Comments:
Task #1: Remove ‘connected’ and define term distributed energy resource (DER).
Task #3: Implement voltage reduction to lower Demand.
Task #6: Add ‘with the Transmission system’ to the end of the sentence to add clarity.
26. **For the Distribution function:** Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  
☒ No  

Comments:  
Introduction: Add ‘or distributed energy resource (DER) to the end of the first sentence. This addition accommodates solar, wind, or other DERs that connect to the distribution system.

27. **For the Generator Operation function:** Do you agree with the proposed revisions to the “Tasks” for the Generator Operation function? If not, please identify the specific Task that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  
☒ No  

Comments: According to EOP-005 (and Activity 23 of the TOP functional model), GOPs and TOs have a role to play in the TOP’s system restoration plan. The corresponding activities also need to be added to the GOP and TO Relationship sections in the Reliability Functional Model document.

28. **For the Generator Operation function:** Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  
☒ No  

Comments:  
Item #4: Recommend inserting ‘to’ between equipment and Transmission.  
Item #8: Reference to the PSE should be removed. Please see explanation in Comment 31.

29. **For the Generator Ownership function:** Do you agree with the proposed revisions to the “Tasks” for the Generator Ownership function? If not, please identify the specific Task that you take issue
with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☑ Yes
☐ No
Comments:
30. **For the Generator Ownership function**: Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  
☒ No

Comments:
Item #5, 7, 8, 10, and 11: References to the PSE and IA/IC should be eliminated. Please see explanation in Comment 31.

31. **For the Purchasing-Selling function**: Do you agree with the proposed revisions to the “Tasks” for the Purchasing-Selling function? If not, please identify the specific Task that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  
☒ No

Comments:
The Purchasing-Selling Function should be removed from the Functional Model as a reliability entity based on the NERC filing (December 11, 2014) and subsequent FERC approval (March 19, 2015) of the RBR Initiative. The functions are not reliability but market based in nature per the filing and subsequent FERC approval. Recommend treating the Purchasing-Selling function similar to the Market Operator and create a new section of the document, ‘Market Functions that interface with Reliability Functions’ for Market Operator, Interchange, Load-Serving Entity, and Purchasing-Selling functions.

32. **For the Purchasing-Selling function**: Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes  
☒ No

Comments:
Functions should be reviewed and all reliability functions allocated to the proper reliability entity (e.g. Distribution Provider, Transmission Operator). Only market functions should remain under the Interchange function.

33. **For the Load-Serving function**: Do you agree with the proposed revisions to the “Tasks” for the Load-Serving function? If not, please identify the specific Task that you take issue with, the
technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No

Comments:
The Purchasing-Selling Function should be removed from the Functional Model as a reliability entity based on the NERC filing (December 11, 2014) and subsequent FERC approval (October 15, 2015) of the RBR Initiative. The functions are not reliability but market based in nature per the filing and subsequent FERC approval. Recommend treating the Load-Serving function similar to the Market Operator and create a new section of the document, ‘Market Functions that interface with Reliability Functions’ for Market Operator, Interchange, Load-Serving Entity, and Purchasing-Selling functions.
34. **For the Load-Serving function:** Do you agree with the proposed revisions to the “Relationships with Other Functional Entities” section? If not, please identify the specific Relationship that you take issue with, the technical basis for why you do not support the revisions, and the alternative language that you propose to address the issue.

☐ Yes
☒ No

Comments:

Functions should be reviewed and all reliability functions allocated to the proper reliability entity (e.g. Distribution Provider, Transmission Operator). Only market functions should remain under the Interchange function.

Activity 6: Examples can be provided in parentheses of agreements or procedures between the TSP and TO.

35. The FMAG is proposing to add two new Tasks related to security protections for cyber assets and physical assets, and communication regarding an actual or suspected threat to those assets. The Tasks have been added to the RC, BA, TOP, TO, IC, DP, GO and GOP functions. Do you believe there are other functional entities that also perform these tasks in carrying out their function? For example, do you believe the proposed Tasks should be included as part of the tasks performed by the Planning Coordinator?

☐ Yes
☒ No

Comments:

There is a relationship between the Functional Model and the CIP Standards. We recommend that the Functional Model does not detail criteria that could expand the scope of the CIP Standards.

1) One of the new tasks uses the language “actual or suspected attack on cyber assets and/or physical assets.” Recommend that the new OE-417 language be used. The older OE-417 used “suspected” while the new 417 uses “could potentially impact.” We are concerned that “suspected” is too subjective.

2) Request clarification on whether “cyber asset” is a reference to the defined term or a generic term or is the intent to refer to BES Cyber Systems, as per CIP-002-5.1. Since this is a NERC document, we would suggest that it use the NERC definition if applicable or another term if the NERC definition of Cyber Asset is not applicable.

3) Part of the process required by CIP-002-5.1 for determining if a Cyber Asset is a BES Cyber Asset is to determine if the Cyber Asset is used for the “reliable operation of the Bulk Electric System” (from the NERC Glossary: BES Cyber Asset)

Two of the ways of making this determination are a) apply the Tasks listed in the Functional Model, and b) apply the Basic Reliability Operating Services (BROS) listed in the CIP-002-5.1 Guidance and Technical Basis section. It is our understanding from communication with the CIP-002-5.1 SDT that the BROS were derived from the Functional Model tasks. A change in the Functional Model may result in a change in the identified BES Cyber Systems, which will have compliance implications at this time both the Functional Model and CIP-002 are being addressed.
by different Standards Drafting Teams. There seems to be no communication between these two teams concerning the connections between these documents.

These tasks are already addressed in specific Reliability Standards and are not functions specific to an entity but rather compliance activities. In section I of the document, it is stated that ‘The FM describes, in general terms, the functions that must be performed to ensure reliability, the specific tasks necessary to perform each function, and the relationships between functional entities that perform the various tasks.’ These two new tasks do not ‘fit’ into any of these enumerated categories.

36. Do you agree with adding the two Tasks to each of the appropriate functional entities, or do you believe it is more appropriate to create a separate function (and functional entity) for the Cyber-related tasks?

☐ Yes
☒ No

Comments:

We do not think that there should be a new functional entity for Cyber-related tasks.

Page 1, Section 1 of the Functional Model states “The Reliability Functional Model (FM) is a guideline that identifies functions that must be performed to ensure that the Bulk Power System (BPS) is planned and operated in a reliable manner. The FM describes, in general terms, the functions that must be performed to ensure reliability, the specific tasks that are necessary to perform each function, and the relationship between functional entities that perform the various tasks.

For the Task “Provide appropriate security protections for cyber assets and physical assets, and their related support systems and data” we have the following concerns:

1) As written this security protection Task is too broad in scope. It could be interpreted to include all physical and cyber assets owned/operated by the functional entity, and not just those assets associated with, as a minimum, the BES and as a maximum, the delivery of electrical energy. As written, the scope includes all physical and cyber assets used for administration, transportation, maintenance, and even recreation. This scope should be limited to the Bulk Power System.

2) The term “related support systems and data” should apply to only BES Cyber Systems

3) If this first task must be included, we recommend this language — “Provide appropriate security protections for BES Cyber Assets and physical assets associated with the performance of other
Tasks listed for this function in the adequacy or reliability of the BPS and the related support system and data for those BES Cyber Assets”

For the Task “Communicate to appropriate authorities and relevant functional entities of an actual or suspected attack on cyber assets and/or physical assets,” we have the following concerns:
1) This task does not meet the “necessary to perform each function” portion of the purpose of the FM. Entities can perform their function without communicating to “appropriate authorities”
2) The term “appropriate authorities” is not needed. The FM’s purpose is the operation of the BPS and includes all “functions that must be performed.” Therefore, any “authority” that should be communicated with would be a functional entity. If the FBI is required to be notified, then they must meet the “functions that must be performed” criteria of the FM and should be given a NERC registration
3) There should be an entry in each of the appropriate “Relationships with Other Functional Entities” section of the FM that correlates with the “Communication to ... relevant functional entities ...”
4) Same concerns on the scope of “physical and cyber assets” as provided for the first Task
5) If the second Task must be included, we recommend language like “Communicate to relevant functional entities of a cyber or physical event that could potentially impact electric power system adequacy or reliability.”

37. Do you agree with the proposed revisions to the Functional Model Technical Document (FMTD)? If not, please identify the specific revisions that you do not support, the technical basis for why you do not support the revisions, and the alternative language that you propose.

☐ Yes
☒ No

Comments:
Part 3 of Section 2 should be revised to indicate that the IC does not have any reliability tasks as reflected in the NERC filing and related FERC orders referenced above. The section should be revised as purely informational describing a market process and not reliability issues as is indicated throughout the section. Examples include the first sentence of the background section and the first sentence of the Current Practice section, both which makes a statement contrary to both NERC and FERC findings as discussed in the December 11, 2014 NERC filing and subsequent FERC order issued March 19, 2015. Any market entities should be noted as such and should not have
reliability functions or be indicated in the document to have reliability functions consistent with the statements in Part 4 of Section II.

38. If you have additional comments on the proposed revisions to the FM that you have not provided in your above responses, please provide them here:

☐ Yes
☐ No


Typos in the Reliability Functional Model:
Page 4, Task 2: in those regions of North-American
Page 14, 2nd paragraph: Interconnection Reliability Operating Limit
Page 17, Activity 7: Submit (...) and provide balancing information (...)  
Page 17, Activity 12: Acquire
Page 17, Activity 14: Receive
Page 18, Activity 32: Implement
Page 23, Activity 15: Coordinate
Page 25, Activity 5: Receive
Page 27, Activity 3: Comma missing between TP and TOP
Page 34, Tasks 1 thru 4: 1. Establish (...) 2. Design and authorize (...) 3. Perform or authorize (...) 4. Provide (...)  
Page 39, Activity 3: Provide (...)  
Page 39, Activity 6: (...) and make arrangements for Ancillary Services with GOs or other LSEs.