COMMENT FORM
Phase III-IV Planning Standards Not Developed in Version 0 Reliability Standards

This form is to be used to submit comments on the four SARs to translate the Phase III-IV Planning Standards that were not developed in the Version 0 Reliability Standards project. Comments must be submitted by **January 7, 2005**. You may submit the completed form by emailing it to: sarcomm@nerc.com with the words "Phase III-IV Planning Standards" in the subject line. If you have questions please contact Gerry Cauley at gerry.cauley@nerc.net on 609-452-8060.

ALL DATA ON THIS FORM WILL BE TRANSFERRED AUTOMATICALLY TO A DATABASE.

DO: **Do** enter text only, with no formatting or styles added.
Do use punctuation and capitalization as needed (except quotations).
Do use more than one form if responses do not fit in the spaces provided.
Do submit any formatted text or markups in a separate WORD file.

DO NOT: **Do not** insert tabs or paragraph returns in any data field.
Do not use numbering or bullets in any data field.
Do not use quotation marks in any data field.
Do not submit a response in an unprotected copy of this form.

Individual Commenter Information **(Complete this page for comments from one organization or individual.)**		
Name:		
Organization:		
Telephone:		
Email:		
NERC Region		**Registered Ballot Body Segment**
☐ ERCOT ☐ ECAR ☐ FRCC ☐ MAAC ☐ MAIN ☐ MAPP ☐ NPCC ☐ SERC ☐ SPP ☐ WECC ☐ NA - Not Applicable	☐	1 - Transmission Owners
	☐	2 - RTOs, ISOs, Regional Reliability Councils
	☐	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

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

Group Name: **ISO/RTO Council**

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Peter Brandien	ISO-NE	NPCC	2
Bill Phillips	MISO	MAIN	2
Karl Tammar	NYISO	NPCC	2
Bruce Balmat	PJM	MAAC	2
Charles Yeung	SPP	SPP	2

* If more than one Region or Segment applies, indicate the best fit for the purpose of these comments. Regional acronyms and segment numbers are shown on prior page.

This questionnaire refers to the four SARs proposing to develop reliability standards to replace the Phase III-IV Planning Standards that were not developed in the Version 0 Reliability Standards. The scope of work is focused on translating the existing planning standards that were not included in Version 0, not on developing new standards. The four SARs are as follows:

Disturbance Monitoring and Reporting

Modeling

Protection and Control

Black Start Capability

Question 1: Scope of Work

Do you agree that the list of planning standards and measures indicated in the four SARs, taking in to consideration the standards already developed in Version 0, would complete the translation of all existing planning standards?

☐ Yes.

☒ No.

Comments

Measurement III.C.S6.M11, "Analysis of misoperations of generator protection equipment", was removed from Version 0, but does not appear in any of the four SARs. It should be included in the Protection and Control SAR.

Measurement III.C.S6.M10, "Procedure to monitor/ review/ analyze/ correct trip operations of generator protection equipment" is duplicated in both the Disturbance Monitoring and Reporting SAR and the Protection and Control SAR, should only be in the Protection and Control SAR.

Measurement I.F.S2.M6, "Use of Disturbance Data to Develop and Maintain Models", is missing and should be added.

Question 2: Reliability Need

Do you agree there is a reliability need for all of the standards proposed in these four SARs? If you have any concerns regarding reliability need, please note them in your comments.

☒ Yes.

☐ No.

Comments

Question 3: Grouping of the Standards for Development Purposes

Because the proposed scope of work is large, the requester has grouped the proposed standards into four SARs. Do you agree this is an appropriate way to organize the work? What improvements would you suggest to grouping the development work?

☒ Yes.

☐ No.

Comments

The following Measurements do not belong in the Disturbance Monitoring and Reporting SAR:

II.D.S1.M2, "Reporting procedures that ensure against double counting or omission of customer demand data" - Move to Modeling SAR

II.D.S1-S2.M3, "Procedures requiring consistency of data reported for reliability purposes and to gvt agencies" - Move to Modeling SAR

III.C.S6.M10, "Procedure to monitor/ review/ analyze/ correct trip operations of generator protection equipment" - Move to Protection and Control SAR

I.F.S2.M5, "Use Database" does not belong in the Disturbance Monitoring and Reporting SAR. - Move to Modeling SAR.

The following Measurements do not belong in the Modeling SAR:

III.C.S3.M7, "Requirements for withstanding temporary excursions in frequency, voltage, etc" - Move to Protection and Control SAR

III.C.S4.M8, "Info on generator controls coordination with unit's short-term capabilities & protective relays" - Consider whether this better fits in the Protection and Control SAR

III.C.S1.M1-M2 "Generation Voltage Control" and III.C.S2.M3-M4 "Voltage Schedules" are more closely associated with VAR-001 in Version 0 than they are with modeling. They should be placed in VAR-001 as a Version 1 change rather than placed in this Modeling SAR.

Question 4: Challenges to Achieving Consensus

Some of the proposed standards may require more work than others to reach industry consensus on approving the standards. Please rate each proposed standard below by indicating the level of difficulty you foresee in achieving consensus on the standard. Please indicate specific challenges you think must be overcome to complete the standard and achieve industry consensus.

Difficulty Reaching Consensus	Topic	Challenges to Overcome to Achieve Consensus
SAR- Disturbance Monitoring and Reporting		
☒ Easy ☐ Medium ☐ Difficult	I.F.S1.M2, List of monitoring equipment installations & operating status	
☒ Easy ☐ Medium ☐ Difficult	I.F.S2.M3, Disturbance monitoring data reporting Requirements	
☐ Easy ☒ Medium ☐ Difficult	I.F.S2.M4, Recorded fault and disturbance Data	**Applicable To entities may feel they could be suject to unreasonable Regional requirements for providing disturbance data**
☐ Easy ☐ Medium ☒ Difficult	I.F.S2.M5, Use Database	**Compliance should not be measured only by whether or not changes to models were made. Disturbance data could verify models are OK**
☐ Easy ☐ Medium ☒ Difficult	II.D.S1.M2, Reporting procedures that ensure against double counting or omission of customer demand data	**Very difficult to measure whether the procedures are "complete" or "incomplete", for compliance or non-compliance**
☐ Easy ☐ Medium ☒ Difficult	II.D.S1-S2.M3, Procedures requiring consistency of data reported for reliability purposes and to gvt agencies	**Unclear if this requires procedures for consistency, as in Full Compliance, or consistent data, as in Levels of Non-Compliance**
☐ Easy ☐ Medium ☒ Difficult	III.C.S6.M10, Procedure to monitor/ review/ analyze/ correct trip operations of generator protection equipment	**NOTE: DUPLICATE ENTRY. REMOVE FROM THIS LOCATION, LEAVE IN PROTECTION AND CONTROL SAR**
SAR - Modeling		
☐ Easy ☒ Medium ☐ Difficult	I.D.S1.M1, Assessment of reactive power resources	**Implies that a separate reactive assessment must be made, but it is possible, and probably better, to do reactive assessment in the "I.A" assessments**
☐ Easy ☐ Medium ☒ Difficult	I.D.S1.M2, Generator reactive power capability	**Coordination of the use of generator reactive capability can be measured, very difficult to measure if completely "optimized"**
☐ Easy ☒ Medium ☐ Difficult	II.B.S1.M1, Procedures for validating generation equipment data	**Allow Regional procedures to vary. Allow exemptions to be made by type of generator, not just by indivdual unit**
☐ Easy ☒ Medium ☐ Difficult	II.B.S1.M2, Verification of gross and net dependable capability	**Allow operational data to be used instead of a separate test, if adequate**

☐ Easy ☒ Medium ☐ Difficult	II.B.S1.M3, Verification of gross and reactive power capability of generators	**Five year test cycle is arbitrary. Allow operational data to be used instead of a separate test, if adequate**
☐ Easy ☐ Medium ☒ Difficult	II.B.S1.M4, Test results of generator voltage regulator controls and limit functions	**Five year test cycle is arbitrary. A physical survey to verify the equipment installed and in service, and to note settings, may be adequate**
☐ Easy ☐ Medium ☒ Difficult	II.B.S1.M5, Test results of speed/load governor controls	**Five year test cycle is arbitrary. A physical survey to verify the equipment installed and in service, and to note settings, may be adequate**
☐ Easy ☐ Medium ☒ Difficult	II.B.S1.M6, Verification of excitation system dynamic modeling data	**Five year test cycle is arbitrary. A physical survey to verify the equipment installed and in service, and to note settings, may be adequate. Open circuit test may not be the best or only test needed**
☐ Easy ☒ Medium ☐ Difficult	II.E.S1.M1, Plans for the evaluation and reporting of voltage and frequency characteristics of customer demands	**Unclear how the Regional determination of dynamic demand characteristics (II.E.S1.M1) fits in with the Interconnections' determination of dynamic demand characteristics (II.E.S1.M2)**
☐ Easy ☒ Medium ☐ Difficult	II.E.S1.M2, Documentation of requirements for determining dynamic characteristics of customer demands	**Unclear how the Regional determination of dynamic demand characteristics (II.E.S1.M1) fits in with the Interconnections' determination of dynamic demand characteristics (II.E.S1.M2)**
☐ Easy ☒ Medium ☐ Difficult	II.E.S1.M3, Customer (dynamic) demand data	**Load Serving Entities may not be equipped to determine dynamic demand characteristics**
☐ Easy ☒ Medium ☐ Difficult	III.C.S1.M1, Procedure by system operator for reporting operation without automatic voltage control mode	**Allow procedure to be only that Generation Owner/Operator reports when not in automatic voltage control mode, Transmission Operator keeps and analyzes data**
☐ Easy ☒ Medium ☐ Difficult	III.C.S1.M2, Log of operation without automatic voltage control mode by generator owner	**There is an incentive not to report, and penalties for a larger number of reported incidents**
☒ Easy ☐ Medium ☐ Difficult	III.C.S2.M3, Documentation of schedule for maintaining network voltage	
☐ Easy ☒ Medium ☐ Difficult	III.C.S2.M4, Log operation not maintaining network voltage schedules	**There is an incentive not to report, and penalties for a larger number of reported incidents**
☒ Easy ☐ Medium ☐ Difficult	III.C.S2.M5, Reporting procedures for tap settings of generator step-up and auxiliary transformers	
☒ Easy ☐ Medium ☐ Difficult	III.C.S2.M6, Tap settings data of generator step-up and auxiliary transformers	

☒ Easy ☐ Medium ☐ Difficult	III.C.S2.M7, Requirements for withstanding temporary excursions in frequency, voltage, etc.	
☐ Easy ☒ Medium ☐ Difficult	III.C.S4.M8, Information on generator controls coordination with unit's short-term capabilities and protective relays	**Generation Owners/Operators may not be equipped to determine this information**
☒ Easy ☐ Medium ☐ Difficult	III.C.S5.M9, Information on speed/load governing system	
	SAR – Protection and Control	
☐ Easy ☒ Medium ☐ Difficult	III.A.S2M2, Redundancy requirements for transmission system protection	**Each region should have analysis or specific requirements to make redundancy requirements clear.**
☐ Easy ☒ Medium ☐ Difficult	III.B.S1.M1, Assessment of reliability impact of transmission control devices	**"Transmission Control Devices" needs to be clearly defined**
☐ Easy ☒ Medium ☐ Difficult	III.B.S1.M2, Transmission control device models and data	**"Transmission Control Devices" needs to be clearly defined**
☐ Easy ☒ Medium ☐ Difficult	III.B.S1.M3, Periodic review & validation of settings & operating strategies	**"Transmission Control Devices" needs to be clearly defined**
☐ Easy ☒ Medium ☐ Difficult	III.C.S6.M10, Procedure to monitor/ review/ analyze/ correct trip operations of generator protection equipment	**Needs to be clear that the focus is to find and correct misoperations. NOTE; INSERT III.C.S6.M11 AFTER THIS MEASUREMENT**
☒ Easy ☐ Medium ☐ Difficult	III.E.S1-S2.M1, Documentation of undervoltage load shedding program	
☒ Easy ☐ Medium ☐ Difficult	III.E.S1.M2, UVLS Regional Database	
☒ Easy ☐ Medium ☐ Difficult	III.E.S1.M5, Analysis & documentation of UVLS event	
☒ Easy ☐ Medium ☐ Difficult	III.C.S7.M12, Maintenance / testing Program of generation equipment protection systems	
SAR – Black Start Capability		
☒ Easy ☐ Medium ☐ Difficult	IV.A.S1.M2, Demonstrate by simulation and testing blackstart unit can perform its function	
☒ Easy ☐ Medium ☐ Difficult	IV.A.S1.M3, Diagram blackstart units and initial switching	**Does not address the issue of security of such diagrams. Confidentiality of these diagrams should be maintained.**

☒ Easy ☐ Medium ☐ Difficult	IV.B.S1.M1, Document automatic load restoration (ALR) programs including database	
☒ Easy ☐ Medium ☐ Difficult	IV.B.S1.M2, Document auto load restoration program with regional requirements	
☐ Easy ☒ Medium ☐ Difficult	IV.B.S1.M3, Assess effectiveness of automatic load restoration programs	**Automatic Load Restoration owners/operators may not be equipped to perform this assessment, which should be done on a Regional coordinated basis**
☒ Easy ☐ Medium ☐ Difficult	IV.B.S1.M4, Document auto load restoration equipment testing and maintenance program	

Question 5:

Please provide any additional comments you have regarding the proposed development of Phase III-IV planning standards that were not developed in Version 0.

For periodic testing of generator capabilities, it could be problematic to determine how to consistently conduct tests. In addition, there are difficult financial issues to be dealt with.

Based on previous experience, determination of dynamic load modelling will be a challenge.

It is not clear why the System Restoration standards (IV.B….) are being pushed through this process. The importance of these particular standards does not seem to warrant fast tracking rather than going through normal due process. Version 0 already has requirements for restoration plans, so any standards developed here should be coordinated with existing Version 0 standards (EOP-005, R7 and R8) to assure consistency.