NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL
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Regional Reliability Standards Working Group
July 6–7, 2006
FRCC Offices in Tampa, FL
Meeting Notes

Attendance:

H. Steven Myers — ERCOT
John E. Odom, Jr. — FRCC
Larry Brusseau — MRO (via telephone)
Guy V. Zito — NPCC
Robert W. Millard — RFC
Patrick Huntley — SERC
Mak Nagle — SPP
Kenneth J. Wilson — WECC
David Taylor — NERC

Notes:

Members of the RRSWG are requested to submit any changes in the roster to Dave Taylor.

Dave reiterated that each Regional Entity (RE) will have full responsibility for developing their regional standards. While developing any such standard, the RE must ensure that the standard is developed using a fair and open process and the resulting standard should not have a significant impact on the reliability and commerce.

Guy Zito raised an issue of getting regional standards developed in a reasonable amount of time. The concern related the ability of entities to get a "second bite at the apple" once NERC opens the standard for comments after a considerable amount of time has been spent on developing standards at the regional level. Dave pointed out that when NERC posts the proposed standard for comments, the comments are limited to one of the categories as listed in Regional Differences section in NERC's ERO application document (Page 243) which prohibits technical issues to be re-opened:

- Was developed in a fair and open process that provided an opportunity for all interested parties to participate;
- Would not have an adverse impact on commerce that is not necessary for reliability;
- Provides a level of Bulk Electric System reliability that is adequate to protect public health, safety, welfare, and national security and would not have a significant adverse impact on reliability; and
- Is based on a justifiable difference between regions or between subregions within the regional organization's geographic area.

Ken expressed concerns regarding the second bullet above that states a standard should "not have an adverse impact on commerce that is not necessary for reliability" in the sense that this will give many entities a "second bite at the apple" or even the ability to inhibit the regional standard development process. He feels the stated language will provide a wide range of entities the ability to intervene in the regional standards development process at the point which NERC posts the standard for comment by stating that any such standard will have significant impact on commerce. He is concerned that a number of these entities will not participate in the regional process and will instead wait for the NERC process to be initiated as they typically do not get involved when the standard is developed at the regional level. He feels this could adversely impact the regional standard development process.

John suggested creating a version of the Regional Entity Standards Development Process Manual containing an outline of the regional standards development requirements followed by a sample manual.

Action Item:
RRSWG will develop a sample Regional Entity Standards Development Process Manual that contains an outline of the regional standards development requirements based on section 311 of NERC's ERO application (Page 150). (Guy and John)

The draft Regional Entity Standards Development Process Manual contains an appeals process that is lacking in some of the manuals provided by the regional councils to NERC for comment. The group discussed the two types of appeals processes, one procedural and the other for the standards itself. The group agreed that the appeals process outlined in the draft Regional Entity Standards Development Process Manual pertained to the process and was a process for appealing the technical aspects of the standards themselves.

Action Item:
The appeals language in the draft Regional Entity Standards Development Process Manual needs to be reviewed by NERC counsel to ensure no ambiguity and that the process only applies to the procedural process and not the technical aspect of the standards themselves. (Dave)

Dave pointed out a few of the items that had been added to the draft Regional Entity Standards Development Process Manual that were not included in the manuals provided by the regional councils to NERC for comment:

- In Appendix B, a box was added for "Justification for Regional Variation" (Dave stressed that it is imperative for the regions to justify the need for a regional standard).
- Also in Appendix B, Reliability and Market Interface principles were added.
- As mentioned above, an appeals process was added.

Action Item:
The draft Regional Entity Standards Development Process Manual needs revised to include the Justification for Regional Variation in the template portion of the manual and also a section pertaining to Urgent Action Items. (Dave)

The group discussed the importance of completing Action Item AI-0002-00: document the procedure for gaining approval for a regional variation of a standard. The group acknowledged

that time could be saved if the NERC and regional comment periods were performed in parallel but since one of the key principles of the NERC process relates to the ability to file a protest if the standard was not developed in a fair and open process that provided an opportunity for all interested parties to participate at the regional level — might be problematic. This principle for enabling an entity to protest the standard leads one to believe the processes should be performed sequentially. Comments:

- NPCC — Parallel with an understanding that key technical issues will be sequential.
- SERC — Sequential

The group discussed each of the NERC standards identified at the May 18–19 meeting of the RRSWG (see redlined comments in the attached Regional "Fill-in-the-Blank" Standards table). At that point, the RRSWG has determined following standards to be Fill-in-the-blank: BAL-002, EOP-007, MOD-024, MOD-025, PRC-002, PRC-003, PRC-004, PRC-006, PRC-007, PRC-012, PRC-016, and PRC-018. Dave plans to develop a regional reliability standards page on the NERC web site. It is anticipated that the page will contain these standards with links to the regional documentation associated with each standard.

Next meeting of the RRSWG will be held July 25 and 26 at WECC's offices in Salt Lake City on July 25 and 26. The meeting will run from 1-5 p.m.. on July 25 and from 8 a.m.–noon on July 26.

The group discussed the possibility of coordinating a meeting of the RRSWG around the OC/PC in September. Dave will provide the group with the information for the September meeting as it becomes available.

Regional "Fill-in-the-Blank" Standards

Standard Number	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Region (Quick or Long-term)	NERC (Quick or Long-term)	Notes and statu
BAL-002-0 DWT	R2. Each Regional Reliability Organization, sub-Regional Reliability Organization or Reserve Sharing Group shall specify its Contingency Reserve policies, including: R 2.1. The minimum reserve requirement for the group. R 2.2. Its allocation among members. R 2.3. The permissible mix of Operating Reserve – Spinning and Operating Reserve – Supplemental that may be included in Contingency Reserve. R 2.4. The procedure for applying Contingency	R1. Each Balancing Authority shall have access to and/or operate Contingency Reserve to respond to Disturbances. Contingency Reserve may be supplied from generation, controllable load resources, or coordinated adjustments to Interchange Schedules.	*Have regions submit existing contingency reserve criteria intended to address R2 on quick schedule.*	*Long-term review and revision of NERC standard to see what elements of contingency reserve should be standardized.*	*Yes it is fill-in-the-blank; no it should not be a uniform N requirements; yes we should recommend a SAR to review and upgrade the NERC standard (Note: need to remove reference to "sub-Regional Reliabili Organization or Reserve Sharing Group"); in the interim we should get the regions to file their existing criteria as standar*

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	Reserve in practice. R 2.5. The limitations, if any, upon the amount of interruptible load that may be included. R 2.6. The same portion of resource capacity (e.g. reserves from jointly owned generation) shall not be counted more than once as Contingency Reserve by multiple Balancing Authorities.				*for ERO/FERC approval (time TB* *In the long-term, this will be a Regional Reliabili Standard* *In the interim, NERC will develo a web page with links to each of the applicable documents.*
EOP-004-0 *Deutsch*	R1. Each Regional Reliability Organization shall establish and maintain a regional reporting procedure to facilitate preparation of preliminary and final	R3.4 If, in the judgment of the Regional Reliability Organization, after consultation with the Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load		*SAR to drop R1 and modify R3.4 to standardize the disturbance reporting requirements.*	*A new Version 1 is going to ballot.* ~~*Yes, fill in blank standard;*~~ *have*

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	disturbance reports.	Serving Entity in which a disturbance occurred, a final report is required, the affected Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load Serving Entity shall prepare this report within 60 days. As a minimum, the final report shall have a discussion of the events and its cause, the conclusions reached, and recommendations to prevent recurrence of this type of event. The report shall be subject to Regional Reliability Organization approval.		*Long-term.*	*procedures, but no in form of standar consider SAR to drop R1 and modi R3.4 to remove fil in-blank aspects.* *In the long run, th will be a NERC Standard. A SAR will need to be drafted that remov the fill-in-the-blan aspects. .*
EOP-005-1 Millard		R8. Each Transmission Operator shall verify that the number, size, availability, and location of system blackstart generating units are sufficient to meet Regional		*See EOP-007-0*	

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		Reliability Organization restoration plan requirements for the Transmission Operator's area. R9. The Transmission Operator shall document the Cranking Paths, including initial switching requirements, between each blackstart generating unit and the unit(s) to be started and shall provide this documentation for review by the Regional Reliability Organization upon request. Such documentation may include Cranking Path diagrams.			
EOP-007-0 Millard	R1. Each Regional Reliability Organization shall establish and maintain a system [Black Start Capability Plan], as part of an overall coordinated Regional System Restoration Plan]. The Regional SRP shall include			*Long-term project to move these requirements to EOP-005, 006, and 009, etc. to place*	*This is a fill-in-the blank tied to EOP-005-1, EOP-006, and EOP-009-0; every region shou have the procedur required in EOP-*

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	requirements for verification through analysis how system black start generating units shall perform their intended functions and shall be sufficient to meet SRP expectations. The Regional Reliability Organization shall coordinate with and among other Regional Reliability Organizations as appropriate in the development of its BCP. The BCP shall include: R 1.1. A requirement to have a database that contains all blackstart generators designated for use in an SRP within the respective areas. This database shall be updated on an annual basis. The database shall include the name,			*requirements on functional entities directly; role may be retained for RRO and/or RC coordination in NERC standard.*	*007-0; could have regions file; question why this even an RRO function; they are not operating entities, should be RCs and operating entities that have t black start plan; they needed to be coordinated regionally. Move retire the above requirements and move these elemer to EOP-005; EOP 006; and EOP-00 That would remov fill-in-blank elements. Still ma need to evaluate*

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	location, megawatt capacity, type of unit, latest date of test, and starting method. R 1.2. A requirement to demonstrate that blackstart units perform their intended functions as required in the Regional SRP. This requirement can be met through either simulation or testing. The BCP must consider the availability of designated BCP units and initial transmission switching requirements. R 1.3. Blackstart unit testing requirements including, but not limited to: R 1.3.1. Testing frequency (minimum of one third of				*role of RRO.* *In long term EOP-007 would be retir and EOP-005, EO 006, and EOP-009 would need SARs written to add the EOP-005 requirements, but not as Regional Reliability Standards. Combining EOP-005, EOP-006, an EOP-009 into one standard should b considered.* *In the near term, t*

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	the units each year). R 1.3.2. Type of test required, including the requirement to start when isolated from the system. R 1.3.3. Minimum duration of tests. R 1.4. A requirement to review and update the Regional BCP at least every five years. R2. The Regional Reliability Organization shall provide documentation of its system BCPs to NERC within 30 calendar days of a request.				*regions have applicable documentation an this will remain a fill-in-the-blank standard..* *The drafting team should be instructe to define the speci requirements for F 1.2, R 1.3, etc.* *In the interim, NERC will develo a web page with links to each of the applicable documents.*

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EOP-009-0 Millard		R1. The Generator Operator of each blackstart generating unit shall test the startup and operation of each system blackstart generating unit identified in the BCP as required in the Regional BCP (Reliability Standard EOP-007-0_R1). Testing records shall include the dates of the tests, the duration of the tests, and an indication of whether the tests met Regional BCP requirements. R2. The Generator Owner or Generator Operator shall provide documentation of the test results of the startup and operation of each blackstart generating unit to the Regional Reliability Organizations		*See above.*	*This will no longe be fill-in-the-blank criteria will be applied on a NA basis. Is there a requirement for generator to provi test results to the transmission operator and RC? Should add R1 to right column here R1 should have be the fill-in-the-blan requirement. R2 i the measure.*

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		and upon request to NERC.			
FAC-001-0 Odom		The Transmission Owner shall document, maintain, and publish facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Reliability Organization, subregional, Power Pool, and individual Transmission Owner planning criteria and facility connection requirements. The Transmission Owner's facility connection requirements shall address connection requirements for: R 1.1. Generation facilities, R 1.2. Transmission facilities, and R 1.3. End-user facilities		*NERC SAR could be quick standard; not a fill in the blank.*	*Remove the phras 'to ensure compliance…' Don't need for transmission connections and e users (drafting tea needs to address)? Recommend SAR t modify the standa* *Should be a North American standar* *Is not a fill-in-the blank. SAR is needed to cleanup verbiage.*
FAC-002-0		R1. The Generator Owner,		*NERC SAR;*	*SAR to remove R1*

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Odom		Transmission Owner, Distribution Provider, and Load-Serving Entity seeking to integrate generation facilities, transmission facilities, and electricity end-user facilities shall each coordinate and cooperate on its assessments with its Transmission Planner and Planning Authority. The assessment shall include: R 1.1. Evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems. R 1.2. Ensurance of compliance with NERC Reliability Standards and applicable Regional, subregional, Power Pool, and individual system planning criteria		*could be long-term, depending on what we find in detailed review.*	*and it would no longer be a fill-in-the-blank; conside remove/modify R1 as it is redundant with the TPL standard. Might need to keep the short-circuit requirement. Coordinate with FAC-001.* *Review FERC rule on interconnecting generators and se what parts of that could help here (u as a resource).* *Should be a North American standar*

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		and facility connection requirements. R 1.3. Evidence that the parties involved in the assessment have coordinated and cooperated on the assessment of the reliability impacts of new facilities on the interconnected transmission systems. While these studies may be performed independently, the results shall be jointly evaluated and coordinated by the entities involved. R 1.4. Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance in			*Is not a fill-in-the blank. SAR is needed to cleanup verbiage.*

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		accordance with Reliability Standard TPL-001-0. R 1.5. Documentation that the assessment included study assumptions, system performance, alternatives considered, and jointly coordinated recommendations.			
FAC-004-0		The Transmission Owner and Generator Owner shall each document the methodology(ies) used to determine its electrical equipment and Facility Rating. Further, the methodology(ies) shall comply with applicable Regional Reliability Organization requirements. The documentation shall address and include:			*Retired. Replacement FAC 008 does not have the fill-in-the-blan requirements.*

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		R 1.1. The methodology(ies) used to determine equipment and Facility Rating of the items listed for both normal and emergency conditions: R 1.1.1. Transmission circuits. R 1.1.2. Transformers. R 1.1.3. Series and shunt reactive elements. R 1.1.4. Terminal equipment (e.g., switches, breakers, current transformers, etc). R 1.1.5. VAR compensators. R 1.1.6. High voltage direct current converters. R 1.1.7. Any other device listed as a Limiting Element. R 1.2. The Rating of a facility shall not exceed the Rating(s) of the most			

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		Limiting Element(s) in the circuit, including terminal connections and associated equipment. R 1.3. In cases where protection systems and control settings constitute a loading limit on a facility, this limit shall become the Rating for that facility. R 1.4. Ratings of jointly-owned and jointly-operated facilities shall be coordinated among the joint owners and joint operators resulting in a single set of Ratings. R 1.5. The documentation shall identify the assumptions used to determine each of the equipment and Facility Ratings, including			

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		references to industry Rating practices and standards (e.g., ANSI, IEEE, etc.). Seasonal Ratings and variations in assumptions shall be included.			
IRO-001-0 Deutsch	R1. Each Regional Reliability Organization, sub-region, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.			*NERC SAR to remove extraneous entities (quick).*	*This is not a fill-in the-blank standard Separately may ne to revise to remov subregion and interregional coordinating grou as they are not registered entities.* *Should be a North*

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					American standar *Is not a fill-in-the blank. SAR is needed to cleanup verbiage.*
MOD-001-0 DWT coordinate; regions check that have method that addresses MOD-001 to 009.	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a Regional TTC and ATC methodology. (Certain systems that are not required to post ATC values are exempt from this standard.) The Regional Reliability Organization's TTC and ATC methodology shall include each of the following nine items, and shall explain its use in determining TTC and ATC values: R 1.1. A narrative explaining		*Regions supply existing method that addresses requirements in MOD-001 thru MOD-009.*	*NERC long-term through existing project joint with NAESB (DWT coordinate with Bill Blevins to make sure all these standards are considered and replaced as part of the new project.)*	*Related to FAC-012 and FAC-01 (new standards). Those more generally addres transfer capabilities inste of ATC/TTC. FAC-012 and FAC-013 also appear to be fill-the-blank becaus of reference in applicability section to RRO.*

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	how TTC and ATC values are determined. R 1.2. An accounting for how the reservations and schedules for firm (non-recallable) and non-firm (recallable) transfers, both within and outside the Transmission Service Provider's system, are included. R 1.3. An accounting for the ultimate points of power injection (sources) and power extraction (sinks) in TTC and ATC calculations. R 1.4. A description of how incomplete or so-called partial path transmission reservations are addressed. (Incomplete				*Need to look at FAC-012 and FAC-013 to mod applicability section.* *MOD-002 is the related standard, however it is stat in reverse format by saying the RR must ensure compliance withi the region to the ATC/TTC methodology.* *Every region has something that m these criteria; reviewed by NER subgroup.*

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	or partial path transmission reservations are those for which all transmission reservations necessary to complete the transmission path from ultimate source to ultimate sink are not identifiable due to differing reservation priorities, durations, or because the reservations have not all been made.) R 1.5. A requirement that TTC and ATC values shall be determined and posted as follows: R 1.5.1. Daily values for current week at least once per day. R 1.5.2. Daily values for day 8 through the first month at				*Refer these standards to the ATC/TTC draftin team to sort out reliability components and business practice include this material in that review; correct t applicability issues; should method be provided by PA c RC or RRO?* *Is there no standard for entities to use the RRO method? Should the RRO*

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	least once per week. R 1.5.3. Monthly values for months 2 through 13 at least once per month. R 1.6. Indication of the treatment and level of customer demands, including interruptible demands. R 1.7. A specification of how system conditions, limiting facilities, contingencies, transmission reservations, energy schedules, and other data needed by Transmission Service Providers for the calculation of TTC and ATC values are shared and used within the Regional Reliability				*required to subm existing method? What would be gained? Open question whether to do regional standards now until the NERC standards are updated.* *Dave Taylor discussed the wo of the RRSWG w Bill Blevins who leading the effort to revise MOD-0 thru MOD-009. Bill agreed to ha the RRSWG revie the revised standards at an*

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	Organization and with neighboring interconnected electric systems, including adjacent systems, subregions, and Regional Reliability Organizations. In addition, specify how this information is to be used to determine TTC and ATC values. If some data is not used, provide an explanation. R 1.8. A description of how the assumptions for and the calculations of TTC and ATC values change over different time (such as hourly, daily, and monthly) horizons. R 1.9. A description of the Regional Reliability				*appropriate poin in the drafting process.*

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	Organization's practice on the netting of transmission reservations for purposes of TTC and ATC determination.				
MOD-002-0	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to periodically review (at least annually) and ensure that the TTC and ATC calculations and resulting values of member Transmission Service Providers comply with the Regional TTC and ATC methodology and applicable Regional criteria.	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to periodically review (at least annually) and ensure that the TTC and ATC calculations and resulting values of member Transmission Service Providers comply with the Regional TTC and ATC methodology and applicable Regional criteria.			
MOD-003-0	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a procedure on how				

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	transmission users can input their concerns or questions regarding the TTC and ATC methodology and values of the Transmission Service Provider(s), and how these concerns or questions will be addressed. The Regional Reliability Organization's procedure shall specify the following: R 1.1. The name, telephone number and email address of a contact person to whom concerns are to be addressed. R 1.2. The amount of time it will take for a response. R 1.3. The manner in which the response will be communicated (e.g., email, letter, telephone,				

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	etc). R 1.4. What recourse a customer has if the response is deemed unsatisfactory. R2. The Regional Reliability Organization shall post on a web site that is accessible by the Regional Reliability Organizations, NERC, and transmission users, its procedure for receiving and addressing concerns about the TTC and ATC methodology and TTC and ATC values of member Transmission Service Providers.				
MOD-004-0	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a Regional CBM methodology. The Regional Reliability Organization's CBM methodology shall include each of	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a Regional CBM methodology. The Regional Reliability Organization's CBM methodology shall include each of			

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	the following ten items, and shall explain its use in determining CBM value. Other items that are Regional Reliability Organization specific or that are considered in each respective Regional Reliability Organization methodology shall also be explained along with their use in determining CBM values. R 1.1. Specify that the method used by each Regional Reliability Organization member to determine its generation reliability requirements as the basis for CBM shall be consistent with its generation planning criteria. R 1.2. Specify the frequency of	the following ten items, and shall explain its use in determining CBM value. Other items that are Regional Reliability Organization specific or that are considered in each respective Regional Reliability Organization methodology shall also be explained along with their use in determining CBM values. R 1.1. Specify that the method used by each Regional Reliability Organization member to determine its generation reliability requirements as the basis for CBM shall be consistent with its generation planning criteria. R 1.2. Specify the frequency of			

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	calculation of the generation reliability requirement and associated CBM values. R 1.3. Require that generation unit outages considered in a Transmission Service Provider's CBM calculation be restricted to those units within the Transmission Service Provider's system. R 1.4. Require that CBM be preserved only on the Transmission Service Provider's System where the Load-Serving Entity's Load is located (i.e., CBM is an import quantity only). R 1.5. Describe the inclusion or exclusion rationale for	calculation of the generation reliability requirement and associated CBM values. R 1.3. Require that generation unit outages considered in a Transmission Service Provider's CBM calculation be restricted to those units within the Transmission Service Provider's system. R 1.4. Require that CBM be preserved only on the Transmission Service Provider's System where the Load-Serving Entity's Load is located (i.e., CBM is an import quantity only). R 1.5. Describe the inclusion or exclusion rationale for			

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	generation resources of each Load- Serving Entity including those generation resources not directly connected to the Transmission Service Provider's system but serving Load-Serving Entity loads connected to the Transmission Service Provider's system. R 1.6. Describe the inclusion or exclusion rationale for generation connected to the Transmission Service Provider's system but not obligated to serve Native/Network Load connected to the Transmission Service Provider's system. R 1.7. Describe the formal	generation resources of each Load- Serving Entity including those generation resources not directly connected to the Transmission Service Provider's system but serving Load-Serving Entity loads connected to the Transmission Service Provider's system. R 1.6. Describe the inclusion or exclusion rationale for generation connected to the Transmission Service Provider's system but not obligated to serve Native/Network Load connected to the Transmission Service Provider's system. R 1.7. Describe the formal			

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	process and rationale for the Regional Reliability Organization to grant any variances to individual Transmission Service Providers from the Regional Reliability Organization's CBM methodology. R 1.8. Specify the relationship of CBM to the generation reliability requirement and the allocation of the CBM values to the appropriate transmission facilities. The sum of the CBM values allocated to all interfaces shall not exceed that portion of the generation reliability requirement that is to be provided by outside	process and rationale for the Regional Reliability Organization to grant any variances to individual Transmission Service Providers from the Regional Reliability Organization's CBM methodology. R 1.8. Specify the relationship of CBM to the generation reliability requirement and the allocation of the CBM values to the appropriate transmission facilities. The sum of the CBM values allocated to all interfaces shall not exceed that portion of the generation reliability requirement that is to be provided by outside			

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	resources. R 1.9. Describe the inclusion or exclusion rationale for the loads of each Load-Serving Entity, including interruptible demands and buy-through contracts (type of service contract that offers the customer the option to be interrupted or to accept a higher rate for service under certain conditions). R 1.10. Describe the inclusion or exclusion rationale for generation reserve sharing arrangements in the CBM values. R2. The Regional Reliability Organization shall make the most recent version of the documentation of its CBM	resources. R 1.9. Describe the inclusion or exclusion rationale for the loads of each Load-Serving Entity, including interruptible demands and buy-through contracts (type of service contract that offers the customer the option to be interrupted or to accept a higher rate for service under certain conditions). R 1.10. Describe the inclusion or exclusion rationale for generation reserve sharing arrangements in the CBM values.			

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	methodology available on a website accessible by NERC, the Regional Reliability Organizations, and transmission users.				
MOD-005-0	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to review (at least annually) the CBM calculations and the resulting values of member Transmission Service Providers to ensure that they comply with the Regional Reliability Organization's CBM methodology. The procedure shall include the following four requirements: R 1.1. Indicate the frequency under which the verification review shall be implemented.	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to review (at least annually) the CBM calculations and the resulting values of member Transmission Service Providers to ensure that they comply with the Regional Reliability Organization's CBM methodology. The procedure shall include the following four requirements: R 1.1. Indicate the frequency under which the verification review shall be implemented.			

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	R 1.2. Require review of the process by which CBM values are updated, and their frequency of update, to ensure that the most current CBM values are available to transmission users. R 1.3. Require review of the consistency of the Transmission Service Provider's CBM components with its published planning criteria. A CBM value is considered consistent with published planning criteria if the components that comprise CBM are addressed in the planning criteria. The methodology used to	R 1.2. Require review of the process by which CBM values are updated, and their frequency of update, to ensure that the most current CBM values are available to transmission users. R 1.3. Require review of the consistency of the Transmission Service Provider's CBM components with its published planning criteria. A CBM value is considered consistent with published planning criteria if the components that comprise CBM are addressed in the planning criteria. The methodology used to			

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	determine and apply CBM does not have to involve the same mechanics as the planning process, but the same uncertainties must be considered and any simplifying assumptions explained. R 1.4. Require CBM values to be periodically updated (at least annually) and available to the Regional Reliability Organizations, NERC, and transmission users. R 2. Each Regional Reliability Organization shall document its CBM procedure and shall make its CBM review procedure available to NERC on request (within 30 calendar days).	determine and apply CBM does not have to involve the same mechanics as the planning process, but the same uncertainties must be considered and any simplifying assumptions explained. R 1.4. Require CBM values to be periodically updated (at least annually) and available to the Regional Reliability Organizations, NERC, and transmission users.			

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	R 3. The Regional Reliability Organization shall provide documentation of the results of the most current implementation of its CBM review procedure to NERC on request (within 30 calendar days).				
MOD-008-0	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a Regional TRM methodology. The Region's TRM methodology shall specify or describe each of the following five items, and shall explain its use, if any, in determining TRM values. Other items that are Region-specific or that are considered in each respective Regional methodology shall also be explained along with their use in	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a Regional TRM methodology. The Region's TRM methodology shall specify or describe each of the following five items, and shall explain its use, if any, in determining TRM values. Other items that are Region-specific or that are considered in each respective Regional methodology shall also be explained along with their use in			

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	determining TRM values. R 1.1. Specify the update frequency of TRM calculations. R 1.2. Specify how TRM values are incorporated into Available Transfer Capability calculations. R 1.3. Specify the uncertainties accounted for in TRM and the methods used to determine their impacts on the TRM values. Any component of uncertainty, other than those identified in MOD-008-0_R 1.3.1 through MOD-008-0_R 1.3.7, shall benefit the interconnected transmission systems as a	determining TRM values. R 1.1. Specify the update frequency of TRM calculations. R 1.2. Specify how TRM values are incorporated into Available Transfer Capability calculations. R 1.3. Specify the uncertainties accounted for in TRM and the methods used to determine their impacts on the TRM values. Any component of uncertainty, other than those identified in MOD-008-0_R 1.3.1 through MOD-008-0_R 1.3.7, shall benefit the interconnected transmission systems as a whole before they shall			

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	whole before they shall be permitted to be included in TRM calculations. The components of uncertainty identified in MOD-008-0_R 1.3.1 through MOD-008-0_R 1.3.7, if applied, shall be accounted for solely in TRM and not CBM. R 1.3.1. Aggregate Load forecast eRROr (not included in determining generation reliability requirements). R 1.3.2. Load distribution eRROr. R 1.3.3. Variations in facility Loadings due to balancing of generation within a Balancing Authority Area. R 1.3.4. Forecast uncertainty in	be permitted to be included in TRM calculations. The components of uncertainty identified in MOD-008-0_R 1.3.1 through MOD-008-0_R 1.3.7, if applied, shall be accounted for solely in TRM and not CBM. R 1.3.1. Aggregate Load forecast eRROr (not included in determining generation reliability requirements). R 1.3.2. Load distribution eRROr. R 1.3.3. Variations in facility Loadings due to balancing of generation within a Balancing Authority Area. R 1.3.4. Forecast uncertainty in transmission system			

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	transmission system topology. R 1.3.5. Allowances for parallel path (loop flow) impacts. R 1.3.6. Allowances for simultaneous path interactions. R 1.3.7. Variations in generation dispatch. R 1.3.8. Short-term System Operator response (Operating Reserve actions not exceeding a 59-minute window). R 1.4. Describe the conditions, if any, under which TRM may be available to the market as Non-Firm Transmission Service. R 1.5. Describe the formal process for the Regional Reliability Organization	topology. R 1.3.5. Allowances for parallel path (loop flow) impacts. R 1.3.6. Allowances for simultaneous path interactions. R 1.3.7. Variations in generation dispatch. R 1.3.8. Short-term System Operator response (Operating Reserve actions not exceeding a 59-minute window). R 1.4. Describe the conditions, if any, under which TRM may be available to the market as Non-Firm Transmission Service. R 1.5. Describe the formal process for the Regional Reliability Organization to grant any variances to			

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	to grant any variances to individual Transmission Service Providers from the Regional TRM methodology. R2. The Regional Reliability Organization shall make its most recent version of the documentation of its TRM methodology available on a web site accessible by NERC, the Regional Reliability Organizations, and transmission users.	individual Transmission Service Providers from the Regional TRM methodology.			
MOD-009-0	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to review Transmission Reliability Margin (TRM) calculations and resulting values of member Transmission Service Providers to ensure they	R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to review Transmission Reliability Margin (TRM) calculations and resulting values of member Transmission Service Providers to ensure they			

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	comply with the Regional TRM methodology, and are periodically updated and available to transmission users. This procedure shall include the following four required elements: R 1.1. Indicate the frequency under which the verification review shall be implemented. R 1.2. Require review of the process by which TRM values are updated, and their frequency of update, to ensure that the most current TRM values are available to transmission users. R 1.3. Require review of the consistency of the Transmission Service	comply with the Regional TRM methodology, and are periodically updated and available to transmission users. This procedure shall include the following four required elements: R 1.1. Indicate the frequency under which the verification review shall be implemented. R 1.2. Require review of the process by which TRM values are updated, and their frequency of update, to ensure that the most current TRM values are available to transmission users. R 1.3. Require review of the consistency of the Transmission Service			

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	Provider's TRM components with its published planning criteria. A TRM value is considered consistent with published planning criteria if the same components that comprise TRM are also addressed in the planning criteria. The methodology used to determine and apply TRM does not have to involve the same mechanics as the planning process, but the same uncertainties must be considered and any simplifying assumption explained. R 1.4. Require TRM values to	Provider's TRM components with its published planning criteria. A TRM value is considered consistent with published planning criteria if the same components that comprise TRM are also addressed in the planning criteria. The methodology used to determine and apply TRM does not have to involve the same mechanics as the planning process, but the same uncertainties must be considered and any simplifying assumption explained. R 1.4. Require TRM values to be periodically updated			

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	be periodically updated (at least prior to each season — winter, spring, summer, and fall), as necessary, and made available to the Regional Reliability Organizations, NERC, and transmission users. R2. The Regional Reliability Organization shall make documentation of its Regional TRM review procedure available to NERC on request (within 30 calendar days). R3. The Regional Reliability Organization shall make documentation of the results of the most current implementation of its TRM review procedure available to NERC on request (within 30	(at least prior to each season — winter, spring, summer, and fall), as necessary, and made available to the Regional Reliability Organizations, NERC, and transmission users.			

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	calendar days).				
MOD-010-0 Mak; Ken; and Steve		R1. The Transmission Owners, Transmission Planners Generator Owners, and Resource Planners (specified in the data requirements and reporting procedures of MOD-011-0_R1) shall provide appropriate equipment characteristics, system data, and existing and future Interchange Schedules in compliance with its respective Interconnection Regional steady-state modeling and simulation data requirements and reporting procedures as defined in Reliability Standard MOD-011-0_R 1. R2. The Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners (specified in the data requirements			*In the long run, th will be a an interconnection-wide standard..* *In the interim, NERC will develo a web page with links to each of the applicable documents.* *SAR is needed to split the standard requirements from the process requirements and cleanup verbiage. The process*

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		and reporting procedures of MOD-011-0_R1) shall provide this steady-state modeling and simulation data to the Regional Reliability Organizations, NERC, and those entities specified within Reliability Standard MOD-011-0_R 1. If no schedule exists, then these entities shall provide the data on request (30 calendar days).			*requirements shou not be included in the standard.*
MOD-011-0 Mak, Ken, and Steve	R1. The Regional Reliability Organizations within an Interconnection, in conjunction with the Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners, shall develop comprehensive steady-state data requirements and reporting procedures needed to model and analyze the steady-state conditions for each of the NERC				*MOD-010 and 011 are related. This i the MMWG work p the eastern interconnection.* *Revise NERC MO 011 to clarify that the data reporting requirements must be uniform across each*

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	Interconnections: Eastern, Western, and ERCOT. Within an Interconnection, the Regional Reliability Organizations shall jointly coordinate the development of the data requirements and reporting procedures for that Interconnection. The Interconnection-wide requirements shall include the following steady-state data requirements: R 1.1. Bus (substation): name, nominal voltage, electrical demand supplied (consistent with the aggregated and dispersed substation demand data supplied per Reliability Standards MOD-016-0, MOD-017-0, and MOD-020-0), and				*interconnection.* *Replace MOD-01(with a new NERC standard that specifies data reporting requirements for Eastern Interconnection (entities in WECC and ERCOT exempted from the NERC standard). WECC and ERCO need to come up with regional standards to do th same thing in thei regions.* *This is long-term f NERC, WECC an*

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	location. R 1.2. Generating Units (including synchronous condensers, pumped storage, etc.): location, minimum and maximum Ratings (net Real and Reactive Power), regulated bus and voltage set point, and equipment status. R 1.3. AC Transmission Line or Circuit (overhead and underground): nominal voltage, impedance, line charging, Normal and Emergency Ratings (consistent with methodologies defined and Ratings supplied per Reliability Standard FAC-004-0 and FAC-				*ERCOT. May be quicker if there is controversy; nothi changing.* *In the long run, th will be a an interconnection-wide standard..* *In the interim, NERC will develo a web page with links to each of th applicable documents.* *SAR is needed to split the standard requirements from*

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	005-0) equipment status, and metering locations. R 1.4. DC Transmission Line (overhead and underground): line parameters, Normal and Emergency Ratings, control parameters, rectifier data, and inverter data. R 1.5. Transformer (voltage and phase-shifting): nominal voltages of windings, impedance, tap ratios (voltage and/or phase angle or tap step size), regulated bus and voltage set point, Normal and Emergency Ratings (consistent with methodologies defined and Ratings supplied per				*the process requirements and cleanup verbiage. The process requirements shou not be included in the standard.*

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	Reliability Standard FAC-004-0 and FAC-005-0.), and equipment status. R 1.6. Reactive Compensation (shunt and series capacitors and reactors): nominal Ratings, impedance, percent compensation, connection point, and controller device. R 1.7. Interchange Schedules: Existing and future Interchange Schedules and/or assumptions. R2. The Regional Reliability Organizations within an Interconnection shall document their Interconnection's steady-state data requirements and reporting				

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	procedures, shall review those data requirements and reporting procedures (at least every five years), and shall make the data requirements and reporting procedures available on request (within five business days) to Regional Reliability Organizations, NERC, and all users of the interconnected transmission systems.				
MOD-012-0 Mak, Ken, and Steve		R1. The Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners (specified in the data requirements and reporting procedures of MOD-013-0_R4) shall provide appropriate equipment characteristics and system data in compliance with the respective Interconnection-wide Regional			*Same treatment as MOD-010 and 01* *In the long run, th will be a an interconnection-wide standard..* *In the interim, NERC will develo*

Standard Number	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Region (Quick or Long-term)	NERC (Quick or Long-term)	Notes and statu
		dynamics system modeling and simulation data requirements and reporting procedures as defined in Reliability Standard MOD-013-0_R 4. R2. The Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners (specified in the data requirements and reporting procedures of MOD-013-0_R4) shall provide dynamics system modeling and simulation data to its Regional Reliability Organization(s), NERC, and those entities specified within the applicable reporting procedures identified in Reliability Standard MOD-013-0_R 1. If no schedule exists, then these entities shall provide data on request (30 calendar days).			*a web page with links to each of the applicable documents.* *SAR is needed to split the standard requirements from the process requirements and cleanup verbiage. The process requirements shou not be included in the standard.*

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MOD-013-0 Mak, Ken, Steve look at by interconnection	R1. The Regional Reliability Organization, in coordination with its Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners, shall develop comprehensive dynamics data requirements and reporting procedures needed to model and analyze the dynamic behavior or response of each of the NERC Interconnections: Eastern, Western, and ERCOT. Within an Interconnection, the Regional Reliability Organizations shall jointly coordinate on the development of the data requirements and reporting procedures for that Interconnection. Each set of Interconnection-wide dynamics data requirements shall include the				*In the long run, th will be a an interconnection-wide standard..* *In the interim, NERC will develo a web page with links to each of the applicable documents.* *SAR is needed to split the standard requirements from the process requirements and cleanup verbiage. The process requirements shou*

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	following dynamics data requirements: R 1.1. Unit-specific dynamics data shall be reported for generators and synchronous condensers (including, as appropriate to the model, items such as inertia constant, damping coefficient, saturation parameters, and direct and quadrature axes reactances and time constants), excitation systems, voltage regulators, turbine-governor systems, power system stabilizers, and other associated generation equipment. R 1.1.1. Estimated or typical				*not be included in the standard./*

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	manufacturer's dynamics data, based on units of similar design and characteristics, may be submitted when unit-specific dynamics data cannot be obtained. In no case shall other than unit-specific data be reported for generator units installed after 1990. R 1.1.2. The Interconnection-wide requirements shall specify unit size thresholds for permitting: The use of non-detailed vs. detailed models; The netting of small generating units with bus load, and; The combining of multiple generating units				

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	at one plant R 1.2. Device specific dynamics data shall be reported for dynamic devices, including, among others, static VAR controllers, high voltage direct current systems, flexible AC transmission systems, and static compensators. R 1.3. Dynamics data representing electrical demand characteristics as a function of frequency and voltage. R 1.4. Dynamics data shall be consistent with the reported steady-state (power flow) data supplied per Reliability Standard MOD-010-0_R 1.				

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	R2. The Regional Reliability Organization shall participate in the documentation of its Interconnection's data requirements and reporting procedures and, shall participate in the review of those data requirements and reporting procedures (at least every five years), and shall provide those data requirements and reporting procedures to Regional Reliability Organizations, NERC, and all users of the Interconnected systems on request (within five business days).				
MOD-014-0	R1. The Regional Reliability Organization(s) within each Interconnection shall coordinate and jointly develop and maintain a library of solved (converged)				*Not a fill in the blank; it is a NER requirement on th region. No need t revise to address*

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	Interconnection-specific steady-state system models. The Interconnection-specific models shall include near- and longer-term planning horizons that are representative of system conditions for projected seasonal peak, minimum, and other appropriate system demand levels. R2. The Regional Reliability Organization(s) within each Interconnection shall coordinate and jointly develop steady-state system models annually for selected study years, as determined by the Regional Reliability Organizations within its Interconnection. The Regional Reliability Organization shall provide the most recent solved (converged) Interconnection-				*any fill in the blan issues.* *No action needed be taken by the RRSWG.*

Standard Number	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Region (Quick or Long-term)	NERC (Quick or Long-term)	Notes and statu
	specific steady-state models to NERC in accordance with each Interconnection's schedule for submission.				
MOD-015-0	R1. The Regional Reliability Organization(s) within each Interconnection shall coordinate and jointly develop and maintain a library of initialized (with no Faults or system Disturbances) Interconnection-specific dynamics system models linked to the steady-state system models, as appropriate, of Reliability Standard MOD-014-0_R 1. R2. The Regional Reliability Organization(s) within each Interconnection shall develop Interconnection dynamics system models for their Interconnection annually for selected study years as				*Same as MOD-01* *No action needed be taken by the RRSWG.*

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	determined by the Regional Reliability Organization(s) within each Interconnection and shall provide the most recent initialized (approximately 25 seconds, no-fault) models to NERC in accordance with each Interconnection's schedule for submission.				
MOD-016-0 Pat Huntley: look at MOD-016-1 to MOD-021-0.	R1. The Planning Authority and Regional Reliability Organization shall have documentation identifying the scope and details of the actual and forecast (a) Demand data, (b) Net Energy for Load data, and (c) controllable DSM data to be reported for system modeling and reliability analyses. R 1.1. The aggregated and dispersed data submittal requirements shall ensure				*MOD-016 is the NERC requiremen on region; MOD-017 and 019 are th entity requirement to comply with region. Includes MOD-016 through MOD-021.* *Long-term project to:*

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	that consistent data is supplied for Reliability Standards TPL-005-0, TPL-006-0, MOD-010-0, MOD-011-0, MOD-012-0, MOD-013-0, MOD-014-0, MOD-015-0, MOD-016, MOD-017-0, MOD-018-0, MOD-019-0, MOD-020-0, and MOD-021-0. R 1.1. The aggregated and dispersed data submittal requirements shall ensure that consistent data is supplied for Reliability Standards TPL-005-0, TPL-006-0, MOD-010-0, MOD-011-0, MOD-012-0, MOD-013-0, MOD-014-0, MOD-015-0, MOD-016, MOD-017-0,				*Develop uniform ~~North American~~North American standar for reporting of actual and forecas demand and NEL data to be reporte to RRO for system modeling and analysis. Require entities within all regions to meet th standard. This portion is no longe fill-in-the-blank; i a uniform standar Standard should address quality an accuracy of the forecast; need to avoid double-*

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	MOD-018-0, MOD-019-0, MOD-020-0, and MOD-021-0. R2. The documentation of the scope and details of the data reporting requirements shall be available on request (five business days).				*counting, etc.* *Develop NERC standard requirin region to set DSM data reporting criteria. Request regions to develop regional standard for reporting of DSM data. Requi entities to meet the regional criteria. The DSM part remains a fill-in-t blank.* *A SAR needs to be written to remove fill-in-the-blank aspects.*

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					In the short-term t group is split as to whether or not regional standard required.
MOD-017-0 Huntley		R1. The Load-Serving Entity, Planning Authority and Resource Planner shall each provide the following information annually on an aggregated Regional, subregional, Power Pool, individual system, or Load-Serving Entity basis to NERC, the Regional Reliability Organizations, and any other entities specified by the documentation in Standard MOD-016-0_R 1.			*Same as above.* *A SAR needs to be written to remove fill-in-the-blank aspects.*

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		R 1.1. Integrated hourly demands in megawatts (MW) for the prior year. R 1.2. Monthly and annual peak hour actual demands in MW and Net Energy for Load in gigawatthours (GWh) for the prior year. R 1.3. Monthly peak hour forecast demands in MW and Net Energy for Load in GWh for the next two years. R 1.4. Annual Peak hour forecast demands (summer and winter) in MW and annual Net Energy for load in GWh for at least five years and up to ten years into the future, as requested.			

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MOD-019-0 Huntley		R1. The Load-Serving Entity, Planning Authority, Transmission Planner, and Resource Planner shall each provide annually its forecasts of interruptible demands and Direct Control Load Management (DCLM) data for at least five years and up to ten years into the future, as requested, for summer and winter peak system conditions to NERC, the Regional Reliability Organizations, and other entities (Load-Serving Entities, Planning Authorities, and Resource Planners) as specified by the documentation in Reliability Standard MOD-016-0_R 1.			*Same as above.* *A SAR needs to be written to remove fill-in-the-blank aspects.*
MOD-024-1 Odom	R1. The Regional Reliability Organization shall establish and maintain procedures to address verification of generator gross and	R3. The Generator Owner shall follow its Regional Reliability Organization's procedures for verifying and reporting its gross			*This is a fill-in-the blank. Long-term transition to a uniform ~~North~~*

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	net Real Power capability. These procedures shall include the following: R 1.1. Generating unit exemption criteria including documentation of those units that are exempt from a portion or all of these procedures. R 1.2. Criteria for reporting generating unit auxiliary loads. R 1.3. Acceptable methods for model and data verification, including any applicable conditions under which the data should be verified. Such methods can include use of manufacturer data, commissioning data, performance tracking,	and net Real Power generating capability per R1.			~~*American*~~*North American standar* *Regions are worki on the regional requirements in response to MOD- 024 and 025. Let that process go ahead. Let region file their standard on the existing schedule.* *Long, long term is uniform ~~North American~~North American standar for real and reacti power verification Look at regional requirements and identify the best*

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	and testing, etc. R 1.4. Periodicity and schedule of model and data verification and reporting. R 1.5. Information to be verified and reported: R 1.5.1. Seasonal gross and net Real Power generating capabilities. R 1.5.2. Real power requirements of auxiliary loads. R 1.5.3. Method of verification, including date and conditions.				*practice, commonalities and differences, and whether difference are needed for reliability.* *In the long-term th might become a North American standard. (SAR needs written to accomplish this). See John's summa write-up.* *In the short-term, this will remain a regional reliabilit standard, NERC w*

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					develop a web pag with links to each the applicable documents.
MOD-025-1 Odom	R1. The Regional Reliability Organization shall establish and maintain procedures to address verification of generator gross and net Reactive Power capability. These procedures shall include the following: R 1.1. Generating unit exemption criteria including documentation of those units that are exempt from a portion or all of these procedures. R 1.2. Criteria for reporting generating unit auxiliary loads. R 1.3. Acceptable methods for	R3. The Generator Owner shall follow its Regional Reliability Organization's procedures for verifying and reporting its gross and net Reactive Power generating capability per R1.			*Same as MOD-02* *In the long-term th might become a North American standard. (SAR needs written to accomplish this). See John's summa write-up.* *In the short-term, this will remain a regional reliabilit standard, NERC w develop a web pag with links to each*

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	model and data verification, including any applicable conditions under which the data should be verified. Such methods can include use of commissioning data, performance tracking, engineering analysis, testing, etc. R 1.4. Periodicity and schedule of model and data verification and reporting. R 1.5. Information to be reported: R 1.5.1. Verified maximum gross and net Reactive Power capability (both lagging and leading) at Seasonal Real Power generating capabilities as reported in accordance with				*the applicable documents.*.

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	Reliability Standard MOD-024 Requirement 1.5.1. R 1.5.2. Verified Reactive Power limitations, such as generator terminal voltage limitations, shorted rotor turns, etc. R 1.5.3. Verified Reactive Power of auxiliary loads. R 1.5.4. Method of verification, including date and conditions.				
PER-002-0 DWT – coordinate with the training standard development		R3.1 A set of training program objectives must be defined, based on NERC and Regional Reliability Organization standards, entity operating procedures, and applicable regulatory requirements. These objectives shall reference the knowledge and competencies	*Regions can develop additional training requirements if they choose, but not required as*	*NERC is working on a new training standard. This inclusion of RRO here is unnecessary; could do a quick*	*Ensure developme of new standard does not require regional differenc* *No action needed be taken by the*

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		needed to apply those standards, procedures, and requirements to normal, emergency, and restoration conditions for the Transmission Operator and Balancing Authority operating positions.	*fill-in-the-blank. This is not a fill-in-the-blank.*	*fix to remove, but easier to just wait for the new standard to replace PER-002.*	*RRSWG.* *DWT to talk with John T.*
PRC-002-0 (Now PRC-002-1) Zito	R1. The Regional Reliability Organization shall develop comprehensive requirements for the installation of disturbance monitoring equipment to ensure data is available to determine system performance and the causes of system disturbances. The comprehensive requirements shall include all of the following: R 1.1. Type of data recording capability (e.g., sequence-of-event, Fault recording, dynamic Disturbance recording).		*GVZ-This in my view should be a RRO standard and specific to the Region. Requirements seem to be in line with what is necessary to ensure adequate recording is in place. This will be a long*	*GVZ –PRC-002-1will be up for reballot on or about 6/15.*	*Related to PRC-01 (This is a fill-in-th blank). This is network specific. PRC-002 and 018 are being balloted now; need to refer new copies. Need good justification for region-specific Need regions to develop and subm regional standard Long-term project NERC standard*

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	R 1.2. Equipment characteristics including but not limited to: R 1.2.1. Recording duration requirements. R 1.2.2. Time synchronization requirements. R 1.2.3. Data format requirements. R 1.2.4. Event triggering requirements R 1.3. Monitoring, recording, and reporting capabilities of the equipment. R 1.3.1. Voltage. R 1.3.2. Current. R 1.3.3. Frequency. R 1.3.4. MW and/or MVAR, as appropriate. R 1.4. Data retention capabilities (e.g., length of time data is to be		*term item for the Regions to put through their standards development process.*		*requires region to have this done in 9 months from boar adoption (from August 9). Redire the regions to do this as a regional standard, not a procedure or some other document.* *Include PRC-018- also.* *In the long-term, this will be a Regional Reliabili Standard* *In the interim, NERC will develo a web page with*

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	available for retrieval). R 1.5. Regional coverage requirements (e.g., by voltage, geographic area, electric area or subarea). R 1.6. Installation requirements: R 1.6.1. Substations. R 1.6.2. Transmission lines. R 1.6.3. Generators. R 1.7. Responsibility for maintenance and testing. R 1.8. Requirements for periodic (at least every five years) updating, review, and approval of the Regional requirements. R2. The Regional Reliability Organization shall provide its requirements for the installation of disturbance monitoring equipment				*links to each of the applicable documents.* *SAR is needed to cleanup verbiage.*

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	to other Regional Reliability Organizations and NERC on request (30 calendar days).				
PRC-003-1 Zito	R1. Each Regional Reliability Organization shall establish, document and maintain its procedures for, review, analysis, reporting and mitigation of transmission and generation Protection System Misoperations. These procedures shall include the following elements: R 1.1 The Protection Systems to be reviewed and analyzed for Misoperations (due to their potential impact on BES reliability). R 1.2. Data reporting requirements (periodicity and format) for			*GVZ-This has the potential for becoming a uniform standard and probably should be classified as a Long Term NERC issue.*	*These are fill-in th blank today. Goes with PRC-004. Co all or parts of this become uniform ~~North American~~North American standar for long term? Ho does this relate to the implementatio plan for these new version 1 standard* *In the long-term, this will be a Regional Reliabili Standard*

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	Misoperations. R 1.3. Process for review, analysis follow up, and documentation of Corrective Action Plans for Misoperations. R 1.4. Identification of the Regional Reliability Organization group responsible for the procedures and the process for approval of the procedures. R2. Each Regional Reliability Organization shall maintain and periodically update documentation of its procedures for review, analysis, reporting, and mitigation of transmission and generation Protection System Misoperations. R3. Each Regional Reliability				*In the interim, NERC will develo a web page with links to each of the applicable documents.* *SAR is needed to cleanup verbiage. Parts can be Nort American in scope*

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	Organization shall distribute procedures in Requirement 1 and any changes to those procedures, to the affected Transmission Owners, Distribution Providers that own transmission Protection Systems, and Generator Owners within 30 calendar days of approval of those procedures.				
PRC-004-1		R1. The Transmission Owner and any Distribution Provider that owns a transmission Protection System shall each analyze its transmission Protection System Misoperations and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Reliability Organization's procedures developed for Reliability Standard		*GVZ-This has the potential for becoming a uniform standard and probably should be classified as a Long Term NERC issue.*	*See PRC-003-1 above.* *In the long-term, this will be a Regional Reliabili Standard* *In the interim, NERC will develo a web page with links to each of th*

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		PRC-003 Requirement 1. R2. The Generator Owner shall analyze its generator Protection System Misoperations, and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Reliability Organization's procedures developed for PRC-003 R1. R3. The Transmission Owner, any Distribution Provider that owns a transmission Protection System, and the Generator Owner shall each provide to its Regional Reliability Organization, documentation of its Misoperations analyses and Corrective Action Plans according to the Regional Reliability Organization's procedures developed for PRC-003			*applicable documents.* *SAR is needed to cleanup verbiage. Parts can be Nort American in scope* *Consider combini PRC-003 and PR 004 into one standard.*

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		R1.			
PRC-006-0 Wilson	Each Regional Reliability Organization shall develop, coordinate, and document an [Under-Frequency Load Shedding] program, which shall include the following: R 1.1. Requirements for coordination of UFLS programs within the subregions, Regional Reliability Organization and, where appropriate, among Regional Reliability Organizations. R 1.2. Design details shall include, but are not limited to: R 1.2.1. Frequency set points. R 1.2.2. Size of corresponding load shedding blocks (%				*Has to remain fill-in-the-blank. Nee regional standard Related PRC-007 and 009.* *This is a fill-in-the blank standard going forward. Settings are specif to each interconnection ar region.* *In the long-term, this will be a Regional Reliabili Standard*

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	of connected loads.) R 1.2.3. Intentional and total tripping time delays. R 1.2.4. Generation protection. R 1.2.5. Tie tripping schemes. R 1.2.6. Islanding schemes. R 1.2.7. Automatic load restoration schemes. R 1.2.8. Any other schemes that are part of or impact the UFLS programs. R 1.3. A Regional Reliability Organization UFLS program database. This database shall be updated as specified in the Regional Reliability Organization program (but at least every five years) and shall include sufficient information to model the UFLS program				*In the interim, NERC will develo a web page with links to each of the applicable documents.*

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	in dynamic simulations of the interconnected transmission systems. R 1.4. Assessment and documentation of the effectiveness of the design and implementation of the Regional UFLS program. This assessment shall be conducted periodically and shall (at least every five years or as required by changes in system conditions) include, but not be limited to: R 1.4.1. A review of the frequency set points and timing, and R 1.4.2. Dynamic simulation of possible Disturbance that cause the Region or				

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	portions of the Region to experience the largest imbalance between Demand (Load) and generation. R2. The Regional Reliability Organization shall provide documentation of its UFLS program and its database information to NERC on request (within 30 calendar days). R3. The Regional Reliability Organization shall provide documentation of the assessment of its UFLS program to NERC on request (within 30 calendar days).				
PRC-007-0		R1. The Transmission Owner and Distribution Provider, with a UFLS program (as required by its Regional Reliability Organization)			*This is fill-in-the-blank tied back to PRC-006.*

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		shall ensure that its UFLS program is consistent with its Regional Reliability Organization's UFLS program requirements. R2. The Transmission Owner, Transmission Operator, Distribution Provider, and Load-Serving Entity that owns or operates a UFLS program (as required by its Regional Reliability Organization) shall provide, and annually update, its underfrequency data as necessary for its Regional Reliability Organization to maintain and update a UFLSprogram database. R3. The Transmission Owner and Distribution Provider that owns a UFLS program (as required by its Regional Reliability Organization) shall provide its documentation of			*A SAR is needed to revise the wording of this standard to clearly state that t standard refers ba to PRC-006 instea of stating "(as required by its Regional Reliabili Organization)". Th group also recommends that PRC-006 and PRC 007 be combined into one standard.* *In the interim regional procedur need converted to standard to implement this.*

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		that UFLS program to its Regional Reliability Organization on request (30 calendar days).			*NERC will need to post procedures fo each regions associated with th*
PRC-008-0 DWT		R1. The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall have a UFLS equipment maintenance and testing program in place. This UFLS equipment maintenance and testing program shall include UFLS equipment identification, the schedule for UFLS equipment testing, and the schedule for UFLS equipment maintenance. R2. The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization)			*This is not a fill-in the-blank. These NERC standards need to be reviewe and upgraded long term. The NERC requirements are n sufficiently measurable to kno if reliability objective is being met or not. Long-term SAR to revie this standard.* *A SAR is needed to*

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		shall implement its UFLS equipment maintenance and testing program and shall provide UFLS maintenance and testing program results to its Regional Reliability Organization and NERC on request (within 30 calendar days).			*revise the wording of this standard to clearly state that t standard refers ba to PRC-006 instea of stating "(as required by its Regional Reliabili Organization)". Th group also recommends that PRC-006 and PRC 007 be combined into one standard.*
PRC-009-0 Wilson (tied to the PRC-006 review)		R1. The Transmission Owner, Transmission Operator, Load-Serving Entity and Distribution Provider that owns or operates a UFLS program (as required by its Regional Reliability Organization)			*This is fill-in-the-blank tied back to PRC-006.* *A SAR is needed to*

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		shall analyze and document its UFLS program performance in accordance with its Regional Reliability Organization's UFLS program. The analysis shall address the performance of UFLS equipment and program effectiveness following system events resulting in system frequency excursions below the initializing set points of the UFLS program. The analysis shall include, but not be limited to: R 1.1. A description of the event including initiating conditions. R 1.2. A review of the UFLS set points and tripping times. R 1.3. A simulation of the event.			*revise the wordinc of this standard to clearly state that t standard refers ba to PRC-006 instea of stating "(as required by its Regional Reliabili Organization)". Th group also recommends that PRC-006 and PRC 007 be combined into one standard.* *Consider combini PRC-006, PRC-00 PRC-008, and PR 009.*

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		R 1.4. A summary of the findings. R2. The Transmission Owner, Transmission Operator, Load-Serving Entity, and Distribution Provider that owns or operates a UFLS program (as required by its Regional Reliability Organization) shall provide documentation of the analysis of the UFLS program to its Regional Reliability Organization and NERC on request 90 calendar days after the system event.			
PRC-012-0 Deutsch	Each Regional Reliability Organization with a Transmission Owner, Generator Owner, or Distribution Providers that uses or is planning to use an SPS shall have a documented Regional Reliability Organization SPS				*This is fill-in-the-blank related to PRC- 016. Justifi as regional standard; network specific.*

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	review procedure to ensure that SPSs comply with Regional criteria and NERC Reliability Standards. The Regional SPS review procedure shall include: R 1.1. Description of the process for submitting a proposed SPS for Regional Reliability Organization review. R 1.2. Requirements to provide data that describes design, operation, and modeling of an SPS. R 1.3. Requirements to demonstrate that the SPS shall be designed so that a single SPS component failure, when the SPS was intended to operate, does not prevent the				*In the long-term, this will be a Regional Reliabili Standard* *In the interim, NERC will develo a web page with links to each of the applicable documents.* *A SAR, if written, should remove R1 and capitalize "Misoperation" in the current R1.7 a "misoperation" ha been added to the*

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	interconnected transmission system from meeting the performance requirements defined in Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0. R 1.4. Requirements to demonstrate that the inadvertent operation of an SPS shall meet the same performance requirement (TPL-001-0, TPL-002-0, and TPL-003-0) as that required of the contingency for which it was designed, and not exceed TPL-003-0. R 1.5. Requirements to demonstrate the proposed SPS will coordinate with other protection and				*glossary of the standards manual. Also consider: R1 needs changed to state Regional Standard instead o Regional criteria (once they become standards).*

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	control systems and applicable Regional Reliability Organization Emergency procedures. R 1.6. Regional Reliability Organization definition of misoperation. R 1.7. Requirements for analysis and documentation of corrective action plans for all SPS misoperations. R 1.8. Identification of the Regional Reliability Organization group responsible for the Regional Reliability Organization's review procedure and the process for Regional Reliability Organization approval of the procedure. R 1.9. Determination, as				

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	appropriate, of maintenance and testing requirements. R2. The Regional Reliability Organization shall provide affected Regional Reliability Organizations and NERC with documentation of its SPS review procedure on request (within 30 calendar days).				
PRC-013-0 Huntley	The Regional Reliability Organization that has a Transmission Owner, Generator Owner, or Distribution Provider with an SPS installed shall maintain an SPS database. The database shall include the following types of information: R 1.1. Design Objectives — Contingencies and system conditions for which the				*This is not a fill-in the blank today. I is related to PRC-015. As long as th R1.1 to R1.3 requirements here are sufficient to meet the objective R1 in PRC-015, w don't need additional regiona specific criteria.*

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	SPS was designed, R 1.2. Operation — The actions taken by the SPS in response to Disturbance conditions, and R 1.3. Modeling — Information on detection logic or relay settings that control operation of the SPS. R2. The Regional Reliability Organization shall provide to affected Regional Reliability Organization(s) and NERC documentation of its database or the information therein on request (within 30 calendar days).				*Regions can devel additional criteria on their own initiative. We wou need to revise PR 015 as a quick fix add the R1.1 to R1 criteria, so the standards are not interdependent. Very long-term we could come up wit more uniform ~~Nor American~~North American requirements.* *In the long-term th will be a North American standar*

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					SAR should includ elimination of R1.. from PRC-012-0; revision of PRC-013-0, R1.1, 1.2, & 1.3 to include a specific list of item to be included in t RRO SPS databas The same list shou either be added to PRC-015, R1.1. However, it may b cleaner to move PRC-015-0, R1.1 and the data portio of R1.3 to PRC-01
PRC-014-0	R1. The Regional Reliability				*This is not a fill-in*

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Huntley	Organization shall assess the operation, coordination, and effectiveness of all [Special Protection Systems] installed in its Region at least once every five years for compliance with NERC Reliability Standards and Regional criteria. R2. The Regional Reliability Organization shall provide either a summary report or a detailed report of its assessment of the operation, coordination, and effectiveness of all SPSs installed in its Region to affected Regional Reliability Organizations or NERC on request (within 30 calendar days). R3. The documentation of the Regional Reliability Organization's SPS assessment shall include the following				*the-blank.* *No action needed be taken by the RRSWG.*

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	elements: R 3.1. Identification of group conducting the assessment and the date the assessment was performed. R 3.2. Study years, system conditions, and contingencies analyzed in the technical studies on which the assessment is based and when those technical studies were performed. R 3.3. Identification of SPSs that were found not to comply with NERC standards and Regional Reliability Organization criteria. R 3.4. Discussion of any				

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	coordination problems found between a SPS and other protection and control systems. R 3.5. Provide corrective action plans for non-compliant SPSs.				
PRC-015-0 Huntley		R1. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall maintain a list of and provide data for existing and proposed SPSs as specified in Reliability Standard PRC-013-0_R 1. R2. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall have evidence it reviewed new or functionally modified SPSs in accordance with the Regional Reliability Organization's			*Tied to PRC-013.* *In the long-term th will be a North American standar* *SAR should includ elimination of R1. from PRC-012-0; revision of PRC-013-0, R1.1, 1.2, & 1.3 to include a specific list of item to be included in t*

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		procedures as defined in Reliability Standard PRC-012-0_R1 prior to being placed in service. R3. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall provide documentation of SPS data and the results of Studies that show compliance of new or functionally modified SPSs with NERC Reliability Standards and Regional Reliability Organization criteria to affected Regional Reliability Organizations and NERC on request (within 30 calendar days).			*RRO SPS databas The same list shou either be added to PRC-015, R1.1. However, it may b cleaner to move PRC-015-0, R1.1 and the data porti of R1.3 to PRC-01*
PRC-016-0 Deutsch		R1. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall analyze its SPS operations and maintain a record of all misoperations in accordance with			*Tied to PRC-012.* *In the long-term, this will be a Regional Reliabili*

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		the Regional SPS review procedure specified in Reliability Standard PRC-012-0_R 1. R2. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall take corrective actions to avoid future misoperations. R3. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall provide documentation of the misoperation analyses and the corrective action plans to its Regional Reliability Organization and NERC on request (within 90 calendar days).			*Standard* *In the interim, NERC will develo a web page with links to each of the applicable documents.* *SAR is needed to cleanup verbiage. Parts can be Nort American in scope*
PRC-018-0 Zito		**R1.** Each Transmission Owner and Generator Owner required to install DMEs by its Regional Reliability Organization	*GVZ-This in my view should be a RRO*		*Tied to PRC-002-1 (see above).*

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		(Reliability Standard PRC-002 Requirements 1-3) shall have DMEs installed that meet the following requirements: **R1.1.** The time associated with each sample or condition recorded by a DME device shall be synchronized to within 2 milliseconds of Coordinated Universal Time (UTC) or better. The time stamp cannot be greater than one millisecond from the time the condition reached the input device, measured with the local station's clock. **R1.2.** Recorded data from each Disturbance shall be retrievable for ten days. **R2.** The Transmission Owner and Generator Owner shall each install DMEs in accordance with its Regional Reliability	*standard and specific to the Region. Requirements seem to be in line with what is necessary to ensure adequate recording is in place. This will be a long term item for the Regions to put through their standards development process.*		*This standard is currently being voted on and as of July 6, 2006 was being re-circulate* *In and of itself, thi is not a regional standard but it references PRC-002-1 which is a fi in-the-blank standard.* *In the long-term, this will be a Regional Reliabili Standard* *In the interim,*

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		Organization's installation requirements (Reliability Standard PRC-002 Requirements 1 through 3). **R3.** The Transmission Owner and Generator Owner shall each maintain, and report to its Regional Reliability Organization on request, the following data on the DMEs installed to meet that region's installation requirements (Reliability Standard PRC-002 Requirements1.1, 2.1 and 3.1): **R3.1.** Type of DME (sequence of event recorder, fault recorder, or dynamic disturbance recorder). **R3.2.** Make and model of equipment. **R3.3.** Installation location. **R3.4.** Operational status.			*NERC will develop a web page with links to each of the applicable documents.* *SAR is needed to cleanup verbiage.*

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		R3.5. Date last tested. **R3.6.** Monitored elements, such as transmission circuit, bus section, etc. **R3.7.** Monitored devices, such as circuit breaker, disconnect status, alarms, etc. **R3.8.** Monitored electrical quantities, such as voltage, current, etc. **R4.** The Transmission Owner and Generator Owner shall each provide Disturbance data (recorded by DMEs) in accordance with its Regional Reliability Organization's requirements (Reliability Standard PRC-002 Requirement 4). **R5.** The Transmission Owner and Generator Owner shall each archive all data recorded by DMEs			

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		for Regional Reliability Organization-identified events for at least three years. **R6.** Each Transmission Owner and Generator Owner that is required by its Regional Reliability Organization to have DMEs shall have a maintenance and testing program for those DMEs that includes: **R6.1.** Maintenance and testing intervals and their basis. **R6.2.** Summary of maintenance and testing procedures.			
PRC-020-1 Zito	R1. The Regional Reliability Organization shall establish, maintain and annually update a database for UVLS programs implemented by entities within the Region to mitigate the risk of			*GVZ- In my view this is more of a short term item.*	*I would suggest t group consider tha this is NOT a fill i the blank standard just something tha the Region needs t*

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	voltage collapse or voltage instability in the BES. This database shall include the following items: R 1.1. Owner and operator of the UVLS program. R 1.2. Size and location of customer load, or percent of connected load, to be interrupted. R 1.3. Corresponding voltage set points and overall scheme clearing times. R 1.4. Time delay from initiation to trip signal. R 1.5. Breaker operating times. R 1.6. Any other schemes that are part of or impact the UVLS programs such as related generation protection, islanding schemes, automatic load restoration schemes, UFLS and Special Protection Systems.				*do.* *No action needed be taken by the RRSWG.*

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	R2. The Regional Reliability Organization shall provide the information in its UVLS database to the Planning Authority, the Transmission Planner, or other Regional Reliability Organizations and to NERC within 30 calendar days of a request.				
PRC-021-1 Zito		R1. Each Transmission Owner and Distribution Provider that owns a UVLS program to mitigate the risk of voltage collapse or voltage instability in the BES shall annually update its UVLS data to support the Regional UVLS program database. The following data shall be provided to the Regional Reliability Organization for each installed UVLS system: R1.1. Size and location of customer load, or percent of connected load, to be interrupted.		*GVZ- In my view this is more of a short term item.*	*I would suggest t group consider tha this is NOT a fill i the blank standard just something tha the ERP is requiri an entity to do. No mention is being made to do something according to a RRO's standard o procedure just to provide it. It is*

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		R1.2. Corresponding voltage set points and overall scheme clearing times. R1.3. Time delay from initiation to trip signal. R1.4. Breaker operating times. R1.5. Any other schemes that are part of or impact the UVLS programs such as related generation protection, islanding schemes, automatic load restoration schemes, UFLS and Special Protection Systems. R2. Each Transmission Owner and Distribution Provider that owns a UVLS program shall provide its UVLS program data to the Regional Reliability Organization within 30 calendar days of a request.			*important to leave in the standard 'as is' to enable the collection and enforce complianc* *No action needed be taken by the RRSWG.*
TOP-002-0		R6. Each Balancing Authority and			*FAC-010, FAC-01*

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Wilson		Transmission Operator shall plan to meet unscheduled changes in system configuration and generation dispatch (at a minimum N-1 Contingency planning) in accordance with NERC, Regional Reliability Organization, subregional, and local reliability requirements.			*and FAC-014(?) a out for comment until July 14 that will replace portio of this standard.* *TOP-002 is also currently being modified.* *This standard nee reworded to remo "Regional Reliability Organization, subregional, and local reliability requirements"* *SAR needs written*

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					Included in the SA Ken suggested to remove "in accordance with NERC, Regional Reliability Organization, subregional, and local reliability requirements" fro R6 as it is implied that all requireme must be in accordance with such "requirements".
TOP-004-0 Myers		R3. Each Transmission Operator shall, when practical, operate to			*FAC-010, FAC-01 and FAC-014(?) a*

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		protect against instability, uncontrolled separation, or cascading outages resulting from multiple outages, as specified by Regional Reliability Organization policy.			*out for comment until July 14 that will replace portio of this standard which will remove this particular problem.* *Also, TOP-004-1 i out for comment through July 16 which removes the specific reference.* *No action needed be taken by the RRSWG provided that the present language is approved.*

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TPL-001-0 Millard		R1.3 Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category A of Table 1 (no contingencies). The specific elements selected (from each of the following categories) shall be acceptable to the associated Regional Reliability Organization(s). R3. The Planning Authority and Transmission Planner shall each document the results of these reliability assessments and corrective plans and shall annually provide these to its respective NERC Regional Reliability Organization(s), as required by the			*Superfluous references to RRO do a NERC SAR to remove them and leave it up to regio to add standards i they need them. D TPL-001 through - together. Refer to other project to revise planning standards.* *A standards drafti team has been established to modify TPL-001 thru TPL-004. DW to coordinate with*

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		Regional Reliability Organization.			*Rich Schneider to ensure superfluous references are removed. No actio needed to be taker by the RRSWG at this time.* *Ken suggested tha "The specific elements selected (from each of the following categories) shall b acceptable to the associated Region Reliability Organization(s)" b removed from R1.. Also that " as required by the*

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					Regional Reliabili Organization" be removed from R3.
TPL-002-0 Millard		R1.3 Be supported by a current or past study and/or system simulation testing that addresses each of the following categories,, showing system performance following Category B of Table 1 (single contingencies). The specific elements selected (from each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s). R3. The Planning Authority and Transmission Planner shall each document the results of its Reliability Assessments and corrective plans and shall annually			*A standards drafti team has been established to modify TPL-001 thru TPL-004. DW to coordinate with Rich Schneider to ensure superfluou references are removed. No actio needed to be taker by the RRSWG at this time.*

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		provide the results to its respective Regional Reliability Organization(s), as required by the Regional Reliability Organization.			
TPL-003-0 Millard		R3. The Planning Authority and Transmission Planner shall each document the results of these Reliability Assessments and corrective plans and shall annually provide these to its respective NERC Regional Reliability Organization(s), as required by the Regional Reliability Organization.			*A standards drafti team has been established to modify TPL-001 thru TPL-004. DW to coordinate with Rich Schneider to ensure superfluou references are removed. No actio needed to be taker by the RRSWG at this time.*

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TPL-004-0 Millard		R2. The Planning Authority and Transmission Planner shall each document the results of its reliability assessments and shall annually provide the results to its entities' respective NERC Regional Reliability Organization(s), as required by the Regional Reliability Organization.			*A standards drafti team has been established to modify TPL-001 thru TPL-004. DW to coordinate with Rich Schneider to ensure superfluou references are removed. No actio needed to be taker by the RRSWG at this time.*
TPL-005-0 Odom	Each Regional Reliability Organization shall annually conduct reliability assessments of its respective existing and planned				*Not a fill in the blank.*

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	Regional Bulk Electric System (generation and transmission facilities) for: R 1.1. Current year: R 1.1.1. Winter. R 1.1.2. Summer. R 1.1.3. Other system conditions as deemed appropriate by the Regional Reliability Organization. R 1.2. Near-term planning horizons (years one through five). Detailed assessments shall be conducted. R 1.3. Longer-term planning horizons (years six through ten). Assessment shall focus on the analysis of trends in resources and				*A SAR should be written to remove R1.1.3. The regior can perform any study they so desir without NERC requiring them to so.*

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	transmission Adequacy, other industry trends and developments, and reliability concerns. R 1.4. Inter-Regional reliability assessments to demonstrate that the performance of these systems is in compliance with NERC Reliability Standards TPL-001-0, TPL-002-0, TPL-003-0, TPL-004-0 and respective Regional transmission and generation criteria. These assessments shall also identify key reliability issues and the risks and uncertainties affecting Adequacy and Security.				

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	R2. The Regional Reliability Organization shall provide its Regional and Inter-Regional seasonal, near-term, and longer-term reliability assessments to NERC on an annual basis. R3. The Regional Reliability Organization shall perform special reliability assessments as requested by NERC or the NERC Board of Trustees under their specific directions and criteria. Such assessments may include, but are not limited to: R 3.1. Security assessments. R 3.2. Operational assessments. R 3.3. Evaluations of emergency response preparedness. R 3.4. Adequacy of fuel supply and hydro conditions. R 3.5. Reliability impacts of				

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	new or proposed environmental rules and regulations. R 3.6. Reliability impacts of new or proposed legislation that affects, has affected, or has the potential to affect the Adequacy of the interconnected Bulk Electric Systems in North America.				
TPL-006-0	R1. Each Regional Reliability Organization shall provide, as requested (seasonally, annually, or as otherwise specified) by NERC, system data, including past, existing, and future facility and Bulk Electric System data, reports, and system performance information, necessary to assess				*Not a fill in the blank.* *No action needed be taken by the RRSWG.*

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	reliability and compliance with the NERC Reliability Standards and the respective Regional planning criteria. The facility and Bulk Electric System data, reports, and system performance information shall include, but not be limited to, one or more of the following types of information as outlined below: R 1.1. Electric Demand and Net Energy for Load (actual and projected demands and Net Energy for Load, forecast methodologies, forecast assumptions and uncertainties, and treatment of Demand-Side Management.) R 1.2. Resource Adequacy and supporting information (Regional assessment				

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	reports, existing and planned resource data, resource availability and characteristics, and fuel types and requirements.) R 1.3. Demand-Side resources and their characteristics (program ratings, effects on annual system loads and load shapes, contractual arrangements, and program durations.) R 1.4. Supply-side resources and their characteristics (existing and planned generator units, Ratings, performance characteristics, fuel types and availability, and real and reactive capabilities.) R 1.5. Transmission system and supporting information				

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	(thermal, voltage, and Stability Limits, contingency analyses, system restoration, system modeling and data requirements, and protection systems.) R 1.6. System operations and supporting information (extreme weather impacts, Interchange Transactions, and Congestion impacts on the reliability of the interconnected Bulk Electric Systems.) R 1.7. Environmental and regulatory issues and impacts (air and water quality issues, and impacts of existing, new, and proposed regulations				

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	and legislation.)				