

## Consideration of Comments Violation Risk Factor Criteria Tool

The VRF Criteria Tool Drafting Team thanks all commenters who submitted comments on the proposed Violation Risk Factors (VRF) Criteria and Tool. The VRF Guideline and Tool was posted for a 30-day public comment period from March 23, 2010 through May 7, 2010. The stakeholders were asked to provide feedback on the VRF Guideline Document and Tool through a special Electronic Informal Comment Form. There were 32 sets of comments, including comments from approximately 84 different people from approximately 56 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

[http://www.nerc.com/filez/standards/VRF\\_Criteria\\_Tool.html](http://www.nerc.com/filez/standards/VRF_Criteria_Tool.html)

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 609-452-8060 or at [herb.schrayshuen@nerc.net](mailto:herb.schrayshuen@nerc.net). In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

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

## Index to Questions, Comments, and Responses

1. Do you agree with the need to improve the VRF definitions? .....	8
2. Do you agree with having a more objective, transparent, approach to assigning VRFs? .....	13
3. Does the definition of “Adequate Level of Reliability” as approved by the NERC Operating and Planning Committees provide a sound framework for defining VRFs?.....	18
4. Do you agree with the proposals to have 5 levels of VRF? If not, what is the proper # and why?.....	24
5. With regard to Time Horizons and Risk, is there a material difference in risk between “Operations Planning and Support” and “Operations Assessment” or should they be combined? .....	30
6. Do you agree with the implementation plan?.....	36
7. Do you have comments on the Improved Violation Risk Factors Proposal document? .....	41
8. If you have other comments that you haven’t already provided in response to the first seven questions, please provide them here.....	49

**The Industry Segments are:**

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment											
				1	2	3	4	5	6	7	8	9	10		
1.	Group	Guy Zito	Northeast Power Coordinating Council												X
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10											
2.	Greg Campoli	New York Independent System Operator	NPCC	2											
3.	Roger Champagne	Hydro-Quebec TransEnergie	NPCC	2											
4.	Kurtis Chong	Independent Electricity System Operator	NPCC	2											
5.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1											
6.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1											
7.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10											
8.	Ben Eng	New York Power Authority	NPCC	4											
9.	Brian Evans-Mongeon	Utility Services	NPCC	8											
10.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3											

Group/Individual	Commenter	Organization		Registered Ballot Body Segment											
				1	2	3	4	5	6	7	8	9	10		
11. Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5												
12. Kathleen Goodman	ISO - New England	NPCC	2												
13. David Kiguel	Hydro One Networks Inc.	NPCC	1												
14. Michael R. Lombardi	Northeast Utilities	NPCC	1												
15. Randy MacDonald	New Brunswick System Operator	NPCC	2												
16. Bruce Metruck	New York Power Authority	NPCC	6												
17. Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10												
18. Robert Pellegrini	The United Illuminating Company	NPCC	1												
19. Saurabh Saksena	National Grid	NPCC	1												
20. Michael Schiavone	National Grid	NPCC	1												
2.	Group	Sasa Maljukan	Hydro One		X		X								
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	David Kiguel	Hydro One Networks Inc.	NPCC	NA											
3.	Group	Philip R. Kleckley	SERC Planning Standards Subcommittee		X		X		X						
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Bob Jones	Southern Company Services - Trans.	SERC	1											
2.	David Marler	Tennessee Valley Authority	SERC	1											
3.	Charles Long	Entergy	SERC	1											
4.	James Manning	North Carolina Electric Membership Corporation	SERC	3											
5.	Pat Huntley	SERC Reliability Corporation	SERC	10											
4.	Group	Louis Slade	Dominion		X		X		X	X					
	<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>											
1.	Jack Kerr	Electric Transmission	SERC	1, 3											
2.	Jeff Heffleman	F&H generation - regulated	SERC	5											
3.	Chip Humphrey	F&H generation - unregulated	RFC	5											

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
4. Mike Garton		Electric Market Policy	MRO	5									
5.	Group	Ben Li	ISO/RTO Council Standards Review Committee			X							
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>								
		1. James Castle	NYISO	NPCC	2								
		2. Lourdes Estrada-Saliner	CAISO	WECC	2								
		3. Steve Myers	ERCOT	ERCOT	2								
		4. Al Dicaprio	PJM	RFC	2								
		5. Bill Phillips	MISO	MRO	2								
		6. Matt Goldberg	ISO-NE	NPCC	2								
		7. Mark Thompson	AESP	WECC	2								
		8. Charles Yeung	SPP	SPP	2								
6.	Group	Denise Koehn	Bonneville Power Administration		X		X		X	X			
		<b>Additional Member</b>	<b>Additional Organization</b>		<b>Region</b>	<b>Segment Selection</b>							
		1. Jim Burns	BPA, Transmission Technical Operations		WECC	1							
		2. Tom Gist	BPA, Transmission, CC HW Dsgn/Std Monr & Admin		WECC	1							
		3. Fran Halpin	BPA, Power, Duty Scheduling		WECC	5							
		4. Lorissa Jones	BPA, Transmission Reliability Program		WECC	1							
7.	Group	Kirit Shah	Ameren		X		X		X				
		<b>Additional Member</b>	<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>								
		1. AEM		RFC									
		2. AEGC		RFC									
		3. Ameren Services		SERC									
		4. AER		SERC									
		5. AEM		SERC									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
6. AmerenUE		SERC											
8.	Group	Doug Hohlbaugh	FirstEnergy	X		X	X	X	X				
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>									
1.	Dave Folk	FE	RFC	1, 3, 4, 5, 6									
2.	Rob Martinko	FE	RFC	1, 3, 4, 5, 6									
3.	Sam Ciccone	FE	RFC	1, 3, 4, 5, 6									
9.	Group	Laura Zotter	ERCOT ISO		X								X
<b>Additional Member</b>		<b>Additional Organization</b>	<b>Region</b>	<b>Segment Selection</b>									
1.	Vann Weldon		ERCOT	2, 10									
2.	Steve Myers		ERCOT	2, 10									
10.	Individual	Baj Agrawal	Arizona Public Service Company	X		X		X					
11.	Individual	Brent Ingebrigtsen	E.ON U.S.	X		X		X	X				
12.	Individual	Stephen Mizelle	Southern Company Transmission	X									
13.	Individual	Darryl Curtis	Oncor Electric Delivery LLC	X									
14.	Individual	Steve Alexanderson	Central Lincoln			X							
15.	Individual	Deb Schaneman	Platte River Power Authority	X		X		X					
16.	Individual	Joe O'Brien	NIPSCO	X		X		X	X				
17.	Individual	Kasia Mihalchuk	Manitoba Hydro	X		X		X	X				
18.	Individual	Joe Tarantino	Sacramento Municipal Utility District	X		X	X	X					
19.	Individual	Thad Ness	American Electric Power	X		X		X	X				
20.	Individual	Maggy Powell	Constellation Energy on behalf of parent and affiliate companies: BGE, CPSG, CECG, CNE, CENG & CECD	X		X		X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
21.	Individual	John Blazekovich	Exelon Corporation	X		X		X					
22.	Individual	Jon Kapitz	Xcel Energy	X		X		X	X				
23.	Individual	Scott Barfield-McGinnis	Georgia System Operations Corporation			X	X						
24.	Individual	Ross Kovacs	Georgia Transmission Corporation	X									
25.	Individual	Joylyn Faust	Consumers Energy			X	X	X					
26.	Individual	Donald Williams	PJM Interconnection		X								
27.	Individual	Martin Bauer	US Bureau of Reclamation					X					
28.	Individual	Dan Rochester	Independent Electricity System Operator		X								
29.	Individual	Bill Middaugh	Tri-State Generation & Transmission Assoc., Inc.	X		X							
30.	Individual	Laura Lee	Duke Energy	X		X		X	X				
31.	Individual	Richard Kafka	Pepco Holdings, Inc	X		X		X	X				
32.	Individual	Roger Champagne	Hydro-Québec TransÉnergie (HQT)	X									

**1. Do you agree with the need to improve the VRF definitions?**

**Summary Consideration: (97% voted “yes” and 3% voted “no”: out of the 32 votes, 31 yes votes and 1 no vote)**

Thank you for your comments on the VRF document. Changing the name of VRFs to Violation Impact Factors (VIF) might be confusing to the Industry. The majority of the Industry believes there should be more than 3 levels of VRF.

*We appreciate the comments and support of the Industry*

Summary response to “Yes”: Some Requirements have little to no impact on the BES, and three tiers are not enough to address those standards that skew the low end. The three VRF’s used today cannot be correctly applied to requirements with no risk to the BES. Currently there are only three levels of VRF and the drafting team is told that they can assign low to only administrative items. Thus we are forced to assign a medium VRF even though we think risk to grid is extremely low.

Also, the existing definitions in general are not sufficiently detailed and distinct to ensure appropriate and consistent application of VRFs.

Summary response to “No”: Hydro-Québec TransEnergie (HQT) - We think it is more a matter of better explaining the concept of VRF as being the impact on the BES reliability for not meeting a requirement. It could be renamed to Violation Impact Factor (VIF) to better reflect that fact. The Improved Violation Risk Factors Proposal document is an excellent document to make things clearer but we think three levels of VRF would be sufficient.

*Thank you for your comments on the document. Changing the name of VRFs to Violation Impact Factors (VIF) might be confusing to the Industry.*

*The majority of the Industry believes there should be more than 3 levels of VRF.*

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	Yes	
Hydro One	Yes	We think that the current three tier system is insufficient and their definitions need to be improved

Organization	Yes or No	Question 1 Comment
SERC Planning Standards Subcommittee	Yes	There is definitely a need for more consistency in VRFs between standards.
Dominion	Yes	
ISO/RTO Council Standards Review Committee	Yes	
Bonneville Power Administration	Yes	
Ameren	Yes	
FirstEnergy	Yes	<p>Yes, there is some need to improve the VRF definitions. Some Requirements have little to no impact on the BES, and three tiers are not enough to address those standards that skew the low end. The three VRF's used today cannot be correctly applied to requirements with no risk to the BES.</p> <p>Also, the existing definitions in general are not sufficiently detailed and distinct to ensure appropriate and consistent application of VRFs.</p>
ERCOT ISO	Yes	
Arizona Public Service Company	Yes	The current VRF definitions and the way guidance is provided to the drafting team leaves much to be desired. Currently there are only three levels of VRF and the drafting team is told that they can assign low to only administrative items. Thus we are forced to assign a medium VRF even though we think risk to grid is extremely low.

Organization	Yes or No	Question 1 Comment
E.ON U.S.	Yes	
Southern Company Transmission	Yes	
Oncor Electric Delivery LLC	Yes	
Central Lincoln	Yes	
Platte River Power Authority	Yes	
NIPSCO	Yes	
Manitoba Hydro	Yes	
Sacramento Municipal Utility District	Yes	
American Electric Power	Yes	
Constellation Energy on behalf of parent and affiliate companies: BGE, CPSG, CECG, CNE, CENG & CECD	Yes	
Exelon Corporation	Yes	

Organization	Yes or No	Question 1 Comment
Xcel Energy	Yes	
Georgia System Operations Corporation	Yes	
Georgia Transmission Corporation	Yes	
Consumers Energy	Yes	
PJM Interconnection	Yes	
US Bureau of Reclamation	Yes	
Independent Electricity System Operator	Yes	
Tri-State Generation & Transmission Assoc., Inc.	Yes	
Duke Energy	Yes	
Pepco Holdings, Inc	Yes	
Hydro-Québec TransÉnergie (HQT)	No	We think it is more a matter of better explaining the concept of VRF as being the impact on the BES reliability for not meeting a requirement. It could be renamed to Violation Impact Factor (VIF) to better reflect that fact. The Improved Violation Risk Factors Proposal document is an excellent

Organization	Yes or No	Question 1 Comment
		document to make things clearer but we think three levels of VRF would be sufficient.

**2. Do you agree with having a more objective, transparent, approach to assigning VRFs?**

**Summary Consideration: (All 32 commenters responded “Yes”)**

Summary response to “Yes”: A transparent and repeatable procedure for assigning VRFs to reliability standards requirements is highly desirable. The current approach relies on the expert judgment of the drafting team and is unavoidably influenced by subjectivity. While the proposed VRF tool will not completely eliminate subjectivity, the responses to the controlled set of questions coupled with pre-defined decision rules, should lead to more consistent VRF assignments. The questions in the tool appear to be objective and straight forward.

The VRF Tool is a great approach to achieving the desired objectivity; however, it is not clear how it weights each question and the various responses to each question. The industry should have an opportunity to vet the logic behind the tool. Therefore, the drafting team should publish the tool macros or otherwise explain in the document how the results are derived.

*We appreciate the comments and support of the Industry. The logic used in the tool has been outlined in a flowchart and will be posted along with the revised tool and supporting documents.*

Summary response to “Yes”: No “no” comments.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	Yes	
Hydro One	Yes	We believe that VRFs and VSLs are an integral part of the standard, thus their development should be the responsibility of the drafting teams and should be vetted by the industry
SERC Planning Standards Subcommittee	Yes	
Dominion	Yes	The VRF Tool is a great approach to achieving the desired objectivity; however, it is not clear how it weights each question and the various responses to each question. Playing with the tool reveals

Organization	Yes or No	Question 2 Comment
		<p>some curious results. For example, the current requirement for having a restoration plan carries a “High” VRF but would get a “Low” VRF based upon the results of the VRF Tool (assuming that not having a plan would definitely impede restoration but would not cause cascading, load loss, equipment damage, etc.). The industry should have an opportunity to vet the logic behind the tool. Therefore, the drafting team should publish the tool macros or otherwise explain in the document how the results are derived.</p>
ISO/RTO Council Standards Review Committee	Yes	
Bonneville Power Administration	Yes	
Ameren	Yes	
FirstEnergy		<p>Since application of the VRFs is relative, the more one knows about why/how VRFs were determined the better one can make new VRF assignments. This helps drive consistency throughout the standards and provides documented reasons for why a particular VRF assignment was made. More objectivity is appropriate. However, VRF’s are inherently subjective to some degree and the subjectivity will be difficult to remove even when using a plug-and-chug VRF tool. If not properly designed and sufficiently robust the VRF tool can simply produce bad VRF’s that are merely documented. Also the inner workings of the tool should be better understood within the paper rather than simply a black box. The current tool may be too crude. For example, the proposed tool is based on an individual entity violating one and only one requirement in determining that requirement’s risk to the reliability of the BES. This is fine for some standards such as Vegetation Management. However, for some standards such as the BAL standards the risk to the interconnection, or perhaps more accurately, the probability of occurrence must consider</p>

Organization	Yes or No	Question 2 Comment
		more than one entity violating the requirement at the same time other entities are violating it. Multiple violations elevate the risk to the reliability of the interconnection and should be taken into consideration when determining the VRF.
ERCOT ISO	Yes	
Arizona Public Service Company	Yes	The proposed spreadsheet takes the subjectivness out and VRF's are much more objective and transparent. This is great.
E.ON U.S.	Yes	
Southern Company Transmission	Yes	
Oncor Electric Delivery LLC	Yes	
Central Lincoln	Yes	
Platte River Power Authority	Yes	
NIPSCO	Yes	The questions in the tool appear to be objective and straight forward.
Manitoba Hydro	Yes	
Sacramento Municipal Utility District	Yes	
American Electric Power	Yes	

Organization	Yes or No	Question 2 Comment
Constellation Energy on behalf of parent and affiliate companies: BGE, CPSG, CECG, CNE, CENG & CECD	Yes	
Exelon Corporation	Yes	
Xcel Energy	Yes	
Georgia System Operations Corporation	Yes	
Georgia Transmission Corporation	Yes	
Consumers Energy	Yes	
PJM Interconnection	Yes	
US Bureau of Reclamation	Yes	
Independent Electricity System Operator	Yes	<p>A transparent and repeatable procedure for assigning VRFs to reliability standards requirements is highly desirable. The current approach relies on the expert judgment of drafters and is unavoidably influenced by subjectivity. While the proposed VRF tool will not completely eliminate subjectivity, the responses to the controlled set of questions coupled with pre-defined decision rules, should lead to more consistent VRF assignments. We expect that with time and experience, the list of questions will be refined and improved.</p>

Organization	Yes or No	Question 2 Comment
Tri-State Generation & Transmission Assoc., Inc.	Yes	
Duke Energy	Yes	
Pepco Holdings, Inc	Yes	
Hydro-Québec TransÉnergie (HQT)	Yes	

### 3. Does the definition of “Adequate Level of Reliability” as approved by the NERC Operating and Planning Committees provide a sound framework for defining VRFs?

#### Summary Consideration: (83% voted “yes” and 17% voted “no”: out of the 29 votes, 24 yes votes and 5 no votes)

Summary response to “Yes”: Cost effectiveness is excluded with NERC stating ballots can approve/reject it if participants judge it is not cost effective. Regional difference needs to be factored in here, otherwise the larger communities may put a burden on sparse entities without knowing or bothering about their perspective.

The definition of “Adequate Level of Reliability” appears to have been defined in 2007, why isn’t some reference to the term included in the NERC Glossary of terms? If it is not yet FERC approved, should it be used as the basis for the VRF’s?

The definition of Adequate Level of Reliability specifies that “the System has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times (emphasis added), whereas Risk Outcome 2 incorporates the qualifier of load being dropped on an involuntary or uncontrolled basis. The VRF tool needs to reflect the qualifier; i.e., Question No. 5 should be modified to state “Violating the requirement once could result in involuntary or uncontrolled loss of customer load”.

*The definition of “Adequate Level of Reliability” was created by the NERC Planning and NERC Operating Committees. Changing the definition is outside of the scope of this drafting team. Question 5 was changed based on the comment above.*

Summary response to “No”: The definition of Adequate Level of Reliability is not precise and can only be measured by appropriate metrics for each characteristic. The Planning standard defines Categories of contingencies, such a single contingencies, and multiple contingencies. The definition of what is credible in the adequate reliability definition to the contingencies defined in the Planning standard is not clear. There are similar vague terms in the remaining characteristics which present similar challenges to relating VRF to performance. What is meant by vague terms such as “acceptable limits”, “performs acceptably”, “limits the scope and impact of instability”, “unacceptable damage”, and restoring “promptly”?

The word "Contingency(ies)" is capitalized and not in the NERC Glossary, where is it defined? Most of the characteristics that the BES will possess when adequate reliability is achieved provide a sound framework for defining VRFs. However, it should be clear that, for characteristic #4, the pertinent aspect that provides a sound framework is that facilities are "protected from unacceptable damage." A lack of adequate reliability should not necessarily be based on not being operated "within Facility Ratings." Characteristic #5 should take into account the circumstances of each individual restoration situation. What is considered prompt for a complicated widespread restoration situation may be considered not prompt for a

simple localized restoration situation. For example, "The System's integrity can be restored systematically and timely as defined by procedure as well as safely if it is lost; and".

Also, the use of the BPS definition rather than the NERC definition of BES, while understandable in the context of developing a definition of ALR, perpetuates the contradictions that exist. Further consideration should be given to establishing a stable framework.

Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	Yes	
Hydro One	Yes	
SERC Planning Standards Subcommittee	Yes	
Dominion	No	The six "Characteristics of a System with an Adequate Level of Reliability" that are included in the definition of "Adequate Level of Reliability" are intended to apply to the bulk power system - not to individual requirements in individual standards. In fact, the letter from NERC dated May 8, 2008, which officially transmits the definition to FERC states, "In short, NERC will use the definition as a guide to whether or not the standards, taken as a whole, promote 'an adequate level of reliability.'" It is not appropriate to evaluate the risk associated with individual requirements by using characteristics designed to evaluate the reliability of the overall power system and the effectiveness of the standards "taken as a whole".
ISO/RTO Council Standards Review Committee	Yes	
Bonneville Power	Yes	Cost effectiveness is excluded with NERC stating ballots can approve/reject it if participants judge it

Organization	Yes or No	Question 3 Comment
Administration		is not cost effective. Regional difference needs to be factored in here, otherwise the larger communities may put a burden on sparse entities without knowing or bothering about their perspective.
Ameren	Yes	
FirstEnergy	Yes	It should be one of several considerations.
ERCOT ISO	Yes	
Arizona Public Service Company	Yes	
E.ON U.S.	No	E ON U.S. objects to the sixth characteristic listed in NERC’s definition of “Adequate Level of Reliability,” namely: The System has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times, taking into account scheduled and reasonably expected unscheduled outages of system components. This characteristic relates to the adequacy of the system and not BPS reliability. While NERC does have reporting requirements pursuant to 215(g) related to adequacy assessments, it is inappropriate to develop BPS reliability violation risk factors from this ALR “characteristic.” E ON U.S. believes the other five ALR characteristics provide an appropriate basis from which to develop VRFs for BPS reliability requirements.
Southern Company Transmission	Yes	
Oncor Electric Delivery LLC	Yes	

Organization	Yes or No	Question 3 Comment
Central Lincoln	Yes	
Platte River Power Authority	Yes	
NIPSCO	Yes	The six characteristics seem to cover it.
Manitoba Hydro	No	<p>The definition of Adequate Level of Reliability is not precise and can only be measured by appropriate metrics for each characteristic. For example: "1. The System is controlled to stay within acceptable limits during normal conditions;" - The acceptable limits are defined by individual entities, and generally come in the form of ratings or voltage levels. Metrics need to be defined that relate risk to the system of violation of the acceptable limits. "2. The System performs acceptably after credible Contingencies;" - Acceptable performance relates to meeting the performance criteria in the planning or operating standard. Again the amount of violation of acceptable performance to risk needs to be quantified. The Planning standard defines Categories of contingencies, such a single contingencies, and multiple contingencies. The definition of what is credible in the adequate reliability definition to the contingencies defined in the Planning standard is not clear. There are similar vague terms in the remaining characteristics which present similar challenges to relating VRF to performance. What is meant by vague terms such as "acceptable limits", "performs acceptably", "limits the scope and impact of instability", "unacceptable damage", and restoring "promptly"? The Adequate Level of Reliability is a concept, described by a set of vague characteristics. Metrics are required to define the concept in details before a relationship to VRFs can be defined.</p>
Sacramento Municipal Utility District	Yes	
American Electric Power	Yes	

Organization	Yes or No	Question 3 Comment
Constellation Energy on behalf of parent and affiliate companies: BGE, CPSG, CECG, CNE, CENG & CECD	No	While the concepts and discussion in the Definition of Adequate Level of Reliability document are constructive, this document in may not be a stable reference. The recent Standard Processes Manual revisions moved ALR language to the Reliability Principles. Also, the use of the BPS definition rather than the NERC definition of BES, while understandable in the context of developing a definition of ALR, perpetuates the contradictions that exist. Further consideration should be given to establishing a stable framework.
Exelon Corporation	Yes	
Xcel Energy		
Georgia System Operations Corporation	No	The word "Contingency(ies)" is capitalized and not in the NERC Glossary, where is it defined?  Most of the characteristics that the BES will possess when adequate reliability is achieved provide a sound framework for defining VRFs. However, it should be clear that, for characteristic #4, the pertinent aspect that provides a sound framework is that facilities are "protected from unacceptable damage." A lack of adequate reliability should not necessarily be based on not being operated "within Facility Ratings."Characteristic #5 should take into account the circumstances of each individual restoration situation. What is considered prompt for a complicated widespread restoration situation may be considered not prompt for a simple localized restoration situation. For example, "The System's integrity can be restored systematically and timely as defined by procedure as well as safely if it is lost; and".
Georgia Transmission Corporation	Yes	
Consumers Energy		

Organization	Yes or No	Question 3 Comment
PJM Interconnection	Yes	The definition of “Adequate Level of Reliability” appears to have been defined in 2007, why isn’t some reference to the term included in the NERC Glossary of terms. If it is not yet FERC approved, should it be used as the basis for the VRF’s?
US Bureau of Reclamation		
Independent Electricity System Operator	Yes	Those requirements that directly and most significantly contribute to or, when violated, detract from achieving high levels of reliability, would intuitively be expected to attract higher VRF assignments. As such, using the ALR definition as the basis for assigning VRFs seems appropriate.
Tri-State Generation & Transmission Assoc., Inc.	Yes	
Duke Energy	Yes	The definition of Adequate Level of Reliability specifies that “the System has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times (emphasis added), whereas Risk Outcome 2 incorporates the qualifier of load being dropped on an involuntary or uncontrolled basis. The VRF tool needs to reflect the qualifier; i.e., Question No. 5 should be modified to state “Violating the requirement once could result in involuntary or uncontrolled loss of customer load”.
Pepco Holdings, Inc	Yes	
Hydro-Québec TransÉnergie (HQT)	Yes	

#### 4. Do you agree with the proposals to have 5 levels of VRF? If not, what is the proper # and why?

##### Summary Consideration: (74% voted “yes” and 26% voted “no”: out of the 31 votes, 23 yes votes and 8 no votes)

Summary response to “Yes”: It would be useful if a proposed penalty table with the 5 VRF’s was available for review. The addition of the Administrative level is an especially important enhancement.

The five proposed categories add helpful granularity to the range of risk scenarios. However, additional clarification is needed regarding documentation failures as a lower risk or an administrative risk. Documentation and other administrative items that do not impact reliability should clearly fall in the lowest category.

There seems to be some overlapping between Administrative and Low levels. It seems that the definition for Low Risk contains examples that can easily be perceived as administrative in nature. Consequently, we think that these two VRF levels should be more clearly and distinctly defined or alternatively combined into one.

*It is expected that a penalty table will be presented along with proposed changes to the Rules of Procedure that would be required to enable increasing the number of VRF levels. While we agree there is still some subjectivity in the difference between Administrative and Lower VRFs, the tool will focus drafting teams on a consistent evaluation set and a transparent record that can be evaluated by the Industry.*

Summary response to “No”: Adding two more levels of VRF will only make the process more complicated. The information provided in the Improved Violation Risk Factors Proposal document still permits to continue the use of the three levels of VRF actually in use. High VRF can correspond to Severe; Medium VRF can correspond to High and Medium since the difference between the two is marginal; Lower VRF can correspond to Lower and Administrative.

Although we agree with the Severe, High, Medium, and Low levels, it should be clear that Administrative items are those that are not reliability requirements and within the context of a results-based standard would reside in the Administrative Procedure section as shown in the new "proof of concept" FAC-003-2 standard. As standards evolve to become "Results-Based", no-risk (administrative) "requirements" should be separate from the reliability requirements sections of standards (i.e. Administrative Procedures) and should not be sanctionable with monetary fines for noncompliance.

The addition of an “Administrative” VRF is needed and should be applicable to numerous existing requirements that do not directly affect real time BES reliability. For requirements that directly impact BES reliability - the existing 3 levels of VRFs (High, Medium and Low) are sufficient to delineate

the degree of impact. The type of events listed under “Medium” risk ought to be “Low” and those in “Low” ought to be included in the “Administrative” category.

*The drafting team and the majority of the Industry agree with the approach to use a 5-tier approach to VRFs. There should be no added complexity as the tool will generate the corresponding VRF based on a common set of question. The tool should also enable some of the suggestions in the comments. The Administrative requirements may migrate to the “compliance” section of the standard or an expeditious process may develop around the disposition of Lower Risk and Administrative requirements.*

Organization	Yes or No	Question 4 Comment
Northeast Power Coordinating Council	Yes	
Hydro One	Yes	There seems to be some overlapping between Administrative and Low levels. It seems that the definition for Low Risk contains examples that can easily be perceived as administrative in nature. Consequently, we think that these two VRF levels should be more clearly and distinctly defined or alternatively combined into one.
SERC Planning Standards Subcommittee	Yes	
Dominion	No	There is a need for a fourth, “Administrative”, level to apply to the misdemeanor requirements. However, it is difficult to imagine a non-hypothetical, individual requirement that would, on its own merits, qualify for a “Severe” designation based upon a single violation.
ISO/RTO Council Standards Review Committee	Yes	
Bonneville Power	Yes	

Organization	Yes or No	Question 4 Comment
Administration		
Ameren	Yes	
FirstEnergy	No	<p>Although we agree with the Severe, High, Medium, and Low levels, it should be clear that Administrative items are those that are not reliability requirements and within the context of a results based standard would reside in the Administrative Procedure section as shown in the new "proof of concept" FAC-003-2 standard. As standards evolve to become "Results Based", no-risk (administrative) "requirements" should be separate from the reliability requirements sections of standards (i.e. Administrative Procedures) and should not be sanctionable with monetary fines for noncompliance. A VRF by definition implies there is some level of risk to the BES, however, for truly administrative items it should be understood that there is NO risk. If there are "Administrative-Type" requirements that could have some impact on the BES, they should not be called Administrative, and should be called something else i.e. "Minor" VRF or some other appropriate term that is between Lower and Administrative.</p>
ERCOT ISO	Yes	
Arizona Public Service Company	Yes	We have been advocating 5 levels for a long time. This is an excellent idea.
E.ON U.S.	No	<p>The addition of an "Administrative" VRF is needed and should be applicable to numerous existing requirements that do not directly affect real time BES reliability. For requirements that directly impact BES reliability - the existing 3 levels of VRFs (High, Medium and Low) are sufficient to delineate the degree of impact. The type of events listed under "Medium" risk ought to be "Low" and those in "Low" ought to be included in the "Administrative" category</p>

Organization	Yes or No	Question 4 Comment
Southern Company Transmission		
Oncor Electric Delivery LLC	Yes	
Central Lincoln	Yes	Three levels do not adequately address the range of possible risk.
Platte River Power Authority	Yes	
NIPSCO	Yes	This increased granularity is needed.
Manitoba Hydro	Yes	It would be useful if a proposed penalty table with the 5 VRF's was available for review.
Sacramento Municipal Utility District	Yes	
American Electric Power	No	We like the addition of "administrative" VRF, but we think adding "severe" not necessary. To summarize, add a fourth category for "administrative" and keep the existing levels. In addition we support the concept of the "Traffic ticket" approach for "administrative" and possibly "low" VRFs.
Constellation Energy on behalf of parent and affiliate companies: BGE, CPSG, CECG, CNE, CENG & CECD	Yes	The five proposed categories add helpful granularity to the range of risk scenarios. However, additional clarification is needed regarding documentation failures as a lower risk or an administrative risk. Documentation and other administrative items that do not impact reliability should clearly fall in the lowest category.
Exelon Corporation	Yes	

Organization	Yes or No	Question 4 Comment
Xcel Energy	No	5 seems too many. The stated desire was to have a pyramid shape, but with the current number the distribution is quite flat. We suggest combining some of the lower levels.
Georgia System Operations Corporation	No	Requirement that are procedural or administrative in nature should not be "reliability requirements." NERC should appropriately have rules and procedures that have entities submit information or documentation for analysis and administrative purposes. These should not be in the "Mandatory and Enforceable Sections of a Standard" described in the recent draft of the Standards Processes Manual. It does not meet the definition of "Reliability Standard" included in the Energy Policy Act of 2005. Violating an administrative requirement should not be a violation of a Reliability Standard. However, having a level called "Diminished Risk" or something similar for reliability requirements that have a diminished risk based on Risk Probability or Time Horizon should be created. We support 5 levels with Severe (as described in the concepts paper) and Diminished as described here added to the existing 3 levels.
Georgia Transmission Corporation	Yes	
Consumers Energy	Yes	The five levels allow entities a more descriptive process of categorizing risk.
PJM Interconnection	Yes	
US Bureau of Reclamation	No	The concept of improving the definition is welcomed; however, most of the levels are not related to true reliability impacts rather they appear to be based on an attempt to force compliance with a requirements which reflect an ultimate good thing not from a perspective that would "preserve service to load". Failure to coordinate and maintain protective relaying systems on critical BES facilities. It is not reasonable that failure to coordinate would result in the interconnection one credible contingency away from cascading, uncontrolled separation, or instability. The

Organization	Yes or No	Question 4 Comment
		determination of one contingency away is not known to all reliability entities. The ability to make this determination is very vague. Likewise it is difficult to see how a failure to conduct an operational assessment can have a moderate impact on reliability of the BES. Reliability of the BES is an operational condition. Unless it can be demonstrated that the assessment results in a direct impact on the hourly operation of the BES it is not a reliability issue.
Independent Electricity System Operator	Yes	
Tri-State Generation & Transmission Assoc., Inc.	Yes	
Duke Energy	Yes	The addition of the Administrative level is an especially important enhancement.
Pepco Holdings, Inc	Yes	
Hydro-Québec TransÉnergie (HQT)	No	Adding two more levels of VRF will only make the process more complicated. The information provided in the Improved Violation Risk Factors Proposal document still permit to continue the use of the three levels of VRF actually in use. High VRF can correspond to Severe; Medium VRF can correspond to High and Medium since the difference between the two is marginal; Lower VRF can correspond to Lower and Administrative.

**5. With regard to Time Horizons and Risk, is there a material difference in risk between “Operations Planning and Support” and “Operations Assessment” or should they be combined?**

**Summary Consideration: (75% voted yes and 25% voted no: out of the 28 votes, 21 yes votes and 7 no votes)**

Summary response to “Yes”: There is a difference; they should not be combined.

Although, Operations Assessment is related to Real-time operations, its risk (and any probability assigned in the VRF Tool) is less than Operations Planning and Support. Operations Planning and Support is forward looking, such as Next Day studies, and is more important than Operations Assessment which is more backward looking.

The Time Horizon names and descriptions in the document differ from the ones posted on the “Resource Documents” page of the NERC website. We believe these should be the same. Assuming that they are intended to be the same, we note from the Resource Documents posting that the Time Horizons have an additional purpose - they are used as a factor in determining the size of a sanction.

There is a difference between these two time horizons. One may be a subset of the other might be overlapping depending on the requirement involved but we still believe that it is beneficial to keep them separated.

*The VRF Tool was modified based on Industry comments to separate the “Operations Assessment” and “Operations Planning” Time Horizons. The weightings of these Time Horizons in the tool were modified to reflect the higher risk associated with the Operations Planning Time Horizon.*

Summary response to “No”: Thank you for your support.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	Yes, there is a difference; they should not be combined	There is a difference, however, the “operations assessment” Time Horizon is an after-the-fact, post mortem Time Horizon which should be considered no “risk.” The “risk” would be to not addressing mitigation actions necessary or expected resulting from such after-the-fact assessments.

Organization	Yes or No	Question 5 Comment
Hydro One	Yes, there is a difference; they should not be combined	We believe that there is a difference between these two time horizons. One may be a subset of the other might be overlapping depending on the requirement involved but we still believe that it is beneficial to keep them separated.
SERC Planning Standards Subcommittee	No, there is not a difference; they should be combined	Followup evaluations would take place in the time horizon of next day up to one year. There should be no distinction between Operations Assessment and Operations Planning and support.
Dominion	Yes, there is a difference; they should not be combined	
ISO/RTO Council Standards Review Committee	Yes, there is a difference; they should not be combined	There can be a difference; the “operations assessment” Time Horizon sometimes is an after-the-fact, post mortem Time Horizon which should be considered no “risk.” The “risk” would be to not addressing mitigation actions necessary or expected resulting from such after-the-fact assessments.
Bonneville Power Administration	Yes, there is a difference; they should not be combined	There is a difference. Based on what the Improved VRF doc says, (Improved_VRF_Definitions_2010March22.pdf, p9) "Operations Assessment" deals with follow-up of things that have happened and "Operations Planning and Support" deals with things that are going to happen. That's a very distinct difference that should be retained.
Ameren	Yes, there is a difference; they should not be combined	
FirstEnergy	Yes, there is a difference; they should not be combined	Operations Planning and Support is a forward looking process, while Operations Assessment is an after-the-fact activity. Perhaps the time horizons should be just

Organization	Yes or No	Question 5 Comment
		that, time related and not the mixture of time and activity related that we have today. Time related Time Horizons such as Real-time, Operating Day, Day Prior to Operating Day, After-the-Fact, and Future would be easier to apply.
ERCOT ISO	Yes, there is a difference; they should not be combined	The Operations Planning and Support horizon leads up to the Same Day and Real-Time horizons and therefore may offer some time to plan and take mitigating actions. The Operations Assessment is described in the proposal as “follow up evaluations and reporting”, which is after real-time. These are clearly different levels of risk.
Arizona Public Service Company	No, there is not a difference; they should be combined	We do not believe that the risks are substantially different for Operations assessment and Operations planning support (next day to one year).
E.ON U.S.	No, there is not a difference; they should be combined	<p>According to the VRF Proposal document, Operations Assessment is after the fact (ATF) and reports on or evaluates real time operations. Operations Planning and Support is forward looking./ Therefore, yes - there seems to be a very material difference in risk; and no - the two should not be combined.</p> <p>Violation of an Operations Planning requirement (especially a next day requirement) would seem to be a much greater threat to BES reliability than an Operations Assessment violation. Is the violation of an Operations Assessment requirement a threat to BES reliability?</p> <p>It seems that the portion of the Operations Assessment definition “and reporting of real time operations” should be moved from the Operations Assessment definition to the Real-Time definition. A better definition of Operation Assessment would be:            Operations Assessment: Follow up evaluations of real time operations and appropriate reporting of the assessment.</p>

Organization	Yes or No	Question 5 Comment
Southern Company Transmission		
Oncor Electric Delivery LLC	Yes, there is a difference; they should not be combined	
Central Lincoln		No opinion.
Platte River Power Authority	Yes, there is a difference; they should not be combined	
NIPSCO	Yes, there is a difference; they should not be combined	
Manitoba Hydro	No, there is not a difference; they should be combined	
Sacramento Municipal Utility District	No, there is not a difference; they should be combined	
American Electric Power	Yes, there is a difference; they should not be combined	
Constellation Energy on behalf of parent and affiliate companies: BGE, CPSG, CECG, CNE, CENG	No, there is not a difference; they should be combined	They are not the same, but one naturally follows the other. If properly worded, these two could be combined.

Organization	Yes or No	Question 5 Comment
& CECD		
Exelon Corporation	Yes, there is a difference; they should not be combined	
Xcel Energy		
Georgia System Operations Corporation	Yes, there is a difference; they should not be combined	Performing Operations Assessments (evaluations and reports) after the fact is not a reliability requirement - it is administrative. In addition, if post analysis assessments were not performed there is very little risk (if any) to the integrity of the BES. Not performing "Operations Planning and Support" could have a much higher risk to the reliability of the BES.
Georgia Transmission Corporation	Yes, there is a difference; they should not be combined	
Consumers Energy		
PJM Interconnection	Yes, there is a difference; they should not be combined	Although, Operations Assessment is related to Real-time operations, its risk (and any probability assigned in the VRF Tool) is less than Operations Planning and Support. However, the main question is why should the Operations Assessment Time Horizon be considered. Provide an explanation where the need for an Operations Assessment based on follow-up activities should be considered in the Reliability Standards.
US Bureau of Reclamation	Yes, there is a difference; they should not be combined	Not sure why the question was asked one have been defined as "Follow-up evaluations and reporting of real time operations" and the other as "From next-day up to one year". This raises the issue that the Time Horizons do not help with non planning or operations functions such as maintenance tasks. Maintenance tasks are

Organization	Yes or No	Question 5 Comment
		not follow-up evaluations or reporting of real time operations. Time horizons should be modified to be applicable to all standards.
Independent Electricity System Operator	Yes, there is a difference; they should not be combined	The Time Horizon names and descriptions in the document differ from the ones posted on the “Resource Documents” page of the NERC website. We believe these should be the same. Assuming that they are intended to be the same, we note from the Resource Documents posting that the Time Horizons have an additional purpose - they are used as a factor in determining the size of a sanction. Reducing the granularity of the Time Horizons by consolidating these two categories could therefore expose registered entities to higher penalties, if found in violation of certain requirements.
Tri-State Generation & Transmission Assoc., Inc.	Yes, there is a difference; they should not be combined	
Duke Energy	Yes, there is a difference; they should not be combined	Operations Planning and Support is forward looking, such as Next Day studies, and is more important than Operations Assessment which is more backward looking.
Pepco Holdings, Inc	No, there is not a difference; they should be combined	
Hydro-Québec TransÉnergie (HQT)	Yes, there is a difference; they should not be combined	There is a difference, however, the “operations assessment” Time Horizon is an after-the-fact, post mortem Time Horizon which should be considered no “risk.” The “risk” would be to not addressing mitigation actions necessary or expected resulting from such after-the-fact assessments.

**6. Do you agree with the implementation plan?**

**Summary Consideration: (68% voted “yes” and 32% voted “no”: out of the 28 votes, 19 yes votes and 9 no votes)**

Summary response for “Yes”: The implementation plan is aggressive but sooner the better. This way we can use these new VRF definitions on standards which are currently being commented on.

*Thank you for your support.*

Summary response for “No”: Since it is unclear how much testing was previously done and the results of that testing were not made public, there should be another opportunity to “update document and tool” after results of drafting team field testing are made public. It is unclear if the changes that will be proposed to the Rules of Procedure are limited to modifications required to allow for five tier VRF. The Implementation Plan is unclear when and how VRFs will be assigned to current standards that do not have VRF’s assigned yet, i.e. MOD Standards.

It is not clear how this new VRF Tool and 5-tier approach will be implemented throughout the existing and new standards being developed. Also, per the timeline presented in the document, it is not clear if industry will be allowed to vote on this new tool and criteria.

*The drafting team and the vast majority of the Industry are supportive of this new approach. The document and VRF tool will be publicly posted. Changes can be suggested through the Standards Committee as with their other references and resources.*

*The Industry will also have the opportunity to comment and voice their support or disapproval when changes are ultimately proposed to the Rules of Procedure (which are required to add additional VRF levels).*

Organization	Yes or No	Question 6 Comment
Northeast Power Coordinating Council		We did not find any implementation plan posted with the materials.
Hydro One	Yes	
SERC Planning Standards	Yes	

Organization	Yes or No	Question 6 Comment
Subcommittee		
Dominion	No	The implementation plan seems optimistic given the newness of the concept and the lack of information about the tool logic. There is more work to be done.
ISO/RTO Council Standards Review Committee		We did not find any implementation plan posted with the materials.
Bonneville Power Administration	Yes	
Ameren	Yes	
FirstEnergy	No	It is not clear how this new VRF Tool and 5-tier approach will be implemented throughout the existing and new standards being developed. Also, per the timeline presented in the document, it is not clear if industry will be allowed to vote on this new tool and criteria.
ERCOT ISO	No	We recommend piloting by the SDTs in order to provide more feedback beyond previous testing efforts. Real world application is appropriate at this time for further input and tweaking of the tool, but mandating use at this point may be premature. The tool is an excellent improvement toward consistent VRFs.
Arizona Public Service Company	Yes	The implementation plan is aggressive but sooner the better. This way we can use these new VRF definitions on standards which are currently being commented on.
E.ON U.S.	No	There is no implementation plan posted.
Southern Company		

Organization	Yes or No	Question 6 Comment
Transmission		
Oncor Electric Delivery LLC	Yes	
Central Lincoln	Yes	
Platte River Power Authority	Yes	
NIPSCO	Yes	
Manitoba Hydro	Yes	
Sacramento Municipal Utility District	Yes	
American Electric Power	Yes	
Constellation Energy on behalf of parent and affiliate companies: BGE, CPSG, CECG, CNE, CENG & CECD	No	It seems more realistic to target July 2010 to obtain SC endorsement. This will allow for more insight from the drafting team field tests.
Exelon Corporation	Yes	
Xcel Energy	Yes	
Georgia System Operations Corporation		

Organization	Yes or No	Question 6 Comment
Georgia Transmission Corporation	Yes	
Consumers Energy	Yes	
PJM Interconnection	No	<p>1) Since it is unclear how much testing was previously done and the results of that testing were not made public, there should be another opportunity to “update document and tool” after results of drafting team field testing are made public.</p> <p>2) It is unclear if the changes that will be proposed to the Rules of Procedure are limited to modifications required to allow for five tier VRF.</p> <p>3) The Implementation Plan is unclear when and how VRFs will be assigned to current standards that do not have VRF’s assigned yet, i.e. MOD Standards.</p> <p>4) The Implementation Plan is unclear when and how VRFs will be assigned to current standards that already have 3 tier VRF’s assigned i.e. at the next standard review cycle or SAR work.</p>
US Bureau of Reclamation	No	There should be another Webex and formal comment period to review changes to the tool which resulted from the comments.
Independent Electricity System Operator	No	Please clarify what guidance will be given to drafting teams issued with the tool for continued field tests. Will their judgment predominate by default in instances where their VRF assignment differs with that produced by the tool?
Tri-State Generation & Transmission Assoc., Inc.	Yes	
Duke Energy	No	The implementation plan seems very aggressive - what is the reason for this time frame? It is not

Organization	Yes or No	Question 6 Comment
		clear from the implementation plan how NERC will move from the currently approved VRFs to the new VRFs to achieve the desired consistency and granularity provided by the tool, especially if the decision is to use more than three VRFs.
Pepco Holdings, Inc	Yes	
Hydro-Québec TransÉnergie (HQT)	Yes	

**7. Do you have comments on the Improved Violation Risk Factors Proposal document?**

**Summary Consideration: (58% voted “yes” and 42% voted “no”: out of the 31 votes, 18 yes votes and 13 no votes)**

Summary response “Yes”: The definition of “Adequate Level of Reliability” appears to have been defined in 2007, why isn’t some reference to the term included in the NERC Glossary of terms. If it is not yet FERC approved, should it be used as the basis for the VRF’s? The term Contributing Risk Probability should be defined further. More explanation and transparency should be given in the Proposal document or VRF Tool Instructions on the basis of how the nine questions in the VRF Tool were chosen and how the VRF Tool takes the answers to these questions into account to determine the VRF. Although there is some embedded-user-bias in answering the questions, in the hands of an SME it is as good as anything can be, and is at least consistent.

The document briefly mentions Violation Severity Levels, and even though they are not the subject of the document under review, this is a good opportunity to address the ongoing confusion and controversy in the industry caused by applying a “Severe” VSL to binary requirements that have little or no risk associated with them. The connotation of the word “severe” is what many people object to in reviewing and commenting upon proposed VSLs for binary requirements. The Standards Committee should consider developing a new set of VSLs that would apply solely to binary requirements and would consist simply of “Pass” or “Fail”.

*The definition of “Adequate Level of Reliability” (ALR) was created by the NERC Planning and NERC Operating Committees. Changing the definition is outside of the scope of this drafting team.*

*The questions are based directly on the definition of ALR.*

*Addressing VSLs is outside of the scope of this drafting team.*

Summary response “No”: There were no comments.

Organization	Yes or No	Question 7 Comment
Northeast Power Coordinating Council	No	

Organization	Yes or No	Question 7 Comment
Hydro One	No	
SERC Planning Standards Subcommittee	No	
Dominion	Yes	The document briefly mentions Violation Severity Levels, and even though they are not the subject of the document under review, this is a good opportunity to address the ongoing confusion and controversy in the industry caused by applying a “Severe” VSL to binary requirements that have little or no risk associated with them. The connotation of the word “severe” is what many people object to in reviewing and commenting upon proposed VSLs for binary requirements. The Standards Committee should consider developing a new set of VSLs that would apply solely to binary requirements and would consist simply of “Pass” or “Fail”.
ISO/RTO Council Standards Review Committee	No	
Bonneville Power Administration	Yes	Nice improvement. Believe it was a good thing to recognize how skewed the VRFs became. There was confusion between importance and risk during VRF development and “legaleze” issues. Too much administrative burden was added with the numerous standards.
Ameren	Yes	Although there is some embedded-user-bias in answering the questions, in the hands of an SME it is as good as anything can be, and is at least consistent.
FirstEnergy	Yes	The Improved Violation Risk Factors Proposal document sites a statement from Industrial Accident Prevention by H. Heinrich published in 1959 by McGraw Hill, London that states, "Accident theory has found that the distribution of contributing events to mishaps follows a pyramid shape, where there are relatively few medium risk actions (or omissions) compared to low risk items, and even

Organization	Yes or No	Question 7 Comment
		<p>fewer high risk items." This statement needs more explanation. Taken alone, as done in this document, this citing may lead the reader to assume that the performance of one or more low risk actions leads to the majority of accidents. If this document is going to be used as a way to communicate the concept of VRFs, more information on this work is needed including specific examples. Additionally, a single reference to one study performed in 1959 does not necessarily justify the need for a pyramid shape in the electric reliability standards. The wording in the document needs better correlation with the VRF Tool so that the reader may have a better understanding of the inner workings of the VRF tool such that the tool is not merely a "black box". Also, the document's description of load loss being involuntary or on an uncontrolled basis is not reflected in the tool Question 5. We suggest rewording Question 5 in the tool to state "Violating the requirement once could lead to involuntary or uncontrolled loss of customer load." The Improved Violation Risk Factors Proposal document uses an odd example in the Relationship to Violation Severity Levels in an attempt to explain the difference between VRFs and VSLs. It states, "Driving 5 mph over the speed limit is not as severe as going 30 mph over the limit. Speeding carries a greater risk than a parking infraction. Going through a red light or a railroad semaphore carries a greater risk than speeding. A violation can be severe (being 30 days late paying a ticket) without posing a significant risk." It is odd that this example is used because this leads the reader to make the same error that this document is trying to avoid. The first sentence demonstrates very well what a VSL is. Then the risk comparisons are introduced without any discussion on how risk is not related to Violation Severity. More discussion is necessary to lead the reader in the direction that you are trying to take them. The various traffic examples provided also may miss the point of trying to disassociate risk (VRF) from severity (VSL). The example of driving 5 mph over versus 30 mph is really a VSL issue and not a matter of risk (VRF) per se. We suggest the following text: "Its important to differentiate between risk (VRF) and violation severity (VSL). Speeding on a rural highway (Rt. 66), on a busy urban section of an interstate (I-75) or through a school zone each pose various levels of risks (VRF). Whereas speeding at a rate of 10%, 20%, 30% or 40% over the posted speed limit in each represents varying degrees of violation severity (VSL) that could be consistently</p>

Organization	Yes or No	Question 7 Comment
		applied to each." A parking infraction may carry little risk, unless done in front of a fire hydrant. If this document is going to be used as a way to communicate the concepts of VRF and VSL, more work is needed on this section and specifically the examples used.
ERCOT ISO	Yes	<p>1. If Standards are by nature pre-filtered identifiers of risk, is it appropriate to assume that there are many standards that are of little or no risk? Is it appropriate to set a goal for the distribution of VRFs into a particular pattern? While accident theory may provide one avenue or perspective, the rule of standard deviation could lead back to the barrel shape distribution. We recommend removal of page 2 of the Risk Discussion section and posting it as a separate reference.</p> <p>2. On page 2 of the Risk Discussion section, the Figure 2 that describes the present and theoretical distribution needs to be updated to reflect the 5-tier approach.</p> <p>3. The Implementation Plan section needs to be posted separately, since it is reference information.</p>
Arizona Public Service Company	Yes	Excellent work. The team is to be commended.
E.ON U.S.	Yes	Several of the VRF examples provided are vague or belong in the Administrative VRF level - for example: "Failure to provide data or documents (excludes data needed for real-time operations) within a specified date" and "Failure to develop a database". If the Severe VRF is included, most of the VRF examples provided in the document should be lowered 1 level
Southern Company Transmission	Yes	
Oncor Electric Delivery LLC	No	

Organization	Yes or No	Question 7 Comment
Central Lincoln	No	
Platte River Power Authority	No	
NIPSCO	Yes	It would be nice to see a draft Penalty \$ Matrix for the new 5 VRF levels.
Manitoba Hydro	No	
Sacramento Municipal Utility District	No	
American Electric Power	Yes	AEP does not necessarily endorse the example risk factors. For example some of the “Lower” risk factors appear to be “administrative” in nature.
Constellation Energy on behalf of parent and affiliate companies: BGE, CPSG, CECG, CNE, CENG & CECD	Yes	The risk outcomes are well structured and well categorized; however, #s 3, 4 and 5 need additional clarification. Specifically:3 - “components” and “damaged” are too broad4 - What constitutes “restoration”?5 - “negatively impacted” needs some level of magnitude associated.  Also, the time horizons section should include remedial time frames to provide framework and consistency.
Exelon Corporation	No	
Xcel Energy	No	
Georgia System Operations Corporation	Yes	Risk should not be based only on the factors described in this document. Risk should also be based on voltage, customer density, and other situational aspects of a violation. This will probably require a revision of penalty sanctions principals and not just the method of setting VRFs. There should be

Organization	Yes or No	Question 7 Comment
		<p>another dimension to setting penalties that is situational.</p> <p>The current concept of a VRF could be called a "worst-case theoretical risk factor." It is not the real risk of any one particular violation. There should also be a concept of a "situational risk factor" based on the particular risks of the violation (based on voltage level, customer density, time of day, size of the system, etc.). For example, could work have been performed "off-peak" rather than "on-peak" where the system would have more of an operational cushion should a contingency occur.</p>
Georgia Transmission Corporation	Yes	<p>In the Improved Violation Risk Factors Proposal document, it would be useful to provide guidance on the question "Violating this requirement would contribute to violating another requirement with a higher VRF". Instructions stating that this question is not intended to cause a series of higher VRFs (e.g., R2 is raised because it would contribute to violating R1, does not mean that R3 should be raised simply because R2 was raised for its contribution to R1).</p>
Consumers Energy		
PJM Interconnection	Yes	<p>7.1. The definition of "Adequate Level of Reliability" appears to have been defined in 2007, why isn't some reference to the term included in the NERC Glossary of terms. If it is not yet FERC approved, should it be used as the basis for the VRF's?</p> <p>7.2. The term Contributing Risk Probability should be defined further.</p> <p>7.3. More explanation and transparency should be given in the Proposal document or VRF Tool Instructions on the basis of how the nine questions in the VRF Tool were chosen and how the VRF Tool takes the answers to these questions into account to determine the VRF.</p> <p>7.4. The Proposal page 5 explains that VRF's are based on three factors, but it appears that a fourth factor is used in questions 7-9. The basis of this factor and the yes/no answers should be explained.</p>

Organization	Yes or No	Question 7 Comment
		<p>7.5. Can a table, matrix, or other detail be included on how the different questions and answers are weighting?</p> <p>7.6. The Proposal page 5 discusses the Risk Outcomes which do line-up with the first five VRF questions. While the six characteristics of a system that has achieved an “adequate level of reliability” appear to be combined into the first four Risk Outcomes in the Proposal on page 5, how did the fifth Risk Outcome- “The reliability of another entity has been negatively impacted” get included.</p> <p>7.7. The Risk Probabilities are used as the answers to the five Risk Outcome questions. The Risk Probabilities terms are discussed in the Proposal page 5 and are similar to the terms in the VRF Tool: High-Definitely; Potential-Possibly; Contributing-If other contingencies of standards violations occurred; and is Not Likely. What probability is assigned to each term? Is Not Likely 0% or 10%?</p> <p>7.8. The Time Horizon factor is included in the VRF Tool question 6. However, the time horizon of Operations Assessment is not included separately. How is the Time Horizon risk quantified?</p>
US Bureau of Reclamation	No	
Independent Electricity System Operator	Yes	<p>Refer to page 6, sub-section headed “Severe Risk” - The first paragraph states “A severe risk... in real-time...”. This suggests that only those requirements that are assigned to the Real-time Time Horizon can be assigned a severe VRF. Please clarify.</p> <p>Refer to page 6, sub-section headed “Severe Risk” - The first paragraph ends “...or other severe risk outcomes.” This phrase seems inconsistent with the rest of that sentence and requires some clarification in our view.</p>
Tri-State Generation & Transmission Assoc., Inc.	No	

Organization	Yes or No	Question 7 Comment
Duke Energy	Yes	Overall this document is well written, especially the explanations of risk being probability as well as consequence, and the difference between VRFs and VSLs. However, the wording of the document does not seem to be clearly linked to the outcome of the tool. For example if the questions are answered in the tool for a requirement that states “the system shall be planned such that studies in the planning horizon show that any single contingency will not cause a cascading failure” (i.e., questions No. 1 and No. 5 are answered definitely, the rest are Not likely or No, and the Time horizon is Long Term Planning) the VRF comes out severe. This result is not consistent with the description of Severe Risk in the Violation Risk Factors section of the document. The text and the examples indicate that Severe Risk is associated with real time operations. The Severe Risk result in this planning horizon example is not appropriate because there should be time to remedy the deficiency creating the possibility of future cascading.
Pepco Holdings, Inc	Yes	This is much appreciated and needed. This guidance to drafting teams should lead to grater consistency and meaning.
Hydro-Québec TransÉnergie (HQT)	Yes	See our answer to Q1 and Q4. As per our comment, the document should be modified to proposed only three levels of VRF.

**8. If you have other comments that you haven't already provided in response to the first seven questions, please provide them here.**

**Summary Consideration: General comments:**

Test number five in the tool is inappropriate. The non-cascading loss of customer load is not addressed by the proposal document, and is not addressed by the NERC definition of "adequate level of reliability", or by the Rules of Procedure. The question of rates versus customer service is best addressed by the state or local commissions and boards organized for these tasks, not by NERC or the regional entities. Test number 9 is likewise inappropriate. Since an entity in violation of the requirement in question will likely be audited simultaneously for the related higher level requirement, the effect is to jeopardize the entity twice for violating the higher level requirement.

The logic behind the tool needs to be shared with the industry for us to be able to adequately evaluate whether or not the results are correct. The VRF Tool Instructions state "The drafting team may choose a different VRF, but should justify its reasoning in the "Drafting Team Notes". It will be difficult to provide this justification if the logic behind the tool is not clearly documented. There should be a technical reference guide provided.

The Time Horizons are unclear as to how they would be applied. For example, would a relay that is overdue for testing by one month be considered a Real-Time horizon? How about an error in a FAC-009 posting? It still seems like Severe and High VRF levels could artificially be expanded, defeating the attempts to better represent the real problems brought up in the "Risk Discussion" section.

*The definition of "Adequate Level of Reliability" (ALR) was created by the NERC Planning and NERC Operating Committees. Changing the definition is outside of the scope of this drafting team.*

*The loss of customer load is part of the definition of ALR "The System has the ability to supply the aggregate electric power and energy requirements of the electricity consumers at all times..,"*

*Question 9 is directly related to guidance provided by the FERC with regard to assigning VRFs.*

*A flowchart with the tool's logic has been developed and is available.*

*With regard to application of Time Horizons, it is up to the drafting team to first assign Time Horizons. The tool is applied thereafter. We agree there is still some subjectivity in answering the questions in the tool, still the common questions and transparency should increase the quality of the VRFs.*

Organization	Yes or No	Question 8 Comment
Northeast Power Coordinating Council		
Hydro One		<p>This tool is a definite improvement compared to the two previous versions. Questions are clearer and better defined. In addition to this, we still have a problem with some of the answers from the menu. “Possibly” and “If other contingencies or standards violations occurred” very often seem one and the same, interchangeable and hard to distinct. Maybe it would help if these answers are defined with some examples in the supporting literature.</p>
SERC Planning Standards Subcommittee		<p>The spreadsheet tool seems like a very good approach. The comments expressed herein represent a consensus of the views of the above named members of the SERC Engineering Committee Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.</p>
Dominion		<p>1) There is an inconsistency between the Improved Violation Risk Factors Proposal Document and the VRF Tool. Specifically, the third paragraph on the fourth page of the document states that, “. . . evaluation of VRFs should be done assuming no other requirement is violated”; however, one of the selectable answers to several of the questions used in the tool to evaluate VRFs is, “If other contingencies or standards violations occur”. It appears that the tool allows the assumption that other requirements are violated in its evaluation of VRFs contrary to what the document says. 2) Question 8 of the tool states, “The requirement is performance-based (rather than procedural or explanatory)” and allows for only a yes/no response. This does not align well with the philosophy articulated in the Results-based Reliability Standards Initiative. Specifically, results-based standards are not limited to just performance-based requirements. Instead, they can, and should, include risk-based requirements and capability-based requirements. Question 8 and its allowed responses should be expanded to address all types of results-based requirements.3) Question 9 of the tool states, “Violating this requirement would contribute to violating another requirement with a higher</p>

Organization	Yes or No	Question 8 Comment
		<p>VRF". This question cannot be answered without knowing what the VRF of the requirement being evaluated is. This question should be asked only after the tool has provided its recommended VRF based upon the answers to the other questions. Otherwise, the person using the tool must make a subjective, personal determination of what the VRF should be before question 9 can be answered. Subjective, personal determinations are what the tool is supposed to eliminate.</p>
<p>ISO/RTO Council Standards Review Committee</p>		
<p>Bonneville Power Administration</p>		<p>We think this is a step in the right direction to help determine which factors provide the greatest risk to the Bulk Electric System. We agree that just because something is important, it doesn't necessarily equate to a high or severe VRF level. We also believe that previously too much administrative burden was added to numerous standards on items less important to day-to-day operations. Reduce sanctionable items down by a significant percentage. Money should have been spent on infrastructure instead of documentation and penalizing of such document errors.</p> <p>As for the VRF tool, it worked OK but it is subjective and is simple enough that it can easily be figured out which answers to give to get some desired result - i.e. - to steer the tool toward a desired rating.</p>
<p>Ameren</p>		<p>It looks to be a pretty ingenious way to "quantify" violation risks. The tool uses the expert's opinion on practical and likely consequences to develop VRFs. While there will probably be many differences of opinion on the answers, it at least narrows down the best choices.</p>
<p>FirstEnergy</p>		
<p>ERCOT ISO</p>		<p>Each requirement VRF should be determined unilaterally. If the violation of one requirement is tied to others, as suggested in Question 9 of the Tool, then the present distribution shape will</p>

Organization	Yes or No	Question 8 Comment
		potentially remain as is. Question 9 appears to introduce additional subjectivity. Perhaps this question should be reworded, removed, or at the very least, the response choices should be expanded.
Arizona Public Service Company		
E.ON U.S.		While testing the VRF tool E.ON U.S. received an error upon hitting “Generate Record” in the tool.
Southern Company Transmission		<p>General Comments</p> <ol style="list-style-type: none"> <li>1. Insert “North American Reliability Corporation” before the acronym NERC.</li> <li>2. Established acronyms should be used consistently in the document. It is noted that the terms and acronyms are repeatedly spelled out in several locations. Where section headers are provided it seems appropriate to spell out “Violation Risk Factor” instead of using the acronym “VRF.”               <ol style="list-style-type: none"> <li>a. Violation Risk Factor - VRF or VRFs</li> <li>b. Bulk Electric System - BES</li> </ol> </li> <li>3. Reference “Determining Violation Risk Factors” on pages 6 and 7. The established terms for Severe, High, Medium, and Lower should be capitalized where they are mentioned in each description.</li> </ol> <p>Executive Summary</p> <ol style="list-style-type: none"> <li>1. See General Comment #1</li> <li>2. See General Comment #2</li> <li>3. Replace “V0” with “Version 0”</li> <li>3. Typo. Remove extra space at NERC-assignedRisk</li> </ol> <p>Discussion</p> <ol style="list-style-type: none"> <li>1. See General Comment #2</li> </ol>

Organization	Yes or No	Question 8 Comment
		<p>2. At page 3, the 3rd full paragraph explains the meaning of the defense-in-depth philosophy. It may be helpful to make a reference to Figure 1 in this paragraph and insert the illustration (Figure 1) after the paragraph.</p> <p>3. At page 3, strike the 4th paragraph beginning with “Even though the risk...” This paragraph is overly critical of the industry response and the NERC survey process. The need for this proposal is explained sufficiently by prior mention of industry vetting and the explanation of risk coupled with the defense-in-depth philosophy.</p> <p>4. At page 3, Figure 2 is not referenced in the narrative. Suggestion: "...mishaps follows a pyramid shape (see Figure 2), where there are relatively..."</p> <p>5. At page 3, refer to the last sentence in the last paragraph. This phasing could be clarified with the proposed language: "...the current process has a tendency to inaccurately assign VRFs."</p> <p>6. At page 3, the illustration of Figure 2 does not clearly distinguish the "Present" distribution as having a pyramid-shaped or the "Theoretical" distribution as being octagonal.</p> <p>7. At page 4, in the 3rd paragraph, replacing “scenarios” with “multi-faceted scenarios” may add emphasis.</p> <p>8. At page 4, reference the 4th paragraph. This argument might be strengthened with additional explanation. It is not clear if the author intended to state that the “...distribution of risk applies to the entire spectrum of requirements and violation risk factors.” The example in the second sentence does not clearly explain the correlation of standards with High risk VRFs and standards with Medium or Lower requirements.</p> <p>Relationships to Violation Severity Levels</p> <p>1. At page 4, reference the 2nd and 3rd paragraphs in this section. This narrative is not properly introduced as an example and it does not clearly illustrate the relationship to VSLs as suggested by</p>

Organization	Yes or No	Question 8 Comment
		<p>the title.</p> <p>2. It is not entirely clear how the 3rd paragraph, in conjunction with the prior example of the speeding limit violation, builds on the concept of relationship to VSL. More explanation is required. Proposed Definitions and Examples (no comment)</p> <p>Evaluating Outcomes and Probabilities</p> <p>1. The introduction statement provides a definition of VRF. Any definition of VRF should be integrated in the first part of the Proposal (perhaps at the Executive Summary or Background).</p> <p>2. The introduction statement also provides further detail about how risk outcomes are based on two things - the NERC definition of Adequate Level of Reliability and the “Reliability Objectives” defined in the NERC Rules of Procedure. This should be mentioned in the subpart where “Risk Outcome” is actually described.</p> <p>3. For the reasons cited above, the section should be re-titled consistent with the three elements discussed and a new introduction statement should be drafted. Proposed title and introduction language: Title - Risk Outcomes, Risk Probabilities, and Time Horizons; Narrative - “The process for developing VRFs considers three elements - Risk Outcomes, Risk Probabilities, and Time Horizons. Collectively, these elements ensure that VRFs are developed with careful consideration to defined objectives, the possibility of occurrence, and the timeframe in which violations may take place.”</p> <p>Risk Outcomes</p> <p>1. As previously mentioned, certain details about the Risk Outcomes should be added to this description.</p> <p>Risk Probabilities (no comment)</p> <p>Time Horizons</p> <p>1. This section includes numerous subparts that describe various timeframes. The following</p>

Organization	Yes or No	Question 8 Comment
		<p>language should be removed from the introduction statement and mentioned in the subpart entitled Real-Time: “Violations that occur in Real-Time present a greater risk than those that occur in other Time Horizons, as real-time is generally the last line of defense in a risk management strategy.”</p> <p>2. It is not clear if the term “Real-Time” as a description for current hour operations has any bearing on how real-time is contemplated in other aspects of NERC Reliability Standards, guidelines, supplements, or other areas. Determining Violation Risk Factors</p> <p>1. The citation from Order 693 - where FERC gave NERC the discretion to increase the number of VRFs - is not provided. A review of the Commission Determination in Order 693 at Paragraph 248 indicates that the Commission left development of a category of “administrative infraction” to the ERO. What should be verified is whether or not the flexibility is in relation to the Violation Severity Levels (discussed in the paragraph) or Violation Risk Factors discussed in this Proposal. If it is determined that FERC did not grant this discretion this and other similar statements should be deleted.</p> <p>Violation Risk Factors - Subparts: Severe Risk, High Risk, Medium Risk, and Lower Risk</p> <p>1. See General Comment #3</p> <p>Violation Risk Factors - Subpart: Administrative</p> <p>1. A consistent format would be achieved if the first two introductory statements were shifted to a footnote. The existing footnote 3 could be revised to incorporate the justification described here. (See above comment regarding statements where FERC grants the ERO discretion to create an administrative category of VRF. Clarification of this reference may suggest that it be removed entirely.)</p> <p>2. A revised introduction follows: “An Administrative violation includes the violation of any requirement in any time frame that is procedural or administrative in nature, or whose risk is otherwise sufficiently diminished based on Risk Probability or Time Horizon.”</p>

Organization	Yes or No	Question 8 Comment
		<p>3. The last two paragraphs appear to be concluding remarks. The very last paragraph, which describes a catch-all scenario for Administrative requirements, should be incorporated into the examples for the Administrative segment.</p> <p>4. The second-to-last paragraph may be a good conclusion but could it also be incorporated into the following section - Special Rule for Contributing VRFs? Otherwise, it may help to incorporate these statements into the VRF introduction section on page 6.</p> <p>Special Rule for Contributing VRFs</p> <p>1. See above comments regarding the concluding statements in the prior section.</p> <p>2. See General Comment #2 Approach for Assigning VRFs (no comment) Implementation Plan (no comment) References (no comment)</p>
Oncor Electric Delivery LLC		
Central Lincoln		<p>Test number five in the tool is inappropriate. The non-cascading loss of customer load is not addressed by the proposal document, and is not addressed by the NERC definition of “adequate level of reliability”, or by the Rules of Procedure. The question of rates versus customer service is best addressed by the state or local commissions and boards organized for these tasks, not by NERC or the regional entities. Test number 9 is likewise inappropriate. Since an entity in violation of the requirement in question will likely be audited simultaneously for the related higher level requirement, the effect is to jeopardize the entity twice for violating the higher level requirement. And there is also the possibility of a cascading effect where R2 is escalated by its relation to R1, R3 is escalated by its relation to R2, and so on. With a five level VRF system, an entity could be effectively penalized four times for violating one requirement.</p>
Platte River Power Authority		

Organization	Yes or No	Question 8 Comment
NIPSCO		
Manitoba Hydro		
Sacramento Municipal Utility District		
American Electric Power		<p>This proposal needs to provide additional clarity on how to address the assignment of VRF across parent and sub-requirements in a standard. The requirements in PRC-005-1 R2, R2.1 and R2.2 are good examples of a breakdown in the assignment of VRF. The parent is “Lower” VRF and the sub-requirements are “High” VRF. This might not be an issue with the VRF, but might indicate a mismatch in the association of these requirements. If a sub-requirement needs to have a greater VRF than its parent, then the sub-requirement probably needs to be a stand-alone requirement.</p>
Constellation Energy on behalf of parent and affiliate companies: BGE, CPSG, CECG, CNE, CENG & CECD		
Exelon Corporation		<p>Exelon believes that the tool provides a good start in the development of transparent and consistent Reliability Standard VRFs</p>
Xcel Energy		
Georgia System Operations Corporation		<p>There should be the concept of applying the full penalty range to a "Severe" violation level of a "binary" requirement and not automatically eliminating the penalty ranges associated with the three lower levels (Lower, Medium, and High) of violation severity. The penalty should be able to</p>

Organization	Yes or No	Question 8 Comment
		<p>range from the lowest of the lowest level to the highest of the highest level as is the case for other requirements that are not binary. There is no rationale for increasing the lower level of the penalty range because a requirement was worded and formatted as a standalone requirement rather than as one of many sub-requirements. Each sentence within the NERC standards could be written as a stand alone binary requirement rather than as sub-requirements, compound sentences with two clauses, or one sentence with more than one part that must be met. Either you meet what the sentence says or you don't. Either you meet what one part of a sentence says or you don't. The full penalty range should be available to every requirement, sub-requirement, or clause.</p> <p>We understand that this is a compliance monitoring and evaluation issue. However, we are proposing that appropriate changes be made to the CMEP rules to achieve this along with any changes that are necessary to accomplish the new risk factors and associated concepts.</p> <p>The VRF tool seems to "double-factor-in" risk. It accounts for the likelihood of affecting the BES reliability/adequacy. It also factors in the time horizon. It makes a requirement for the real time horizon more risk than a requirement for the operations planning horizon. The time horizon should not be used.</p> <p>Without a tool, the concept that a requirement that applies to real time operations seems to be more likely to affect the BES reliability/adequacy effectively resulted in a rule of thumb that a requirement for real time operations should have a higher VRF than one for a longer time horizon. However, with this tool it is unnecessary to account for the time horizon. In fact it double counts the risk. Answering the questions in the tool relating to the risk should produce the desired VRF. A violation of a real time requirement that could lead to cascading outages (with other concurrent violations) should have the same VRF as a violation of an operations planning requirement that could lead to cascading outages (with other concurrent violations).</p>
Georgia Transmission		In the VRF Tool Instructions document, it would be useful to provide guidance on the question "Violating this requirement would contribute to violating another requirement with a higher VRF".

Organization	Yes or No	Question 8 Comment
Corporation		Instructions stating that this question is not intended to cause a series of higher VRFs (e.g., R2 is raised because it would contribute to violating R1, does not mean that R3 should be raised simply because R2 was raised for its contribution to R1).
Consumers Energy		
PJM Interconnection		8.1. Thank you for all the work that went into the Proposal and VRF Tool.8.2. While the Proposal and the VRF Tool are a great start, we need more transparency, structure, detail and specific dialogue on how to increase the objective nature of the answers to the VRF Tool questions, to get more consistency in responses to the questions. Different raters can assign a different risk probability to the questions which can change the VRF by a lot. 8.3. Will the industry get to comment on the final VRF to be approved by NERC and subsequently filed with the FERC.
US Bureau of Reclamation		The concept of the tool is a welcome means of assessing the risk factors. The answers should be checked against all the standards to ensure applicability.
Independent Electricity System Operator		
Tri-State Generation & Transmission Assoc., Inc.		The Time Horizons are unclear as to how they would be applied. For example, would a relay that is overdue for testing by one month be considered a Real-Time horizon? How about an error in a FAC-009 posting? It still seems like Severe and High VRF levels could artificially be expanded, defeating the attempts to better represent the real problems brought up in the “Risk Discussion” section.
Duke Energy		The logic behind the tool needs to be shared with the industry for us to be able to adequately evaluate whether or not the results are correct. The VRF Tool Instructions state “The drafting team may choose a different VRF, but should justify its reasoning in the “Drafting Team Notes””. It will

Organization	Yes or No	Question 8 Comment
		<p>be difficult to provide this justification if the logic behind the tool is not clearly documented. There should be a technical reference guide provided.</p> <p>While we appreciate the increased transparency and consistency that this provides in regard to assignment of VRFs, it does not completely remedy the lack of transparency in the application of the Sanctioning Guidelines.</p>
Pepco Holdings, Inc		
Hydro-Québec TransÉnergie (HQT)		The VRF tool (Excel sheet) as it was developed can be use to continue the use of three levels of VRF which we recommend.

**END OF REPORT**