

Consideration of Comments on Transmission Vegetation Management SAR (FAC-003-1)

The Transmission Vegetation Management SAR Drafting Team thanks all commenters who submitted comments on the first draft of the Transmission Vegetation Management SAR. This SAR was posted for a 30 day public comment period from January 15–February 14, 2007. The Standards Committee asked stakeholders to provide feedback on the standard through a special standard Comment Form. There were 19 sets of comments, including comments from more than 80 different people from more than 63 companies representing 7 of the 10 Industry Segments as shown in the table on the following pages.

Based on the comments received, the drafting team revised the SAR to reflect these comments and improvements identified by the FERC in its Mandatory Reliability Standards for the Bulk Power System Order 693.

The following major changes were made to the SAR:

- Updated the Purpose to use language that matches the associated standard (e.g., where FAC-003 is only related to the transmission system, the term, 'bulk power system' was replaced with 'transmission system').
- Added the items NERC is required to address in compliance with FERC Order 693
- Added the following items to the list of items to review in refining the standard:
 - Review reporting criteria for Category 3 outages in the proposed technical reference material and may remove the reporting requirement of Category 3 outages in R.3 and R.4.
 - Consider deleting requirement R.4.
 - Review the reporting exemptions to include all category outages under major disasters in Requirement R3.2.
- Added a commitment to prepare a technical reference such as a "white paper" to aid in understanding the technical basis for the standard.
- The descriptions of the 'Reliability Functions' on page 3 of the SAR were updated to reflect Version 3 of the Functional Model.

In this "Consideration of Comments" document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the standards can be viewed in their original format at:

http://www.nerc.com/~filez/standards/Vegetation-Management_Project_2007-7.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 Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

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

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Commenter | | Organization | Industry Segment | | | | | | | | | | | |
|-----------|----------------------------|--|------------------|---|---|---|---|---|---|---|---|----|--|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| 1. | Anita Lee (G2) | AESO | | ✓ | | | | | | | | | | |
| 2. | Jay Farrington (G6) | Alabama Electric Coop | ✓ | | | | | | | | | | | |
| 3. | Randall Gann (G6) | Alabama Power Co. | ✓ | | | | | | | | | | | |
| 4. | William J. Smith | Allegheny Power | ✓ | | | | | | | | | | | |
| 5. | Ken Goldsmith (G3) | ALT | | | | | | | | | | | | ✓ |
| 6. | Raymond Wiesehan (G6) | Ameren | ✓ | | | | | | | | | | | |
| 7. | James H. Sorrels, Jr. | American Electric Power | ✓ | | | | | ✓ | ✓ | | | | | |
| 8. | John Neagle (G6) | Associate Electric Coop | ✓ | | | | | | | | | | | |
| 9. | William T. Rees | Baltimore Gas and Electric | ✓ | | | | | | | | | | | |
| 10. | Brian Bartos | Bandera Electric Coop., Inc. | | | | | | | | | | | | |
| 11. | Michael D. Johnson | Bonneville Power Administration | ✓ | | | | | | | | | | | |
| 12. | Dave Rudolph (G3) | BPEC | | | | | | | | | | | | ✓ |
| 13. | Brent Kingsford (G2) | CAISO | | ✓ | | | | | | | | | | |
| 14. | John R. Kellum, Jr. | CenterPoint Energy Houston Electric, LLP | ✓ | | | | | | | | | | | |
| 15. | Michael Spector | Central Hudson Gas & Electric | ✓ | | ✓ | | | | | | | | | |
| 16. | Alan Gale (G1) | City of Tallahassee | | | | | | ✓ | | | | | | |
| 17. | Ed Thompson (G4) | ConEd | ✓ | | | | | | | | | | | |
| 18. | John Loftis | Dominion - Electric Transmission | ✓ | | | | | | | | | | | |
| 19. | Billy George (G6) | Duke Energy Carolinas | ✓ | | | | | | | | | | | |
| 20. | Ralph Hale (G6) | Entergy | ✓ | | | | | | | | | | | |
| 21. | Steve Myers (G2) | ERCOT | | ✓ | | | | | | | | | | |
| 22. | Marc Tunstall (G6) | Fayetteville PWC | ✓ | | | | | | | | | | | |
| 23. | Pedro Modia (G1) | Florida Power and Light Company | ✓ | | | | | | | | | | | |
| 24. | Barbara Jaendl | Florida Power and Light Company | ✓ | | | | | | | | | | | |
| 25. | Greg Keller | Florida Power and Light Company | ✓ | | | | | | | | | | | |
| 26. | John Tamsberg | Florida Power and Light Company | ✓ | | | | | | | | | | | |
| 27. | Marty Mennes | Florida Power and Light Company | ✓ | | | | | | | | | | | |
| 28. | Michael Warr | Florida Power and Light Company | ✓ | | | | | | | | | | | |
| 29. | Eric Senkowicz (G1) | FRCC | | | | | | | | | | | | ✓ |
| 30. | Mark Bennett (G1) | Gainesville Regional Utilities | | | | | | ✓ | | | | | | |
| 31. | John West (G6) | Georgia Power Co. | ✓ | | | | | | | | | | | |
| 32. | Jimmy Etheridge (G6) | Georgia Transmission Corporation | ✓ | | | | | | | | | | | |
| 33. | Steve Burns (G6) | Gulf Power Co. | ✓ | | | | | | | | | | | |
| 34. | David Kiguel (G4) (I) | Hydro One Networks, Inc. | ✓ | | | | | | | | | | | |
| 35. | George Juhn | Hydro One Networks, Inc. | ✓ | | | | | | | | | | | |
| 36. | Roger Champagne (G4) (I) | Hydro-Québec TransÉnergie | ✓ | | | | | | | | | | | |
| 37. | Ron Falsetti (G2) (G4) (I) | IESO Ontario | | ✓ | | | | | | | | | | |
| 38. | Bill Shemley (G4) | ISO-NE | | ✓ | | | | | | | | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| | Commenter | Organization | Industry Segment | | | | | | | | | | | |
|-----|---------------------------|---|------------------|---|---|---|---|---|---|---|---|----|---|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| 39. | Kathleen Goodman (G4) (I) | ISO-NE | | ✓ | | | | | | | | | | |
| 40. | Matt Goldberg (G2) | ISO-NE | | ✓ | | | | | | | | | | |
| 41. | Brian Thumm | ITC Transmission | ✓ | | | | | | | | | | | |
| 42. | Clark Hawkins (G1) | Lee County Electric Cooperative | | | ✓ | | | | | | | | | |
| 43. | Eric Ruskamp (G3) | LES | | | | | | | | | | | | ✓ |
| 44. | Don Nelson (G4) | MA Dept. of Tele. and Energy | | | | | | | | | | | ✓ | |
| 45. | Robert Coish (G3) (I) | Manitoba Hydro | ✓ | | ✓ | | | ✓ | ✓ | | | | | |
| 46. | Tom Mielnik (G3) | MEC | | | | | | | | | | | | ✓ |
| 47. | Dick Pursley (G3) | Midwest Reliability Organization | | | | | | | | | | | | ✓ |
| 48. | Bill Phillips (G2) | MISO | | ✓ | | | | | | | | | | |
| 49. | Terry Bilke (G3) | MISO | | | | | | | | | | | | ✓ |
| 50. | Carol Gerou (G3) | MP | | | | | | | | | | | | ✓ |
| 51. | Joe Knight (G3) | MRO | | | | | | | | | | | | ✓ |
| 52. | Richard Mider | New York State Electric and Gas Corporation | ✓ | | | | | | | | | | | |
| 53. | Herb Schrayshuen (G4) | NGRID | ✓ | | | | | | | | | | | |
| 54. | Murale Gopinathan (G4) | Northeast Utilities | ✓ | | | | | | | | | | | |
| 55. | Brian Hogue (G4) | NPCC | | | | | | | | | | | | ✓ |
| 56. | Guy V. Zito (G4) | NPCC | | | | | | | | | | | | ✓ |
| 57. | Alan Boesch (G3) | NPPD | | | | | | | | | | | | ✓ |
| 58. | Jerad Barnhart (G4) | NSTAR | ✓ | | | | | | | | | | | |
| 59. | Greg Campoli (G4) | NYISO | | ✓ | | | | | | | | | | |
| 60. | Mike Calimano (G2) | NYISO | | ✓ | | | | | | | | | | |
| 61. | Ralph Rufrano (G4) | NYPA | ✓ | | | | | | | | | | | |
| 62. | Todd Gosnell (G3) | OPPD | | | | | | | | | | | | ✓ |
| 63. | Tom Bowe (G2) | PJM | | ✓ | | | | | | | | | | |
| 64. | Jack Gardner (G6) (I) | Progress Energy Carolinas | ✓ | | | | | | | | | | | |
| 65. | C. Robert Moseley (G5) | Public Service Commission of SC | | | | | | | | | | | | ✓ |
| 66. | David A. Wright (G5) | Public Service Commission of SC | | | | | | | | | | | | ✓ |
| 67. | Elizabeth B. Fleming (G5) | Public Service Commission of SC | | | | | | | | | | | | ✓ |
| 68. | G. O'Neal Hamilton (G5) | Public Service Commission of SC | | | | | | | | | | | | ✓ |
| 69. | John E. Howard (G5) | Public Service Commission of SC | | | | | | | | | | | | ✓ |
| 70. | Mignon L. Clyburn (G5) | Public Service Commission of SC | | | | | | | | | | | | ✓ |
| 71. | Phil Riley (G5) | Public Service Commission of SC | | | | | | | | | | | | ✓ |
| 72. | Randy Mitchell (G5) | Public Service Commission of SC | | | | | | | | | | | | ✓ |
| 73. | Mike Gentry | Salt River Project | ✓ | | | | | | | | | | | |
| 74. | Jerry Lindler (G6) | SCE&G | ✓ | | | | | | | | | | | |
| 75. | John Wolfmeyer (G6) | SERC Vegetation Management Subcommittee | | | | | | | | | | | | |
| 76. | Sam Stonerock | Southern California Edison | ✓ | | | | | | | | | | | |
| 77. | Jim Busbin (G7) | Southern Company Transmission | ✓ | | | | | | | | | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Commenter | | Organization | Industry Segment | | | | | | | | | | | |
|-----------|--------------------------|-------------------------------|------------------|---|---|---|---|---|---|---|---|----|--|---|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| 78. | JT Wood (G7) | Southern Company Transmission | ✓ | | | | | | | | | | | |
| 79. | Marc Butts (G7) | Southern Company Transmission | ✓ | | | | | | | | | | | |
| 80. | Roman Carter | Southern Company Transmission | ✓ | | | | | | | | | | | |
| 81. | Charles Yeung (G2) | SPP | | ✓ | | | | | | | | | | |
| 82. | Richard Dearman (G6) (I) | TVA | ✓ | | | | | | | | | | | |
| 83. | Jim Haigh (G3) | WAPA | | | | | | | | | | | | ✓ |
| 84. | Neal Balu (G3) | WPSR | | | | | | | | | | | | ✓ |
| 85. | Pam Oreschnick (G3) | XEL | | | | | | | | | | | | ✓ |

G1 – FRCC

G2 - ISO/RTO Council Standards Review Committee

G3 - Midwest Reliability Organization

G4 - NPCC CP9 - Reliability Standards Working Group

G5 – Public Service Commission of South Carolina

G6 - SERC Vegetation Management Subcommittee

G7 – Southern Company Transmission

I – Individual comments were submitted in addition to comments as part of a group

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

Index to Questions, Comments, and Responses

1. Do you agree that there is a reliability-related need to address the proposed revisions to FAC-003-1 — Transmission Vegetation Management? If not, please explain in the comment area. 6
2. Do you agree with the scope of the SAR? If not, please explain in the comment area. .18
3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?.....35

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

1. Do you agree that there is a reliability-related need to address the proposed revisions to FAC-003-1 — Transmission Vegetation Management? If not, please explain in the comment area.

Summary Consideration: Most commenters indicated that they do not believe there is a reliability need to revise the technical aspects of this standard. The SAR Drafting Team agrees with commenters who indicated that the original was SAR vague, and the drafting team modified the SAR to clarify that the proposed changes to this standard will address procedural updates to bring the standard into conformance with the latest version of NERC’s Reliability Standards Development Procedure and the Sanctions Guidelines in the ERO Rules of Procedure, and will also address the issues raised in the FERC’s March 16, 2007 Order 693 - Mandatory Reliability Standards for the Bulk Power System.

| Question #1 | | | |
|--|-----|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| Bonneville Power Administration | | <input checked="" type="checkbox"/> | Ok, Yes and No. The first FERC NOPR bullet needs to be addressed. The second bullet is clearly discribed in the standard. A. 4.4.3. The reader must read the statement in context. It meets the Standard Review Guidelines. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The FERC is no longer indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to <200kV is necessary. ▪ The Drafting Team does not agree that the Standard Review Guidelines have been met. For example the guidelines calls for ‘time horizons’ to be assigned to each requirement, and the standard currently does not have these. The standard also needs to replace its ‘levels of non-compliance’ with ‘violation severity levels’ to support the latest version of the Sanctions Guidelines. | | | |
| Bandera Electric Coop. | | <input checked="" type="checkbox"/> | The items listed as potential revisions are vague and do not provide sufficient justification to alter the current requirements of this standard which has been in effect less than 1 year. The current standard allows for the region to determine which transmission lines are critical to reliability and should be included in a Transmission Owner's Transmission Vegetation Management Plan regardless of voltage classification. The current standard also allows each TO the flexibility to develop its plan in accordance with its specific geography and operating environment. There is no need to be more prescriptive. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team agrees that the first SAR draft was vague. The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to <200kV is necessary. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|--|-----|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| Standards for the Bulk Power System. | | | |
| ITC Transmission | | <input checked="" type="checkbox"/> | While there may be "statutory" needs to address (e.g., FERC's request to modify particular components of the existing Standard), we do not feel there is a reliability need to do so. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| Hydro One Networks, Inc. | | <input checked="" type="checkbox"/> | We believe that at this time it is premature to move forward with changes to the standard that are based on voltage class issues. The Standard, as developed, applies to the BES which have been determined by a performance based methodology. NERC should wait until the BES vs. BPS issue is resolved. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. | | | |
| Hydro-Québec TransÉnergie | | <input checked="" type="checkbox"/> | We believe that it is premature to move forward with changes based on voltage class. Applicability of the standard should only be to those portions of the system that are part of the Bulk Power System which have been determined by a performance based methodology. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to <200kV is necessary. | | | |
| Northeast Power Coordinating Council | | <input checked="" type="checkbox"/> | NPCC participating members believe that it is premature to move forward with changes based on voltage class. Applicability of the standard should only be to those portions of the system that are part of the Bulk Power System which have been determined by a performance based methodology. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to <200kV is necessary. | | | |
| American Electric Power | | <input checked="" type="checkbox"/> | American Electric Power believes that the current standard (when thoroughly read and understood) is completely adequate to maintain a reliable transmission system with minimum risk of vegetation-related outages. |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|---|-------------------------------------|-------------------------------------|--|
| Commenter | Yes | No | Comment |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following NEW procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| New York State Electric and Gas Corporation | | <input checked="" type="checkbox"/> | <p>The current draft FAC 003 1 will provide a high level of reliability for the transmission bulk delivery system which the public now expects. After a comprehensive industry review which included industry balloting, the current Vegetation Management Standard 003 1 was approved in February 2006 and several sections did not go in to effect for one year (2007). Sufficient time should be allowed so that impact of the current standard can be monitored.</p> <p>FAC 003 1 was designed to prevent cascading type outages and by establishing a standard for 200KV lines and above catastrophic type power outages will be eliminated. Lower voltage lines can be placed under this standard when the impact on the bulk delivery system requires tighter management as determined by local reliability organizations. Inspection cycles must be designed to meet regional needs based on local conditions, and the current standard provides this flexibility.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following NEW procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to <200KV is necessary. ▪ The FERC is no longer indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| SERC Reliability Corporation | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <p>The SERC VMS is unsure how to answer the question as it is worded, but has the following comments on the SAR:</p> <p>The current standard contains appropriate requirements and measures to ensure the owners vegetation management program is implemented and managed to ensure the reliability of the transmission system. Mandating inspection cycle</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|--|-----|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| | | | frequencies will not enhance nor ensure reliability by inspecting more or less frequently. The minimum vegetation clearances at maximum operating conditions that are established within the owner's program, which is auditable by the ERO, will ensure reliability. Extending the requirements to lines other than those >200KV may reduce the focus on those lines and may cause the allocation of resources away from lines >200KV. Generally easements are narrower on lower voltage lines, requiring more resources and emphasis on these lines. This may have an effect on the ability to focus clearing efforts on those lines that will have a much greater impact on the bulk power system. The IEEE standard when used as the minimum clearance distance at maximum operating condition will ensure reliability when these clearances are maintained by vegetation management activities. In addition, we do not agree that a standard of zero tolerance for vegetaion-related outages in the ROW is weak on compliance. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The FERC is no longer indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. ▪ The Drafting Team agrees with the commenter and recognizes that the IEEE standard is applicable. ▪ The Drafting Team modified the SAR to eliminate the comment that the standard is weak on compliance as this comment was satisfied when Version 1 of the standard was developed. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| Progress Energy | | <input checked="" type="checkbox"/> | The current standard contains appropriate levels of guidelines and penalties to ensure the owners vegetation management program is implemented and managed to ensure the reliability of the transmission system. Mandating inspection cycle frequencies will not enhance nor ensure reliability by inspecting more or less frequently. The minimum vegetation clearances at maximum operating conditions that are established within the owner's program that are auditable by the ERO will ensure reliability. By adding lines other than those >200KV may reduce the focus on those lines and impact the budget dollars allocated to focus on the lines >200KV. Generally easements are much more narrow on lower voltage lines, the impact on budget dollars would often require more emphasis on these lines. This may have an effect on the ability to focus clearing efforts on those lines that will have a much greater impact on the bulk power system. The IEEE standard when used as the minimum clearance distance at maximum operating condition will ensure reliability when these clearances are maintained by vegetation management activities. |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|---|-----|-------------------------------------|--|
| Committer | Yes | No | Comment |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The current version of the standard does not include 'time horizons' and uses 'levels of non-compliance' rather than 'violation severity levels' - 'time horizons' and 'violation severity levels' are needed to conform to the latest version of the Sanctions Guidelines included in the ERO Rules of Procedure. ▪ The FERC is no longer indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. ▪ The Drafting Team agrees with the commenter and recognizes that the IEEE standard is applicable. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| CenterPoint Energy Houston Electric, LLP | | <input checked="" type="checkbox"/> | <p>CenterPoint Energy disagrees that there is a reliability-related need to address the proposed revisions to FAC-003-1.</p> <p>This SAR proposes to establish a minimum vegetation inspection cycle for transmission facilities throughout the United States. Yet, based upon the location of each utility, different vegetation and growth rates will be experienced throughout the country. Placing a time specific vegetation management cycle for all regions does not address the wide divergence of vegetation and growth rates that each utility must face.</p> <p>For instance, in certain areas of the country, such as desert areas, vegetation growth rates are exceedingly small; therefore, vegetation management cycles would likely be for extended periods of time. Placing a required frequent cycle will unnecessarily increase the costs to ratepayers. While in other parts of the country, vegetation can grow rapidly, and there should be shorter periods of time for the vegetation management cycle.</p> <p>Based upon these facts, CenterPoint Energy does not believe that adopting a standard inspection cycle that is applicable to all regions is prudent. However, CenterPoint Energy understands and supports the concept of standard requirements applicable to all regions where such standardization is practical and reasonable. In the specific case of vegetation management, it may be reasonable and practical to establish a national standard based on maximum number of allowed annual vegetation-caused outages per 100-circuit-miles of transmission. Such a standard would allow utilities flexibility to use inspection cycles and other practices that are prudent based on each utility's circumstances while still holding utilities accountable for the results.</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|-------------|-----|----|---|
| Commenter | Yes | No | Comment |
| | | | <p>The SAR also proposes to change the 200 kV threshold and use of the IEEE standard for minimum clearances. These requirements were established by a broad consensus of industry experts. CenterPoint Energy believes the broad industry consensus on these matters should be respected.</p> <p>CenterPoint Energy submits the following specific comments:</p> <p>Minimum inspection cycle, FERC NOPR Paragraph 382-</p> <p>CenterPoint Energy disagrees that “complete discretion left to the transmission owners in determining inspection cycles limits the effectiveness of the Reliability Standard.” The standard is effective because it requires the transmission owners to balance several factors to achieve the optimum inspection cycle.</p> <p>It is not necessary to specify a specific inspection interval in the standard. The inspection cycle interval is one component of several conditions to be considered in FAC-003-1 Requirement R1.2.1 for establishing the required Clearance 1 of the NERC standard. Other conditions that should be considered include operating voltage, appropriate vegetation management techniques, fire risk, reasonably anticipated tree and conductor movement, species types and growth rates, species failure characteristics, local climate and rainfall patterns, line terrain and elevation, location of the vegetation within the span, and worker approach distance requirements. It is the growth rate of the vegetation coupled with the amount of clearance achieved at the time of maintenance that determines the inspection cycle interval. As such, the longer the inspection interval, the larger the clearance that must be attained to achieve balance. If the utility does not achieve balance, then it will likely not avoid vegetation-related outages. It would not be necessary for a utility to be faulted based on its inspection interval, rather it would be measured for compliance under FAC-003-1 D2.3.1, D2.3.2, D2.3.3, and D2.4.1 for operational conditions regarding maintaining the minimum clearance (Clearance 2) required under FAC-003-1 Requirement R1.2.2 and any actual vegetation-related outages.</p> <p>FERC NOPR Paragraph 383-</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|-------------|-----|----|--|
| Commenter | Yes | No | Comment |
| | | | <p>CenterPoint Energy disagrees that “a one-year vegetation inspection cycle is the “norm” for the industry.” The reference to “76 of 161 entities surveyed conduct ground inspections once a year” was taken from Table 3 entitled “Ground Inspection Frequency”. The table can also be interpreted to indicate that 78 of 161 entities surveyed conduct ground inspections on cycles other than once a year. At best, the table shows a distribution of the varying practices of companies surveyed. The table by itself does not indicate the level of reliability provided by each of those companies.</p> <p>The table entries may also be incomplete because the original order under Docket EL04-52-000 under paragraph 12c asked “how often the transmission provider inspects that facility for vegetation management purposes” which did not specify ground or aerial inspection. The EEI template that many respondents used did specify ground inspection and aerial inspection separately, but the template was not used by all of the respondents as noted in the report. Interpolation of the data collected may have affected the accuracy of the results reported, so specific conclusions should consider the disparity between how the data request was worded and how the data was reported. It is important to clearly distinguish between ground inspection, aerial inspection, and pruning cycle when soliciting and interpreting industry data. Additionally, new technologies such as airborne laser surveys are coming to the market which may replace or augment other types of vegetation inspections as they become cost-effective. The industry “norm” may change as a result.</p> <p>FERC NOPR Paragraph 384-</p> <p>Although CenterPoint Energy does not agree with establishing a “one year minimum inspection cycle”, it should be left to the discretion of the transmission owner as to what type of inspection is employed so that the most cost-effective methods can be utilized, depending on the system’s size and terrain. It should also be made clear that “inspection cycle” is not intended to mean “pruning cycle”.</p> <p>Remove 200kV threshold, FERC NOPR Paragraph 385-</p> <p>CenterPoint Energy believes the applicability of FAC-003-1 should be “to all transmission lines operated at 200kV and above and to any lower voltage lines</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|---|-----|----|---|
| Commenter | Yes | No | Comment |
| | | | <p>designated by the regional reliability organization as critical to reliability”, because such a standard most closely matches the vegetation management reporting requirements from Docket EL04-52-000. Voltages below this threshold are not likely to impact the reliability of the Bulk Power System. Further, regional reliability organizations have the authority to designate lower voltages critical to reliability as appropriate. The proposed change is unnecessary.</p> <p>IEEE Standard as basis for minimum clearance to prevent flashover (Clearance 2) -</p> <p>CenterPoint Energy believes that the IEEE standard is sufficient and appropriate as a basis to determine the specific radial clearances to be maintained between vegetation and conductors under all rated electrical operating conditions (Clearance 2). Clearance 2 also must consider additional clearance for the dynamic movement of the transmission conductors to avoid vegetation related outages. Thus, the minimum clearances that a transmission owner must identify and document depend on a variety of conditions including, but not limited to, transmission line voltage, temperature, wind velocities, and altitude.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The FERC is no longer indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. ▪ The Drafting Team agrees with the commenter and recognizes that the IEEE standard is applicable. | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|---|-----|-------------------------------------|--|
| Commenter | Yes | No | Comment |
| Central Hudson Gas & Electric | | <input checked="" type="checkbox"/> | <p>The proposed revisions listed under the FERC NOPR do not provide proper justification to alter the requirements in the current FAC-003-1 document that was adopted one year ago.</p> <p>First, "a minimum vegetation inspection cycle that allows variation in physical difference" is already called for under the current standard. As stated in Section R1.1. of FAC-003-1, a schedule already should be defined under the transmission vegetation management program (TVMP). This schedule already allows for "variation in physical difference" since the current standard states that "this schedule should be flexible enough to adjust for changing conditions."</p> <p>Secondly, under Applicability Section 4.3., the current standard already allows for lines with lower voltage than 200kV to be "designated by the RRO as critical" and therefore applicable to the standard. Removal of the 200kV benchmark is not needed.</p> <p>And lastly, under the FERC staff report, the IEEE standard provides guidance in clearances and has been the industry standard for many years. If FERC objects to using this standard then they should provide clearances that can be discussed and agreed upon by the transmission owners.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The FERC is not indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. ▪ The Drafting Team agrees with the commenter and recognizes that the IEEE standard is applicable. | | | |
| Southern California Edison | | <input checked="" type="checkbox"/> | <p>There was no empirical or anecdotal evidence presented by FERC staff to support the Commission's view that the reliability of the Bulk Power System will be enhanced with further revisions to FAC-003-1. This standard was the subject of vigorous industry debate in a previous SAR. Although it is far from perfect, the proposed revisions will not improve reliability and may very well damage existing VM programs.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following NEW procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|--|-------------------------------------|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| <ul style="list-style-type: none"> o Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| Baltimore Gas and Electric | | <input checked="" type="checkbox"/> | <p>The revisions listed in the NOPR and FERC Staff Report do not provide the necessary justification to alter the requirements in the current FAC-003-1 document. The existing requirements already allow for each utility to specify the inspection requirements. There is no need to more prescriptive. The existing requirements already allow for the ERO to designate critical lines less than 200 kV so removal of the 200 kV benchmark is unnecessary. The IEEE Standard is worthwhile to keep as a benchmark without which there would be no solid guidance for minimum clearances.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following NEW procedural changes: <ul style="list-style-type: none"> o Re-format FAC-003-1 to conform to the current Standards Development Procedure. o Remove references to RRO in the standard and substitute a responsible entity. o Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. ▪ The FERC is no indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. ▪ The Drafting Team agrees with the commenter and recognizes that the IEEE standard is applicable. | | | |
| Southern Company Transmission | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <p>We are not sure what you are asking? If you are asking whether we support the standard as it exists today-Southern does! If you are asking whether Southern Co. supports the changes being recommended in this Standard-we DON'T.</p> <p>The present standard appears to be serving its intended purpose and the industry as currently written. The standard should not be revised until it has demonstrated it is ineffective or inadequate for ensuring the reliability of the nation's transmission grid.</p> <p>Any changes to the standard should be based on empirical data rather than the assumption that the Standard is not serving its intended purpose. The standard has not been in effect long enough to determine if it is ineffective.</p> |
| <p>Response:</p> | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|---|-------------------------------------|-------------------------------------|---|
| Committer | Yes | No | Comment |
| | | | <ul style="list-style-type: none"> ▪ The Drafting Team agrees that the first SAR draft was vague. The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. |
| TVA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <p>As worded this question is confusing however the following comments are presented on the SAR:</p> <p>The current standard contains appropriate requirements and measures to ensure that vegetation related outages will not cause cascading transmission blackouts. Mandating new explicit inspection cycle frequencies will not enhance nor ensure reliability by inspecting more or less frequently. The current minimum vegetation clearances at maximum operating conditions that are established within the owner's program, which is auditable by the ERO, is sufficient to prevent vegetation related cascading transmission blackouts. Extending the requirements to a much a larger population of lines would reduce the current focus on the most important lines (those >200 kV). The IEEE standard when used as the minimum vegetation clearance distance at maximum operating condition will ensure desired performance of the lines. A standard of zero tolerance for vegetation related outages in the ROW is not a weak standard on compliance.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team agrees that the first SAR draft was vague. The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. ▪ The FERC is no indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. ▪ The Drafting Team agrees with the commenter and recognizes that the IEEE standard is applicable. | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #1 | | | |
|---|-------------------------------------|-----------|---|
| Commenter | Yes | No | Comment |
| Florida Power and Light Company | <input checked="" type="checkbox"/> | | FPL recognizes the need to address the concerns outlined in the NOPR and by the FERC Staff. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| Public Service Commission of South Carolina | <input checked="" type="checkbox"/> | | |
| Manitoba Hydro | <input checked="" type="checkbox"/> | | |
| IESO Ontario | <input checked="" type="checkbox"/> | | |
| Salt River Project | <input checked="" type="checkbox"/> | | |
| ISO New England | <input checked="" type="checkbox"/> | | |
| Dominion - Electric Transmission | <input checked="" type="checkbox"/> | | |
| Midwest Reliability Organization | <input checked="" type="checkbox"/> | | |
| ISO/RTO Council Standards Review Committee | <input checked="" type="checkbox"/> | | |
| Allegheny Power | <input checked="" type="checkbox"/> | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

2. Do you agree with the scope of the SAR? If not, please explain in the comment area.

Summary Consideration: Many commenters indicated there is no need to change the applicability of the requirements in this standard. The FERC indicated that the Standard Drafting Team should review and consider whether a change to the applicability to voltage <200kV is necessary.

Furthermore, some commenters expressed support for the IEEE standard's use in the FAC-003-1 Standard while the FERC declines to endorse the use of the IEEE standard as the 'only' minimum clearance. The SAR was revised to indicate that the Standard Drafting Team will seek to clarify the rationale for the use of the IEEE standard in supplemental reference material to be prepared as part of the scope of this SAR.

| Question #2 | | | |
|--|-------------------------------------|-------------------------------------|---|
| Committer | Yes | No | Comment |
| Bonneville Power Administration | <input checked="" type="checkbox"/> | | Since this posting is for comment it would have been nice to provide more information as to why the FERC staff objects to the IEEE standard (since it meets the guidelines for as a North America standard. Also, why are stakeholders concerned with Reliability Coordinators vs. RRO? |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE standard and the Drafting Team agreed to address their questions and concerns. ▪ The Drafting Team believes a revised standard is justified because it needs to include the following NEW procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. Making FAC-003 applicable to the RRO is in violation of the legislation that established the ERO. This legislation states that enforceable standards can apply only to owners, users and operators of the bulk power system. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. | | | |
| Bandera Electric Coop. | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | As submitted, the SAR appears to completely re-open this standard negating many months of work and industry comment to reach the consensus reflected in the current FAC-003. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The ERO Rules of Procedure include the latest versions of the Reliability Standards Development Procedure Manual and the Sanctions Guidelines. These documents were approved following the approval of FAC-003-1. FAC-003-1 will need to be revised to bring the standard into conformance with these documents. | | | |
| Northeast Power Coordinating Council | | <input checked="" type="checkbox"/> | See response to question 1, above. |
| <p>Response: See the drafting team's response to your comments on question 1.</p> | | | |
| CenterPoint Energy Houston Electric, LLP | | <input checked="" type="checkbox"/> | CenterPoint Energy does not agree with the scope of the SAR for the reasons discussed in response to question 1. |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|---|-----|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| Response: See the drafting team's response to your comments on question 1. | | | |
| Central Hudson Gas & Electric | | <input checked="" type="checkbox"/> | See comments above. |
| Response: See the drafting team's response to your comments on question 1. | | | |
| American Electric Power | | <input checked="" type="checkbox"/> | American Electric Power is not aware of any evidence to support a need for revising the vegetation management standard. |
| Response: <ul style="list-style-type: none"> The ERO Rules of Procedure include the latest versions of the Reliability Standards Development Procedure Manual and the Sanctions Guidelines. These documents were approved following the approval of FAC-003-1. FAC-003-1 will need to be revised to bring the standard into conformance with these documents. | | | |
| FRCC | | <input checked="" type="checkbox"/> | <p>As stated in this SAR comment form, the improvements should be made to bring the standard into conformance with the Reliability Standards Development Procedure which at this time is version 6.0, adopted by NERC BOT, 11/1/2006. The SAR scope via the attached Standard Review Guidelines includes two areas not defined within the procedure. The Mitigation Time Horizons and definitions for the violation severity levels (VSLs), Lower, Moderate, High and Severe.</p> <p>We understand the description of Mitigation Time Horizons and definitions for VSLs are included in the SAR (the concept of Violation Time Horizons is included in the Sanctions Guidelines, appendix 4B, NERC Compliance Filing to FERC dated October 18th, 2006), but these discrepancies are part of a broader policy issue and since their use is not clearly stipulated in the NERC Reliability Standards Development Procedure, including them in the scope of the SAR is premature and will cause unnecessary confusion to stakeholders and regulators.</p> <p>The process is requesting the industry to comment on a scope that is defined outside the reliability standards process and as such is subject to revisions and interpretations outside the process as well. This appears inappropriate and at the extreme will lead to inconsistent understanding, measurement and enforcement of compliance actions.</p> <p>The Mitigation Time Horizons and VSL levels should be defined in the Reliability Standards Development Procedure prior to inclusion in the scope of a SAR.</p> <p>Specific Items Within Current SAR Scope:</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|--|-----|----|---|
| Commenter | Yes | No | Comment |
| | | | <p>The establishment of minimum inspection cycles has been addressed previously, in the development of the current standard and was found very problematic given the large variety of vegetative conditions throughout North America. The vegetation that was identified as a contributing cause to the 2003 Northeast Blackout had already been identified by previous inspection activities. It was the failure to take action on the known site conditions that contributed to the event. Therefore, a minimum inspection cycle would still NOT have prevented or mitigated the scope of the Blackout.</p> <p>The current 200 kV threshold ensures that vegetation management efforts are focused on the critical bulk power transfer lines and that TVM efforts are not diluted by including additional lower voltage lines. In practicality, the RRO designation process provides the necessary flexibility to the Regions to address localized areas where bulk power system reliability may be compromised by lower voltage vegetation outages. To note as well, Northeast Blackout related vegetation outages which initiated the cascade occurred on lines that operate at 345 kV, well above the current threshold.</p> <p>The FRCC supported the development of Clearance 2, as established in the current standard, as this was a consensus selection by not only the subject matter experts, but many industry participants. Picking the ANSI Z133.1 Table 1 or 2 as the NOPR suggests, could immediately place thousands of miles of transmission lines out of compliance even though operating data indicates that the lines have performed satisfactorily for years. The concern would be, the resulting dilution of valuable industry and regulator resources.</p> <p>The SAR includes the following stakeholder comment: "Too weak on compliance" . We caution that we feel the compliance section does need refining, but that in a world of limited resources should focus on trends in vegetation outages and not necessarily on single outages. For transmission owners, two outages on a radial 230 kV circuit should not carry the same penalty as eight outages on multiple 230 kV circuits within a network. We would recommend that compliance be refined to identify trends, relevance and risk probability to help the industry focus their resources appropriately.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|--|-------------------------------------|-------------------------------------|--|
| Commenter | Yes | No | Comment |
| | | | <ul style="list-style-type: none"> o Re-format FAC-003-1 to conform to the current Standards Development Procedure. o Remove references to RRO in the standard and substitute a responsible entity. o Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to <200kV is necessary. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. |
| ITC Transmission | | <input checked="" type="checkbox"/> | The Standard Drafting Team should not be given latitude to "include other improvements to the standards deemed appropriate by the drafting team." The purpose of the SAR is to identify the changes contemplated by the need for the Standard Revision. If there are changes that the SAR requestor would like to make to the Standard, they should be spelled out in the SAR. If the SAR requestor does not really know the changes that should be made to the standard, then the SAR should be withdrawn until the need for a SAR can be adequately justified. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team agrees and has removed the paragraph in the brief description of the SAR that opened the scope to other improvements. | | | |
| ISO/RTO Council Standards Review Committee ISO New England | | <input checked="" type="checkbox"/> | The SRC (ISO-NE) would suggest that the SAR be clear that it will be a complete review of the subject requirements: to include the addition, deletion and modification of requirements as agreed to by public consensus. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team removed the paragraph in the brief description of the SAR that opened the scope to other improvements. The Drafting Team concurs with consensus of the commenters that the technical elements of this standard are complete. The intent of the SAR modification is to address FERC issues and to conform to updates in the Reliability Standards Development Procedure and Sanctions Guidelines. | | | |
| Hydro-Québec TransÉnergie | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | FERC staff report has objection to use IEEE standard. Should we understand that another standard is recommended instead? |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE standard and the Drafting Team agreed to address their questions and concerns. | | | |
| Hydro One Networks, Inc. | | <input checked="" type="checkbox"/> | To address FERC's objection to use the IEEE standard, it is necessary to clarify the objective of the Vegetation Management Standard. As we understand it, the focus of the FAC-003-1 standard is system reliability and as such, the responsibility and authority on defining and applying the safety margins is rightly assigned to the transmission owner. We request clarification on how employing safety factors will address reliability and how prescribing minimum clearances within the standard will |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|---|-------------------------------------|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| | | | <p>improve reliability.</p> <p>Please note that the Canadian Standards Association is revising standard C22.3 No. 1 - Overhead Systems. The new version will include clearances to vegetation and the proposed minimum clearances are in alignment with FAC-003-1.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE standard and the Drafting Team agreed to address their questions and concerns. | | | |
| <p>SERC Reliability Corporation</p> <p>Progress Energy</p> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <p>Minimum Inspection Intervals:</p> <p>The SERC VMS (Progress Energy) believes that FAC 003-1 provides the proper amount of flexibility regarding vegetation inspection cycles and that the Standards Drafting Team should not impose minimum inspection intervals on a continent with such regional diversity in climate and plant life.</p> <p>The purpose of Requirement 1.1 of standard FAC-003-1 is to put the responsibility for proper inspection cycles on the entity that knows the local conditions and can best define what that inspection frequency should be, the Transmission Owner. Both NERC and the FERC staff have recognized that various local conditions can have an affect on the determination of adequate inspection frequencies. Establishing a mandatory minimum inspection frequency could have two detrimental effects on the industry.</p> <p>First, where a particular region is heavily forested and has heavy rainfall along with extended or year round growing seasons, a “back stop” minimum inspection frequency could lead transmission owners to conduct inspections less frequently than required by the local conditions. This could result in a Transmission Owner complying with the standard while not adequately protecting the reliability of that region’s transmission system. This is a “lowest common denominator” approach which FERC has repeatedly stated is inappropriate for the reliability standards.</p> <p>Second, where a particular region is arid, sparsely forested or has a minimum growing season, a “back stop” minimum could require a more frequent interval than is realistically needed. This would result in increased and unnecessary costs for electric utility customers without providing an increase in system reliability.</p> <p>In its discussion of inspection intervals, FERC indicates that a “one-year vegetation</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|-------------|-----|----|---|
| Commenter | Yes | No | Comment |
| | | | <p>inspection cycle is reasonable." FERC NOPR, 10/20/2002 paragraph 383. The Commission continues by stating "a one-year inspection cycle is the 'norm' for the industry, but not the lowest common denominator..." It follows from this observation that the industry as a whole recognizes and follows appropriate inspection intervals without a need to change the standard. Further, FERC also states "some variation to a continent-wide, one-year minimum inspection cycle should be allowed due to physical differences such as climate and species of vegetation." FERC NOPR 10/20/2006, paragraph 382. FERC's express recognition that a "one size fits all" approach is not appropriate further supports the SERC VMS's contention that the existing inspection requirements in standard FAC-003-1 should remain unchanged.</p> <p>Finally, the performance metrics of FAC-003 require the reporting of applicable transmission interruptions that are caused by vegetation. This process should appropriately identify Transmission Owners' inspection cycles that are not adequate. In this event, the ERO has the authority to engage the Transmission Owner in enforcement compliance actions and, therefore, can remedy any vegetation-related outage that is attributed to the Transmission Owner's inspection frequency.</p> <p>Standard Applicability: The SERC VMS disagrees with the proposal to revise the 200 kV threshold for determining facilities subject to this standard.</p> <p>The majority of transmission facilities below 200 kV have significantly different design/construction/operating characteristics and have not been cited as impacting bulk power system reliability. For example, the Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations April 2004 by the U.S.- Canada Power System Outage Task Force and all referenced major blackouts(pages 103-115) in that report, cited only outages which involved vegetation at line voltages above 200 kV. Generally applying requirements appropriate for 200 kV lines to lines less than 200 kV will result in significant documentation and reporting of items such as restrictions, mitigation plans, off right-of-way vegetation-related outage investigation/information and other issues, all of which dilutes the focus on lines that directly impact bulk power system reliability.</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|-------------|-----|----|---|
| Commenter | Yes | No | Comment |
| | | | <p>Revising the standard to use general criteria or broad language for defining "Bulk Power System" transmission lines covered by the standard could become a "one size fits all" approach. If that approach were taken, the standard would cover a significant number of transmission lines that have no direct impact on bulk power system reliability under standard planning/operating conditions, resulting in a significant increase in costs for electric customers without improving "Bulk Power System" system reliability. The SERC VMS believes that the applicability provision of the standard should instead focus attention of the standard only on the transmission lines below 200 kV that directly impact "Bulk Power System" reliability, as the current version requires.</p> <p>In sum, while the SERC VMS (Progress Energy) recognizes some validity in the Commission's concern, the SERC VMS (Progress Energy) recommends that the applicability provision of this standard should be revised only if existing system design, planning or operating reliability criteria and parameters are considered as a basis for defining the applicability of the standard. To that end, the SERC VMS recommends each Regional Entity (RE) determine applicability of FAC-003 to those lines within the region that are between 100 kV and 200 kV if and only if they are identified as operationally significant elements of Interconnection Reliability Operating Limits ("IROLs").</p> <p>IEEE Standard for Minimum Clearances: The SERC VMS disagrees with objections in the FERC staff report to the use of the IEEE 516-2003 clearance as the minimum acceptable distances for "Clearance 2". The IEEE 516-2003 tables are appropriate for defining the minimum acceptable clearances to prevent flashover between conductors and vegetation under all rated electrical operating conditions. Closer minimum clearances such as the minimum length of a support insulator could have been adopted as a "lowest common denominator" clearance. However the clearance in IEEE 516-2003 was adopted to ensure an additional margin of reliability. FERC staff references ANSI Z-133 which is a safety standard that addresses worker safety as well as the safety of the general public. As such, the purpose of ANSI Z-133 is to address worker safety and is not focused on transmission line reliability, which is the purpose of FAC-003-1. OSHA, NESC and other related safety standards have clearances in excess of IEEE 516-2003. Those clearances are clearly focused on safety issues and will still apply</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|--|-----|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| | | | to other aspects of design and operation of electric facilities (such as public and worker safety) but do not need to be referenced in a vegetation management reliability standard. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The FERC is no longer indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. ▪ The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE standard and the Drafting Team agreed to address their questions and concerns. | | | |
| TVA | | <input checked="" type="checkbox"/> | <p>Minimum Inspection Intervals: FAC 003-1 provides the proper amount of flexibility regarding vegetation inspection cycles and that the Standards Drafting Team should not impose minimum inspection intervals on a continent with such regional diversity in climate and plant life.</p> <p>Requirement 1.1 of standard FAC-003-1 places the responsibility for proper inspection cycles on the entity that knows the local conditions and can best define what that inspection frequency should be, the Transmission Owner. Both NERC and the FERC staff have recognized that various local conditions can have an affect on the determination of adequate inspection frequencies. Establishing a mandatory minimum inspection frequency could have two detrimental effects on the industry. First, where a particular region is heavily forested and has heavy rainfall along with extended or year round growing seasons, a "back stop" minimum inspection frequency could lead transmission owners to conduct inspections less frequently than required by the local conditions. This could result in a Transmission Owner complying with the standard while not adequately protecting the reliability of that region's transmission system. This is a "lowest common denominator" approach which FERC has repeatedly stated is inappropriate for the reliability standards.</p> <p>Page 5 of 6 January 15, 2007 Second, where a particular region is arid, sparsely forested or has a minimum growing season, a "back stop" minimum could require a more frequent interval than is realistically needed. This would result in increased and unnecessary costs for electric utility customers without providing an increase in system reliability. In its</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|-------------|-----|----|---|
| Commenter | Yes | No | Comment |
| | | | <p>discussion of inspection intervals, FERC indicates that a “one-year vegetation inspection cycle is reasonable.” FERC NOPR, 10/20/2002 paragraph 383. The Commission continues by stating “a one-year inspection cycle is the ‘norm’ for the industry, but not the lowest common denominator...” It follows from this observation that the industry as a whole recognizes and follows appropriate inspection intervals without a need to change the standard. Further, FERC also states “some variation to a continent-wide, one-year minimum inspection cycle should be allowed due to physical differences such as climate and species of vegetation.” FERC NOPR 10/20/2006, paragraph 382. FERC’s recognition that a “one size fits all” approach is not appropriate supports maintaining the existing inspection requirements in standard FAC-003-1. Finally, the performance metrics of FAC-003 require the reporting of applicable transmission interruptions that are caused by vegetation. This process will identify Transmission Owners’ inspection cycles that are not adequate. In this event, the ERO has the authority to engage the Transmission Owner in enforcement compliance actions and, therefore, can remedy any vegetation-related outage that is attributed to the Transmission Owner’s inspection frequency.</p> <p>Standard Applicability: The 200 kV threshold for determining facilities subject to this standard should not be revised. The transmission facilities below 200 kV have not been cited as impacting bulk power system reliability. The Final Report on the August 14, 2003 Blackout in the United states and Canada: Causes and Recommendations April 2004 by the U.S.- Canada Power System Outage Task Force and all referenced major blackouts(pages 103-115) in that report, cited only outages which involved vegetation at line voltages above 200 kV. Generally applying requirements appropriate for 200 kV lines to lines less than 200 kV will result in significant documentation and reporting of items such as restrictions, mitigation plans, off right-of-way vegetation-related outage investigation/information and other issues, all of which dilutes the focus on lines that directly impact bulk power system reliability. Revising the standard to use general criteria or broad language for defining "Bulk Power System" transmission lines covered by the standard could become a “one size fits all” approach. If that approach were taken, the standard would cover a significant</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|------------------|-----|----|--|
| Commenter | Yes | No | Comment |
| | | | <p>number of transmission lines that have no direct impact on bulk power system reliability under standard planning/operating conditions, resulting in a significant increase in costs for electric customers without improving "Bulk Power System" system reliability.</p> <p>The SERC VMS believes that the applicability provision of the standard should instead focus attention of the standard only on the transmission lines below 200 kV that directly impact "Bulk Power System" reliability, as the current version requires. The applicability provision of this standard should be revised only if existing system design, planning or operating reliability criteria and parameters are considered as a basis for defining the applicability of the standard. To that end, each Regional Entity (RE) should determine the applicability of FAC-003 to those lines within the region that are between 100 kV and 200 KV if and only if they are identified as operationally significant elements of Interconnection Reliability Operating Limits ("IROLs").</p> <p>IEEE Standard for Minimum Clearances:</p> <p>Page 6 of 6 January 15, 2007</p> <p>The IEEE 516-2003 should continue to be used as the minimum acceptable distances for "Clearance 2". The IEEE 516-2003 tables are appropriate for defining the minimum acceptable clearances to prevent flashover between conductors and vegetation under all rated electrical operating conditions. Closer minimum clearances such as the minimum length of a support insulator could have been adopted as a "lowest common denominator" clearance. However the clearance in IEEE 516-2003 was adopted to ensure an additional margin of reliability. FERC staff references ANSI Z-133 which is a safety standard that addresses worker safety as well as the safety of the general public. As such, the purpose of ANSI Z-133 is to address worker safety and is not focused on transmission line reliability, which is the purpose of FAC-003-1. OSHA, NESC and other related safety standards have clearances in excess of IEEE 516-2003. Those clearances are clearly focused on safety issues and will still apply to other aspects of design and operation of electric facilities (such as public and worker safety) but do not need to be referenced in a vegetation management reliability standard.</p> |
| Response: | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|---|-------------------------------------|-------------------------------------|--|
| Commenter | Yes | No | Comment |
| | | | <ul style="list-style-type: none"> The FERC is no longer indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE standard and the Drafting Team agreed to address their questions and concerns. |
| Midwest Reliability Organization | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <p>The scope of this SAR would have been better defined if the complete Standard Review Form for the Vegetation Management Standard had been included as an attachment to the SAR. Several issues in the Standard Review Form for this SAR were excluded with this posted SAR. For example, issues related to R3.1 and R3.2.</p> <p>The MRO is also not clear on the scope of the instruction to the SDrafting Team to "Expand the applicability to include transmission lines operated at 200 kV and above and other facilities as determined by the ERO so that the Reliability Standard applies to Bulk-Power System transmission lines that have an impact on reliability" It is not clear to the MRO what is meant by "as determined by the ERO". What process will the ERO use? The ERO should use stakeholder input to make this determination. The current standard is applicable to all transmission lines 200 kV and above and to any lower voltage lines designated by the RRO as critical to the electric system in the region. Will the ERO be in a position to assume the assessment of the criticality of lines less than 200 kV without input from the entities that have historically operated in each region?</p> <p>Also, the MRO is not clear on what is included in the term Bulk-Power System. What guidance will the SDrafting Team have in determining what is meant by the Bulk-Power System? Since this relates to the large issue of the Bulk Electric System versus Bulk-Power System is this SAR the appropriate vehicle to address this issue? There should be a wider discussion and resolution to this issue for consistent application to all standards by all SDrafting Teams.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The comments on R3.1 and R3.2 were developed by NERC staff in a previous version of this SAR and these have been deleted from the revised SAR. Instead, the Standard Drafting Team will apply the Standard Review Guidelines to the Standard. The comments from the FERC NOPR were removed from the revised SAR. The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. | | | |
| Florida Power and Light Company | | <input checked="" type="checkbox"/> | <p>Establishing minimum inspection cycles is a very problematic given the large variety of vegetative conditions throughout North America. In reality most lines are inspected annually for all failure modes including vegetation. The trees that played a part of the North East Blackout were known and on the radar screen. The utility</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|---|-----|-------------------------------------|--|
| Commenter | Yes | No | Comment |
| | | | <p>failed to take action. The inspection did not prevent the outage from occurring. The failure to take action on the known site condition was the contributing factor to the Blackout.</p> <p>We do not understand the need to establish separate criteria other than the RRO's critical designation. A transmission line is either necessary to the system to prevent an overload situation or it is not. To add lines that might not be critical to the system would dilute the effort needed to insure that the critical lines are properly maintained. Since system stability is the focus of the standard, what criteria would be used to bring additional lower voltage lines under the standard.</p> <p>When developing Clearance 2, the committee needed to determine a distance at which a Transmission Owner could be out of compliance even though no interruption has occurred. In a sense this is the maximum 'speed limit' at which the utility would be in violation. Their criteria was "How close can a tree be and not cause an outage?" The engineers on the team reviewed scientific data and current standards. The IEEE MAID standard was the consensus selection of the sub committee. All parties need to understand that this is one of the building blocks that would be used in determining the width of an easement or ROW. Picking the ANSI Z133.1 Table 1 or 2 as the NOPR suggests could immediately place thousands of miles of transmission lines out of compliance that have performed satisfactorily for years. The ANSI tables are phase to phase safety calculations when grow-in tree interruptions are phase to ground situations.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The FERCS no longer indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. | | | |
| Public Service Commission of South Carolina | | <input checked="" type="checkbox"/> | We are concerned that lowering the applicability threshold to all lines below 200KV will divert attention and resources from the higher voltage lines which have a higher probability of causing grid problems. The RRO and transmission owners best know which lower voltage lines should be included under the requirements of the |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|---|-----|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| | | | standard. |
| <p>Response:</p> <ul style="list-style-type: none"> The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. | | | |
| IESO Ontario | | <input checked="" type="checkbox"/> | <p>With respect to the item in the Brief Description section under FERC NOPR: "Remove the applicability to transmission lines operated at 200 kV and above so that the Reliability Standard applies to Bulk Power System transmission lines that have an impact on reliability as determined by the ERO." It is the IESO's view that requiring the ERO to make these determinations, is inappropriate. We believe the standard should remain applicable to lines 200 kV and above and lines below 200 kV as determined by the Reliability Coordinator, similar to the PRC-023 standard.</p> <p>The IESO also suggests that it be made clear in the SAR that it will be a complete review of the subject requirements: to include the addition, deletion and modification of requirements, as agreed to by public consensus.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to transmission voltage class <200kV is necessary. The Drafting Team removed the paragraph in the brief description of the SAR that opened the scope to other improvements. The Drafting Team concurs with consensus of the commenters that the technical elements of this standard are complete. The intent of the SAR modification is to address FERC issues and to conform to updates in the Reliability Standards Development Procedure and Sanctions Guidelines. | | | |
| Dominion - Electric Transmission | | <input checked="" type="checkbox"/> | <p>We disagree with the proposal from FERC NOPR regarding removing applicability to transmission lines >200kv. The proposal to apply the Standard to lines the ERO deems to have an impact on reliability can create inconsistency between regions and is a "fill in the blank" requirement. It is not clear whether the proposed change would increase or decrease the number of transmission lines which are subject to reportable outages. In addition, we support the Standard's existing language that limits reporting to locked out lines only.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. | | | |
| Southern California Edison | | <input checked="" type="checkbox"/> | <p>The Commission's recommendation to develop a "minimum" vegetation inspection cycle is untimely and their proposal to revise the scope ignores plain language contained in the standard.</p> <p>In SCE's view, the Commission's incessant need to bolt on a "widget count" requirement (for minimum inspection cycles) will likely lead to an increased number of tree-to-line contacts. Unlike the static equipment located in power plants</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|--|-----|-------------------------------------|--|
| Commenter | Yes | No | Comment |
| | | | <p>and substations, trees and foliage in and around Transmission ROWs are subject to uncontrollable and fairly unpredictable natural forces. Industry debate during the previous SAR and comments submitted in the recently concluded NOPR demonstrate this approach is unsound. Transmission Owners in neighboring states commented that their cycles and trimming protocols vary from year to year and sometimes circuit to circuit. Instituting a minimum inspection cycle of 3 years (for example) might appeal to certain TOs because doing so will support a case for increased rate recovery. But for others, a mandatory 3 year inspection cycle will offer a potential cost reduction opportunity because they are already following a voluntary 2 year inspection cycle.</p> <p>The Commission's other recommendation should be rejected because subsection 4.3 clearly covers transmission lines operating below 200 kV. ["...any lower voltage lines designated by the RRO as critical to the reliability of the electric system in the region."]</p> <p>FAC-003-1 requires Transmission Owners to - "define a schedule for and the type (aerial, ground) of ROW vegetation inspections". Although the Commission staff would prefer a specific time duration because it suits their "check list" style of enforcement, the prudent thing to do is allow TOs the latitude to manage their part of the bulk system and hold each accountable to the existing compliance measures in FAC-003-1. Similarly, revising subsection 4.3 in deference to the Commission's or staff's misinterpretation of plain text is unwarranted.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The FERC is no longer indicating a need to develop a requirement for a minimum inspection cycle in its March 16, 2007 Order 693 and stakeholders indicated they did not support this change, so it was removed from the SAR. The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. | | | |
| New York State Electric and Gas Corporation | | <input checked="" type="checkbox"/> | <p>The current standard FAC 003 1 should be monitored for one to two full years after all segments have been implemented. February 14, 2007 is too soon to determine if a revision is required.</p> <p>The standard should apply to 200 KV lines and higher voltages to prevent cascading type power outages.</p> <p>The IEEE table 516 is referenced as a minimum guide for table 2 clearances. This table provides clear and measurable distances that can used for audits and</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|--|-----|-------------------------------------|--|
| Commenter | Yes | No | Comment |
| | | | <p>potential compliance issues. The current standard allows enough flexibility so that the clearance 2 distance can be expanded if a utility feels that is the correct approach in a specific region.</p> <p>The physical differences between electric systems, tree growth rates, local regulations, climate, and geography make it important to provide a flexible standard, a "one size fits all" approach will not be effective in the long run.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The ERO Rules of Procedure include the latest versions of the Reliability Standards Development Procedure Manual and the Sanctions Guidelines. These documents were approved following the approval of FAC-003-1. FAC-003-1 will need to be revised to bring the standard into conformance with these documents. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. ▪ The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE standard and the Drafting Team agreed to address their questions and concerns. ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The FERC is no longer indicating a need to develop a requirement for a minimum inspection cycle (March 16, 2007 Order 693) and stakeholders indicated they did not support this change, so it was removed from the SAR. | | | |
| Manitoba Hydro | | <input checked="" type="checkbox"/> | <p>The scope of the SAR is too vague on several important points.</p> <p>(1) There is no definition for the phrase bulk-power system - it would be therefore unclear as to what facilities would be covered by the standard. What guidance will the SDrafting Team have in determining what is meant by the bulk-power system? Since this relates to the large issue of the Bulk Electric System versus Bulk-Power System is this SAR the appropriate vehicle to address this issue? There should be a wider discussion and resolution to this issue for consistent application to all standards by all SDrafting Teams.</p> <p>(2)The concept of Mitigation Time Horizons has not been defined and the use of Mitigation Time Horizons has not been detailed.</p> <p>(3)The ERO is not the appropriate entity to determine which lines have an impact on reliability. This should be Transmission Operators in coordination with Reliability Coordinators. If this standard is to include the methodology to determine which lines have a reliability impact on the bulk-power system, the the applicability of the</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|--|-----|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| | | | <p>standard will have to include other entities besides the Transmission Owners.</p> <p>(4) The SAR refers to RA, i.e., Reliability Authority. This entity no longer exists in the Functional Model but has been replaced by Reliability Coordinator.</p> <p>(5) What is meant by "Too weak on compliance"?</p> <p>(5) FERC objects to IEEE Standard but there is no other guidance to the standard drafting team.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The comments regarding Bulk Power System in the FERC NOPR comments were removed from the revised SAR. ▪ The ERO Rules of Procedure require the inclusion of time horizons for each standard – these are defined in the Sanctions Guidelines and are used to help determine the size of a sanction. ▪ The revised SAR does not include the language proposing that the ERO determine which lines have an impact on reliability. ▪ The reference to Reliability Authority (RA) was removed from the revised SAR. ▪ The reference, 'Too weak on compliance' was removed from the revised SAR as it was addressed with the development of Version 1 of this standard. ▪ The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE standard and the Drafting Team agreed to address their questions and concerns. | | | |
| Southern Company Transmission | | <input checked="" type="checkbox"/> | <p>The scope of the SAR should be limited to formatting and changes of wording that recognize the formation of the ERO and its procedures.</p> <p>The drafting team should not attempt to re-write the present clearance requirements, which are based on IEEE flashover distances. The clearance requirements in the original standard were written through extensive evaluation and input from the industry. There was strong industry consensus on the present language and the standard is serving its intended purpose very well. The clearance standard should not be revised until it is found to be ineffective or inadequate.</p> <p>The drafting team should not attempt to change the applicability of the present standard. The present standard applies to all 200 KV and higher lines, plus any other line the Regional Entity deems critical. A change in wording to make the standard apply to any bulk power system transmission line deemed critical by the ERO does not provide any additional safeguard that is not already contained in the standard as presently written.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #2 | | | |
|---|-------------------------------------|-------------------------------------|-----------------|
| Commenter | Yes | No | Comment |
| standard and the Drafting Team agreed to address their questions and concerns. ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. | | | |
| Baltimore Gas and Electric | | <input checked="" type="checkbox"/> | As noted above. |
| Response: See response to your question #1 comment above. | | | |
| Salt River Project | <input checked="" type="checkbox"/> | | |
| Allegheny Power | <input checked="" type="checkbox"/> | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

3. Are there additional revisions, beyond those identified in the SAR that should be addressed within the scope of this project?

Summary Consideration: Commenters suggested a number of additional revisions to the SAR related to:

- Applicability
- Right of Way (ROW) definition
- Compliance
- Clearance requirements
- Others

The SAR Drafting Team revised the SAR to consider these suggested revisions.

| Question #3 | | | |
|---|-------------------------------------|----|--|
| Commenter | Yes | No | Comment |
| Bonneville Power Administration | <input checked="" type="checkbox"/> | | It is not clear if category 1 and 2 refer only to occupied ROW, or also to unoccupied area reserved by the Transmission Owner for future expansion. |
| <p>Response:</p> <ul style="list-style-type: none"> ○ Category 1 outages refer to “grow-ins” inside or outside the right-of-way regardless; while a Category 2 outage applies to “fall-ins” on land that is inside the legal bounds of the right-or-way whether occupied or not. ▪ The FERC has directed the ERO to address the definition of ROW in its Order 693. ▪ As part of the SAR, the SAR Drafting Team commits the Standard Drafting Team to prepare technical reference material such as a “white paper” to aid in understanding the technical basis for the standard and, unless the requirements in the standard are modified to add more clarity, the SAR Drafting Team will recommend that the white paper include a discussion of the differences between category 1 and category 2 to address your concern. | | | |
| FRCC | <input checked="" type="checkbox"/> | | <p>Requirement 3.2, item (1), the reporting exemption for outages occurring due to natural disasters should be expanded to include all vegetation outages that occur as a result of the disaster. Currently the exemption applies to vegetation from outside the ROW.</p> <p>As a result of significant experience with hurricanes, our operators have found that this distinction results in a waste of post-disaster resources. The standard currently requires the owner to investigate and determine the original location of the vegetation that may have caused an outage. Restoration of circuits may be delayed and often times, determination of the original location of the vegetation is not possible.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The SAR Drafting Team will review the reporting exemptions to all category outages under major disasters in Requirement R3.2. | | | |
| Northeast Power Coordinating Council | <input checked="" type="checkbox"/> | | Only if the Bulk Power System is determined as an impact based performance based methodology. |
| <p>Response:</p> | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #3 | | | |
|--|-------------------------------------|----|--|
| Commenter | Yes | No | Comment |
| <ul style="list-style-type: none"> ▪ The FERC looks to the Standard Drafting Team to determine whether a change to the applicability to voltage <200kV is necessary. The comments regarding Bulk Power System in the FERC NOPR comments were removed from the revised SAR ▪ | | | |
| SERC Reliability Corporation | <input checked="" type="checkbox"/> | | <p>Standard Applicability: The outage reporting requirement for the RRO should be deleted. Making FAC-003 applicable to the RRO is in violation of the legislation that established the ERO. This legislation states that enforceable standards can apply only to owners, users and operators of the bulk power system. Further, in the NOPR on NERC standards, FERC declined to approve those standards that applied to the RROs, in part because the RROs are not owners, users or operators.</p> <p>Compliance: The SERC VMS recommends deleting reporting requirements for Category 3 outages. These outages are not controllable, not relevant to compliance, not related to grid reliability, not related to cascading blackouts, and such reporting leads to unnecessarily biasing reliability related information.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team intends to review reporting criteria for Category 3 outages in the proposed technical reference material and may review the reporting requirement of Category 3 outages in R.3 and R.4. | | | |
| Progress Energy | <input checked="" type="checkbox"/> | | <p>Standard Applicability: The outage reporting requirement for the RRO should be deleted. Making FAC-003 applicable to the RRO is in violation of the legislation that established the ERO. This legislation states that enforceable standards can apply only to owners, users and operators of the bulk power system. Further, in the NOPR on NERC standards, FERC declined to approve those standards that applied to the RROs, in part because the RROs are not owners, users or operators.</p> <p>Compliance: Progress Energy believes that FAC-003 should focus compliance on the issues that improve system/grid reliability. The VM standard outage reporting requirements do not focus on ensuring grid/network reliability.</p> |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #3 | | | |
|---|-------------------------------------|----|--|
| Commenter | Yes | No | Comment |
| | | | <p>Category 2 outages (“Fall-ins” from vegetation within the R/W) result in a level of non-compliance (Level 2 or 3). However, “Fall-ins”, either off-R/W or within the R/W, are random events. They would not occur sequentially (i.e., a fall-in causing another line section to overload resulting in another “fall-in”) and would not have the potential to cascade into a widespread blackout. This is a customer reliability issue for that line, not a grid reliability issue. While it may be worthwhile to report for tracking and trending, it is not an outage that should result in non-compliance.</p> <p>Category 1 “Grow-ins” include outages that result from conductor side-wing would be reported as Category 1 outages, resulting in non-compliance (Level 3 or 4). However, conductor side-swing outages are random occurrences. They are not the sequential outages that would have the potential to cascade into a widespread blackout. This is a customer reliability issue for that line, not a grid reliability issue. These types of outages should be not be considered any different than numerous other random events that result in transmission line outages.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The SAR Drafting Team understands the distinction between grow-in and fall-in related outages and the prediction challenges with fall-in related outages. Modifying the compliance section is included in the scope of the SAR. | | | |
| Florida Power and Light Company | <input checked="" type="checkbox"/> | | <p>Requirement 3.2 exempts reporting of outages from outside the ROW when natural disasters such as tornados or hurricanes occur. Our experience with numerous hurricanes indicates that all outages during these types of events should be exempt. The focus in these situations is to get the lines back in service and restore customers. There is insufficient manpower to adequately complete the forensics necessary to determine an accurate root cause. It is not uncommon to find vegetation debris in the lines or downed trees on the ROW in this situation. In most cases it is not possible to determine the original location of these trees.</p> <p>In the compliance section of the document a transmission owner becomes non compliant with a single category 1 or 2 outage. This occurs regardless of the circumstances. A non compliant penalty for a single outage in a situation where no customers were affected and the system could not have been compromised is not reasonable. It is also not an indicator of a poorly maintained system. We agree that several Category 1 or 2 interruptions could be an indicator of neglect but one is not. We recommend that The compliance section be reviewed with this in mind.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The Standard Drafting Team will review the reporting exemptions to all category outages under major disasters in Requirement | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #3 | | | |
|--|-------------------------------------|----|--|
| Commenter | Yes | No | Comment |
| <p>R3.2.</p> <ul style="list-style-type: none"> Modifying the compliance section is included in the scope of the SAR. | | | |
| Midwest Reliability Organization | <input checked="" type="checkbox"/> | | <p>Since the IEEE standard does not appear to be a favorable clearance requirement, minimum clearance requirements should be tied to legal documents such as easements, state statute, or permits. This will help Transmission Owners to maintain their ROWs based on their agreements with the land owners and not rely on historical ROW management practices. It would also provide flexibility in clearance requirements based on geographical and climatological factors that influence different regions because landowner agreements will be different depending on local influences.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE standard and the Drafting Team agreed to address their questions and concerns. | | | |
| TVA | <input checked="" type="checkbox"/> | | <p>Standard Applicability: The outage reporting requirement for the RRO should be deleted. Making FAC-003 applicable to the RRO is in violation of the legislation that established the ERO. This legislation states that enforceable standards can apply only to owners, users and operators of the bulk power system. Further, in the NOPR on NERC standards, FERC declined to approve those standards that applied to the RROs, in part because the RROs are not owners, users or operators.</p> <p>Compliance: Reporting requirements for Category 3 outages should be eliminated. These outages are not controllable, not relevant to compliance, not related to grid reliability, not related to cascading blackouts, and such reporting leads to unnecessarily biasing reliability related information.</p> |
| <p>Response:</p> <ul style="list-style-type: none"> The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> Re-format FAC-003-1 to conform to the current Standards Development Procedure. Remove references to RRO in the standard and substitute a responsible entity. Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. The Standard Drafting Team intends to review reporting criteria for Category 3 outages in the proposed technical reference material and may review the reporting requirement of Category 3 outages in R.3 and R.4. | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #3 | | | |
|---|------------|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| Bandera Electric Coop. | | <input checked="" type="checkbox"/> | See Comment #2 |
| Response: See response to Comment #2. | | | |
| ITC Transmission | | <input checked="" type="checkbox"/> | We think the Standard is fine the way it is. |
| Response: <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| American Electric Power | | <input checked="" type="checkbox"/> | As stated in responses to questions 1 and 2, AEP believes that the current standard is adequate and that we are not aware of evidence to support a need for revising the current vegetation management standard. |
| Response: <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team will address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| Southern California Edison | | <input checked="" type="checkbox"/> | Although SCE is wholly dissatisfied with the integration of IEEE 516-2003 into FAC-003-1 and looks forward to the day when qualified industry professionals and utility arborists are provided an opportunity to develop a reasonable and scientifically sound method for determining "minimum" tree-to-line clearances, we believe this standard should be allowed to "soak" a bit before subjecting it to further revision. |
| Response: <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels. ▪ The Standard Drafting Team will address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. ▪ The Drafting Team recognizes that the IEEE standard is applicable. The FERC staff has questioned the applicability of the IEEE standard and the Drafting Team agreed to address their questions and concerns. | | | |

**Consideration of Comments on Transmission Vegetation Management SAR
(FAC-003-1)**

| Question #3 | | | |
|---|------------|-------------------------------------|---|
| Commenter | Yes | No | Comment |
| New York State Electric and Gas Corporation | | <input checked="" type="checkbox"/> | The Vegetation Management Standard FAC 003 1 is comprehensive, and utilities following the established guidelines will be able to meet FERC's expectation of preventing bulk power delivery outages by using crisp measurable guidelines that offer limited flexibility for varying conditions. |
| <p>Response:</p> <ul style="list-style-type: none"> ▪ The Drafting Team believes a revised standard is justified because it needs to include the following procedural changes: <ul style="list-style-type: none"> ○ Re-format FAC-003-1 to conform to the current Standards Development Procedure. ○ Remove references to RRO in the standard and substitute a responsible entity. ○ Add the compliance elements needed to support the Sanctions Guidelines, including time horizons, and violation severity levels, etc. ▪ The Standard Drafting Team will also address improvements identified by the FERC in its Order 693 - Mandatory Reliability Standards for the Bulk Power System. | | | |
| ISO/RTO Council Standards Review Committee | | <input checked="" type="checkbox"/> | |
| Hydro One Networks, Inc. | | <input checked="" type="checkbox"/> | |
| Allegheny Power | | <input checked="" type="checkbox"/> | |
| Dominion - Electric Transmission | | <input checked="" type="checkbox"/> | |
| CenterPoint Energy Houston Electric, LLP | | <input checked="" type="checkbox"/> | |
| ISO New England | | <input checked="" type="checkbox"/> | |
| Central Hudson Gas & Electric | | <input checked="" type="checkbox"/> | |
| Public Service Commission of South Carolina | | <input checked="" type="checkbox"/> | |
| Hydro-Québec TransÉnergie | | <input checked="" type="checkbox"/> | |
| Southern Company Transmission | | <input checked="" type="checkbox"/> | |
| IESO Ontario | | <input checked="" type="checkbox"/> | |
| Salt River Project | | <input checked="" type="checkbox"/> | |
| Baltimore Gas and Electric | | <input checked="" type="checkbox"/> | |

