

Successive Ballot (February 18-28, 2011) Consideration of Comments Report

Project 2007-07 Vegetation Management — September 30, 2011

Summary Consideration:

In order to be consistent with the latest version of NERC's Results Based Standards template, the heading "Objective" was replaced with "Purpose," and the numbering, headings, and sections were reformatted as necessary.

Several entities expressed concern with the use of the Minimum Vegetation Clearance Distance (MVCD) and elimination of Clearance 1. With respect to comments about the MVCD, R3 does not suggest the MVCD be used as a distance to manage vegetation. The MVCD was established as a beginning of a series of "building blocks" for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions. R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner's overall vegetation management approach. The net result of this "building block" approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD. In a performance-based standard, requirements are focused on "what" needs to be accomplished to achieve desired results and avoids prescriptive requirements of "how" to achieve that result. TO's are in the best position to determine the appropriate management approach suited for their system, rather than a "one size fits all" or "fill in the blank" requirement that could suppress best practices for vegetation management.

Other entities questioned whether the goal of the standard was to "prevent outages" or to "manage vegetation." In Order 693, FERC was very specific that "...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation." The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated.

Some entities expressed concern with the mandatory inspection intervals proposed in the standard. The SDT recognizes that a number of Transmission Owners in North America may prefer to set their own inspection intervals. Because there is substantial industry support for an annual inspection interval the SDT believes that the industry is best served with this approach.

Several entities suggested making minor changes to clarify the footnotes. The team did so.

If you feel that the drafting team overlooked your comments, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Herb Schrayshuen, at 404-446-2563 or at herb.scrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

Voter	Entity	Segment	Vote	Comment
Paul B. Johnson	American Electric Power	1	Affirmative	<p>American Electric Power believes that the phrase "arboricultural activities or horticultural or agricultural activities" was mistakenly introduced into Footnotes 2 and 4, and should be deleted from both footnotes. If the phrase remains in the Standard, it may empower orchard growers, landowners and others to plant trees on the right of way and challenge Transmission Owners' rights to perform maintenance on the presumption that the standard will exempt the TO from violating the outage or encroachment requirements.</p> <p>For increased clarity, AEP offers the following change to the second paragraph of M1, as well as the second paragraph of M2. The original text "If a later confirmation of a Fault by the Transmission Owner shows that a vegetation encroachment within the MVCD has occurred from vegetation within the ROW, this shall be considered the equivalent of a Real-time observation" should be replaced</p>

¹ The appeals process is in the Reliability Standards Development Procedure: http://www.nerc.com/files/RSDP_V6_1_12Mar07.pdf.
Consideration of Comments on Successive Ballot of FAC-003-2

Voter	Entity	Segment	Vote	Comment
				with “If a later confirmation of a Fault by the Transmission Owner shows that a vegetation encroachment within the MVCD has occurred from vegetation growing into or blowing together with the conductor within the ROW, this shall be considered the equivalent of a Real-time observation. A brief encroachment caused by falling vegetation passing through the MVCD is not considered an encroachment in this requirement”.
<p>Response: Thank you for your comments. The SDT made suggested changes to the footnotes as proposed. Regarding the issue of fall-ins, the SDT is sympathetic to your concern. In fact, the SDT had originally crafted language similar to that which you suggested. However, due to concerns expressed by regulators and others, the exemption for encroachment violations due to falling vegetation from inside the right of way was removed.</p>				
Robert D Smith	Arizona Public Service Co.	1	Negative	Overall comment: The objective, as written, is about outages that can lead to cascading and not about reliability. Recommended change to Standard Objective: To maintain a reliable electric transmission system, implement a defense-in-depth strategy to manage vegetation located on transmission rights of way (ROW) and minimize encroachments from vegetation located adjacent to the ROW.
<p>Response: The SDT thanks you for your comment. With respect to the Purpose as written in the proposed standard, the language clearly states “To improve the reliability of the electric Transmission system...” The SDT made it a point to keep the Purpose as concise as possible without getting into issues that are covered further in the body of the standard.</p>				
John Bussman	Associated Electric Cooperative, Inc.	1	Negative	R1 - “Each Transmission Owner shall manage vegetation to prevent encroachments of the types shown below, into the Minimum Vegetation Clearance Distance (MVCD) of any of its applicable line(s) identified as an element of an Interconnection Reliability Operating Limit (IROL) in the planning horizon by the Planning Coordinator; or Major Western Electricity Coordinating Council (WECC) transfer

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				<p>path(s); operating within its Rating and all Rated Electrical Operating Conditions..."</p> <p>The following is my preliminary comment on this requirement. R1 - Associated Electric Cooperative Inc wants to thank the SDT for their hard work and all the effort associated with this standard. However we currently disagrees with the inclusion in this requirement of any and all IROLs identified within the entire planning horizon (typically 10 years or more). Associated Electric certainly agrees that in real time and in the near term sub 200 kV elements of an IROL should be subject to R1. It seems unreasonable, however, to include a sub 200 kV transmission line that might become an IROL element 10 years in the future. Perhaps the time frame could be limited to the Transmission Owner's planned maintenance cycle.</p>
<p>Response: The SDT thanks you for your comment, and has revised the Standard's effective dates (exceptions) accordingly.</p>				
Gregory S Miller	Baltimore Gas & Electric Company	1	Affirmative	There seems to be a marginal level of improvement over the previous drafts.
<p>Response: The SDT thanks you for your comment.</p>				
Joseph S. Stonecipher	Beaches Energy Services	1	Negative	R1 and R2 Requirement reads: "Each Transmission Owner shall manage to prevent encroachment". The results of manage would be invoices of tree trimming actually performed, documentation of a vegetation management program that would be managed to, etc. However, the Measures proposed are all actual outages which are neither

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				<p>evidence of management nor evidence of encroachment since there can be encroachment without an outage, and in fact, many if not most encroachments do not result in outages. Hence, the Measures are inconsistent with the Requirements.</p> <p>Further, there is ambiguity of the action required in requirements R1 and R2 - e.g., do entities need evidence that they: 1) "manage", or 2) "prevent encroachment"; or 3) as implied by the Measures, prevent vegetation related outages? In other words, what needs to be proven through evidence? Certainly the third, prevent vegetation related outages, is not in the Requirement; yet, that is what is proposed for the Measures, highlighting the inconsistency between Requirements and Measures. But, how would the ambiguity between "manage" and "prevent encroachment" be resolved? One auditor could interpret that the Requirement is to "manage" and accept a vegetation management program and plan and proof that the plan was executed as appropriate evidence. Another auditor could interpret that "prevent" is the key word and look for evidence proving that there was never a vegetation encroachment. How would evidence be produced to provide the auditor that vegetation never encroached? Would video cameras and other surveillance measures need to operate 24 hours a day? Would we cause an entity to survey the lines periodically? One can easily see that "prevent encroachment" is inappropriate here since it is infeasible to create evidence of compliance.</p>
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that "...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances</p>				

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<p>between transmission lines and vegetation” (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated.</p>				
<p>Donald S. Watkins</p>	<p>Bonneville Power Administration</p>	<p>1</p>	<p>Affirmative</p>	<p>R2. Do you agree? If answer is no, please explain.</p> <p>BPA prefers the stratified levels of violation severity presented in the table for R1 and R2. Foot note # 2 on page 8 needs to be clarified with respect to arboricultural activities or horticultural or agricultural activities. Foot note # 4 on page 12 needs to be clarified with respect to arboricultural activities or horticultural or agricultural activities.</p> <p>In response to comments received that requirement R3 is unclear with respect to intent, the SDT added “maintenance strategies.” Do you agree this clarifies the intent? If answer is no, please offer alternative language.</p> <p>The TO procedures / policies and specifications shall demonstrate the TO’s ability to manage the system at all rated conditions to maintain reliability. BPA believes that the intent is clear, but the fundamental approach of using the MVCD (table 2) to manage a vegetation program is still problematic. These values are flashover distances and are way too close. This is acknowledged in a footnote to table 2 but no identification of allowable buffers/distances between energized phase conductors at rated temperatures and vegetation is discussed (this is left up the transmission owners). Clarity is needed on this topic. Setting a finite distance limit based on recognized standards, good science and risk avoidance should be done for the industry. BPA has previously made this comment during the drafting of the</p>

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				standard. It was not addressed then, nor has it been addressed now.
<p>Response: The SDT thanks you for your comments. The footnotes were changed to conform with your suggestions.</p> <p>With respect to comments about the MVCD, R3 does not suggest the MVCD be used as a distance to manage vegetation. The MVCD was established as a beginning of a series of “building blocks” for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions.</p> <p>R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner’s overall vegetation management approach. The net result of this “building block” approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD</p> <p>In a performance based standard, requirements are focused on “what” needs to be accomplished to achieve desired results and avoids prescriptive requirements of “how” to achieve that result. TO’s are in the best position to determine the appropriate management approach suited for their system, rather than a “one size fits all” that could suppress best practices for vegetation management.</p>				
Randall McCamish	City of Vero Beach	1	Negative	<p>Vero Beach's concern is that entities may not be able prove compliance with the standard. R1 and R2 say that: "Each Transmission Owner shall manage vegetation to prevent encroachments ...". If the requirements were interpreted such that "manage" is the operative word, then, we are OK because we can provide evidence of managing a program, such as a vegetation management plan and evidence of executing that plan (which does not align with the Measures). However, that 1) would cause the standard to not be performance based, and 2) it would be duplicative of the other requirements of the standard.</p> <p>If the requirements were interpreted with "prevent encroachment" as the operative phrase (which would be an</p>

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				<p>incorrect interpretation from the construct of the sentence) there is no way to provide sufficient evidence that encroachment was prevented during the audit-period. The suggested Measures are not sufficient evidence to prove compliance with that interpretation of the requirement. For instance, most encroachments do not result in outages; hence, lack of outages cannot prove that there were no encroachments, and real time observations are insufficient because it is a spot-check that does not cover the audit period.</p> <p>There are other weaknesses in the standard, such as R4 being un-measurable therefore unenforceable. However, in the guilty until proven innocent paradigm we live in, FMPA's primary concern is that industry could be put into a no-win situation of not being able to prove compliance with the standard if R1 and R2 are interpreted as "prevent encroachment", and if R1 and R2 are interpreted as "manage" then it is not a performance based standard as advertised. Vero Beach suggests one of two approaches:</p> <ol style="list-style-type: none"> 1. Performance based focused on preventing vegetation related outages. For instance: "Each Transmission Owner shall prevent vegetation related outages (except as noted in Footnote 2) of any of its applicable line(s) ..." Evidence of outages is practical to gather and provide, evidence of encroachment is not. 2. Modify the standard to be similar to the currently mandatory non-results based standard and focus on the word "manage". This would essentially mean eliminating R1

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				and R2 since the rest of the standard focuses on having a plan and managing to that plan.
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that “...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation” (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated.</p>				
Danny McDaniel	Cleco Power LLC	1	Negative	<p>Cleco disagrees with the SDT revising the definition for Right-of-Way (ROW). Right-of-Way is a term that has had a consistent meaning throughout history. If NERC tries to redefine the term, it will only add confusion because most entities will not reference the NERC glossary for a term which is widely used in the industry. In lieu of "Active Transmission Line ROW", please use another term such as Transmission Corridor. No assumptions would be made when reading in the Standard the the Entity is to maintain vegetation located within the Transmission Corridor. Since the term is not commonly used, the NERC glossary would be referenced.</p> <p>Also, Cleco disagrees that an encroachment into the MCVD that does not cause an outage should be considered non-compliant as stated in R1 and R2. The encroachment should only be reportable similar to misoperations as is in the PRC-004 standard.</p>
<p>Response: Thank you for your comments.</p> <p>The existing ROW definition in the glossary was created by and for the FAC-003-1 and was moved there when that standard was adopted. The definition includes a series of options that give the Transmission Owner latitude in establishing ROW width. It does not require selecting a single method for its system. The term “blowout standard” is not capitalized and is not a defined</p>				

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<p>term. This phrase in the definition allows a Transmission Owner to use its internal engineering standards or the general engineering standards that were in effect when the line was constructed to determine the ROW width. The SDT has limited the definition of Right-of-Way to a corridor of land with a defined width to operate a transmission line. This does not include danger tree rights.</p> <p>The definition of the MVCD is now added to this Standard. While use of the pre-2007 records is a compliance issue and is not in the purview of the SDT, it is the intent of the language in the definition that you could use this information.</p> <p>Regarding your second comment, R3 does not suggest the MVCD be used as a distance to manage vegetation. The MVCD was established as a beginning of a series of “building blocks” for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions.</p> <p>R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner’s overall vegetation management approach. The net result of this “building block” approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD</p> <p>Other related requirements of this “Defense in Depth” Standard serve to address any number of scenarios which may arise or hinder the TO’s ability to always strictly adhere to the management approach(s) established within R3. Thus the other requirements of this Standard provide the latitude for appropriate actions to remedy the condition without penalty. Further, trees which have encroached inside the MVCD are evidence of a deficiency in vegetation maintenance.</p>				
<p>Christopher L de Graffenried</p>	<p>Consolidated Edison Co. of New York</p>	<p>1</p>	<p>Affirmative</p>	<p>Reply to Question 5 on Comment Form: The added language for the annual work plan percentage complete calculation is shown in R7 not M7 as stated in the question. In the Guideline and Technical Basis Section for Requirement R6, there is a sample calculation shown for the amount of lines the TO failed to inspect. An example should also be included for Requirement R7 since there is some confusion regarding how modifications to the work plan affect the calculation.</p> <p>In the Lower VSL column for R7, it states that the TO failed to complete up to 5% of its annual vegetation work plan (including modifications if any). If a TO operates 100 lines and submits a justified modification that affects 10 miles of</p>

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				<p>lines, the total number of units in the final amended plan is 90 miles. When you read the VSL, it is somewhat confusing since the information in parenthesis says that the calculation 'includes' the modifications. Should it state 'excludes modifications if any' or the VSLs can simply be re-written to state that ..The TO failed to complete up to x% of the final amended plan.'</p> <p>Also, the VSLs in R6 and R7 should be consistent with each other: R6 says '...TO failed to inspect 5% or less.....' and R7 says '...TO failed to complete up to 5%....' They both should use the same verbiage in each VSL whether it is 'x% or less' or 'up to and including x%.'</p>
<p>Response: The SDT thanks you for your comments. The percentage should be based on the plan as modified. The SDT has changed the language in the standard to reflect this more clearly, and has modified the VSLs to be consistent as you have suggested.</p>				
Robert Martinko	FirstEnergy Energy Delivery	1	Affirmative	FirstEnergy supports standard FAC-003-2 and would appreciate consideration of our comments submitted through the formal comment period.
<p>Response: The SDT thanks you for your comments. Please see our consideration of your comments within the responses to the formal comments.</p>				
Luther E. Fair	Gainesville Regional Utilities	1	Negative	<ol style="list-style-type: none"> 1. It would seem that the impetus for FAC003 is to eliminate vegetation related outages within the rights-of-way as defined and subject to the exclusions as stated in footnote 2. Thus the requirement is to manage the ROW to prevent vegetation related sustained outages with the measure being no outages. With grow-ins and fall-ins from within the defined ROW being controllable factors.

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				<p>2. Including encroachments leaves the door open for fines to be imposed with no actual outage(s) having occurred. This may be like being found guilty of a crime that has not yet taken place.</p> <p>3. Combine vegetation related sustained outages by “grow-ins” and “blowing together of lines and vegetation located inside the ROW” as one item as they are both consequences of the growth of vegetation either vertically and horizontally.</p> <p>4. Leave vegetation related sustained outages by “fall-in” as a standalone as this will be related to structural problems occurring from a variety of sources.</p> <p>5. Combine R3 and R7 to R1 (development and implementation of a Transmission Vegetation Management Plan which shall include documented maintenance strategies or procedures or processes or specifications, delineation of an annual work plan and completion of same). Thus this would be the competency based requirements as a program without execution is meaningless.</p> <p>6. R1 and R2 become R2 and R3.</p>
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that “...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation” (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct</p>				

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inspections in which clearances are evaluated.				
Ted E Hobson	JEA	1	Negative	Need to align the "measures" with the standard requirement language and the performance-based philosophy.
<p>Response: The SDT thanks you for your comments. We are not quite clear as to what misalignment you refer to between the standard language and the measures. The SDT went to great lengths to ensure continuity between the requirements and the measures. While this standard was a first attempt at a "Results Based" approach, the SDT did have limitation in deciding what could be excluded from the standard. This standard has a mixture of the three types of requirements that comprise a results based approach: 1) Performance Based 2) Risk Based and 3) Competency Based. Having only performance-based requirements would not have resulted in a comprehensive, proactive standard.</p>				
Michael Gammon	Kansas City Power & Light Co.	1	Negative	The Standard lacks clarity regarding the facilities that are subject to Requirement 7. It is important that a Standard be clear and not introduce ambiguity or confusion. There are several references throughout the Standard to "for all applicable lines" and it should be made clear the work plan is specific to "all applicable lines".
<p>Response: The SDT thanks you for your comments. The team has made the appropriate modifications where necessary.</p>				
Stan T. Rzad	Keys Energy Services	1	Negative	Concern is that entities may not be able prove compliance with the standard. R1 and R2 say that: "Each Transmission Owner shall manage vegetation to prevent encroachments ...". If the requirements were interpreted such that "manage" is the operative word, then, we are OK because we can provide evidence of managing a program, such as a vegetation management plan and evidence of executing that plan (which does not align with the Measures). However, that 1) would cause the standard to not be performance based, and 2) it would be duplicative of the

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				<p>other requirements of the standard.</p> <p>If the requirements were interpreted with "prevent encroachment" as the operative phrase (which would be an incorrect interpretation from the construct of the sentence) there is no way to provide sufficient evidence that encroachment was prevented during the audit-period. The suggested Measures are not sufficient evidence to prove compliance with that interpretation of the requirement. For instance, most encroachments do not result in outages; hence, lack of outages cannot prove that there were no encroachments, and real time observations are insufficient because it is a spot-check that does not cover the audit period.</p> <p>There are other weaknesses in the standard, such as R4 being un-measurable therefore unenforceable. However, in the guilty until proven innocent paradigm we live in, FMPA's primary concern is that industry could be put into a no-win situation of not being able to prove compliance with the standard if R1 and R2 are interpreted as "prevent encroachment", and if R1 and R2 are interpreted as "manage" then it is not a performance based standard as advertised. One of two approaches are suggested:</p> <p>Performance based focused on preventing vegetation related outages. For instance: "Each Transmission Owner shall prevent vegetation related outages (except as noted in Footnote 2) of any of its applicable line(s) ..." Evidence of outages is practical to gather and provide, evidence of encroachment is not.</p> <p>Modify the standard to be similar to the currently mandatory</p>

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				<p>non-results based standard and focus on the word "manage". This would essentially mean eliminating R1 and R2 since the rest of the standard focuses on having a plan and managing to that plan.</p>
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that “...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation” (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated.</p>				
Walt Gill	Lake Worth Utilities	1	Negative	<p>CLWU's concern is that entities may not be able prove compliance with the standard. R1 and R2 say that: "Each Transmission Owner shall manage vegetation to prevent encroachments ...". If the requirements were interpreted such that "manage" is the operative word, then, we are OK because we can provide evidence of managing a program, such as a vegetation management plan and evidence of executing that plan (which does not align with the Measures). However, that 1) would cause the standard to not be performance based, and 2) it would be duplicative of the other requirements of the standard.</p> <p>If the requirements were interpreted with "prevent encroachment" as the operative phrase (which would be an incorrect interpretation from the construct of the sentence) there is no way to provide sufficient evidence that encroachment was prevented during the audit-period. The suggested Measures are not sufficient evidence to prove compliance with that interpretation of the requirement. For instance, most encroachments do not result in outages; hence, lack of outages cannot prove that there were no</p>

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				<p>encroachments, and real time observations are insufficient because it is a spot-check that does not cover the audit period.</p> <p>There are other weaknesses in the standard, such as R4 being un-measurable therefore unenforceable. However, in the guilty until proven innocent paradigm we live in, FMPA's primary concern is that industry could be put into a no-win situation of not being able to prove compliance with the standard if R1 and R2 are interpreted as "prevent encroachment", and if R1 and R2 are interpreted as "manage" then it is not a performance based standard as advertised. CLWU suggests one of two approaches:</p> <ol style="list-style-type: none"> 1. Performance based focused on preventing vegetation related outages. For instance: "Each Transmission Owner shall prevent vegetation related outages (except as noted in Footnote 2) of any of its applicable line(s) ..." Evidence of outages is practical to gather and provide, evidence of encroachment is not. 2. Modify the standard to be similar to the currently mandatory non-results based standard and focus on the word "manage". This would essentially mean eliminating R1 and R2 since the rest of the standard focuses on having a plan and managing to that plan..
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that “...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation” (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated.</p>				

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Saurabh Saksena	National Grid	1	Affirmative	The revised ROW definition emphasizes the ROW width needed to operate the transmission line(s). It is National Grid’s interpretation that the width established when the line was constructed is the width to be maintained. This width is documented in engineering drawings, per-2007 vegetation records or blow-out standards. This definition does not imply that danger tree rights beyond the constructed and maintained width are incorporated in the definition; therefore fallins - from outside the ROW but within an area with danger tree rights would not be considered fallin-ins from within the ROW. National Grid would like the SDT to comment on this interpretation in its response to these comments.
<p>Response: Your interpretation is consistent with the intent of the definition that the SDT provided. However the definition includes a series of options that give the Transmission Owner latitude in establishing ROW width. It does not require selecting a single method for its system. This phrase in the definition allows a TO to use its internal engineering standards or the general engineering standards that were in effect when the line was constructed to determine the ROW width. The SDT has limited the definition of Right-of-Way to a corridor of land with a defined width to operate a transmission line. This does not include danger tree rights.</p>				
Michael T. Quinn	Oncor Electric Delivery	1	Affirmative	In footnote 2 (pg. 8) and 4 (page 10), the wording “arboricultural activities or horticultural or agricultural activities” should be deleted and replaced with “or removal of, installation of, or digging around vegetation.”
<p>Response: The SDT thanks you for your comments. The footnotes have been changed.</p>				
John C. Collins	Platte River Power Authority	1	Negative	Vegetation Inspection: Is the intent of “... and those vegetation conditions under the TO’s control” to clarify that an entity must have ownership of the transmission line and right-of-way in addition to maintenance or operational responsibility (control), or something different? In situations

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				<p>where a TO owns one circuit on a double circuit, but the other circuit, facilities and ROW belong to another TO who has maintenance, and vegetation management responsibility, who would be responsible for violations? If the definition was modified to allow both maintenance and vegetation inspections to be performed concurrently, the intent might be clearer if it read: "This may be combined with other line inspections", or "This may be combined with a maintenance inspection" opposed to a general line inspection.</p> <p>R1 and R2: Does R1 correlate to facilities in 4.2.2. and 4.2.3. (overhead transmission lines operated below 200 kV) and R2 correlate to facilities in 4.2.1. (overhead transmission lines operated at 200kV or higher)? It isn't clear why the two requirements are split. Could it be one requirement which reads "...identified as a facility in Section 4.2"?</p> <p>R4: Our current imminent threat procedure requires a call to the Manager who confirms the existence of a vegetation condition that is likely to cause a Fault at any moment prior to notifying the control center. We assume notification, without any intentional time delay, would take place after managerial confirmation but feel like the enforcement authorities could interpret this differently based on how it is written in R4. If the intent of the requirement is how we interpret it, the requirement might be clearer if it read: After a Transmission Owner has confirmed a vegetation condition likely to cause a Fault at any moment, they shall notify the control center holding switching authority for the associated applicable transmission line, without any</p>

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				intentional delay.
<p>Response: The SDT thanks you for your comment. With regard to responsibility for a violation, the TO is the accountable party even if it has an agreement with another TO to inspect and manage vegetation.</p> <p>With regard to your suggestion in changing the definition of Vegetation Inspection, the SDT does not believe the proposed changes are necessary for the definition to be clear.</p> <p>With regard to R1 and R2, they applicability applies to 4.2.1 thru 4.2.3. The distinction between the requirement is R1 applies to all lines designated as having an Interconnection Reliability Operating Limit (IROL) in the planning horizon by the Planning Coordinator; or lines designated as Major Western Electricity Coordinating Council (WECC) transfer path(s).</p> <p>With regard to your imminent threat procedure, the standard is not prescriptive to define a TO’s imminent threat procedure. So, if your procedure includes managerial confirmation, then this would not be considered intentional delay.</p>				
Sammy Roberts	Progress Energy Carolinas	1	Affirmative	There needs to be a change in the footnote 2 and footnote 4 to remove the exemption for “arboricultural activities or horticultural or agricultural activities” and replace it with the term “or installation of.”
<p>Response: The SDT thanks you for your comments. The footnotes have been changed.</p>				
Laurie Williams	Public Service Company of New Mexico	1	Negative	<p>PNM is voting negative but offers the following comments to improve the standard.</p> <p>1. The last sentence of the Background on page 7 states: Thus, this Standard’s emphasis is on vegetation grow-ins. However, R1 says that we shall manage encroachments as follows: R1. Each Transmission Owner shall manage vegetation to prevent encroachment that could result in a Sustained Outage encroachments of the types shown</p>

Voter	Entity	Segment	Vote	Comment
				<p>below, into the Minimum Vegetation Clearance Distance (MVCD) of..... 2. An encroachment due to a fall-in from inside the active transmission line Right-of-Way (ROW) that caused a vegetation-related Sustained Outage, This seems contradictory.</p> <p>2. Fac-003-2 makes reference to FAC-014 and a “Planning Coordinator” in section 4.2.2 of Applicability: pg 5 see below:</p> <p>4.2.2. Overhead transmission lines operated below 200kV having been identified as included in the definition of an Interconnection Reliability Operating Limit (IROL) under NERC Standard FAC-014 by the Planning Coordinator.</p> <p>In addition, on pg 8, R1 of FAC-003-2 makes reference to the “planning coordinator” However, FAC-014 makes no reference, or at least it is inconsistent, to a “Planning Coordinator” See below:</p> <p>Taken from FAC-014</p> <ul style="list-style-type: none"> 4. Applicability 4.1. Reliability Coordinator 4.2. Planning Authority 4.3. Transmission Planner 4.4. Transmission Operator <p>The terminology and definitions seem to be inconsistent.</p>

Voter	Entity	Segment	Vote	Comment
				<p>3. R1 and R2 are the same requirements with different applicabilities. R1 applies to lines that are connected to WECC, IROL, etc. R2 applies to all other applicable lines that are NOT an element of WECC or IROL. My Question is: If the line is not part of WECC or IROL or any other connection then, how is it applicable to the Standard?</p> <p>4. R7 says the TO shall complete a %100 of annual plan but allows for modifications that include:</p> <ul style="list-style-type: none"> Change in expected growth rate/ environmental factors Major storms Circumstances that are beyond the control of a Transmission Owner Rescheduling work between growing seasons Crew or contractor availability/ Mutual assistance agreements Identified unanticipated high priority work Weather conditions/Accessibility Permitting delays Land ownership changes/Change in land use by the landowner Funding adjustments (increase or decrease) Emerging technologies <p>[VRF - Medium] [Time Horizon - Operations Planning]</p> <p>The requirement says we shall complete a %100 of the annual plan however, some of the modifications have historically taken over a year to mitigate. SHALL should be</p>

Voter	Entity	Segment	Vote	Comment
				replaced with SHOULD with acceptable modifications and without compromising integrity of system.
<p>Response: The SDT thanks you for your comments.</p> <p>Item 1: It is intended that the Standard will cover any situation within the ROW that causes an encroachment into the MVCD including fall-ins, grow-ins or blowing-together. The arrangement of the Violation Severity Levels for R1. and R2. emphasize that a grow-in results in the greatest risk to a power system, and also is the most egregious and severe failure to meet the intent of these requirements.</p> <p>Item 2: The term Planning Authority (PA) included in FAC-014 was replaced by NERC in the functional model Version 5 with Planning Coordinator. Where references to PA are included in legacy Standards, Planning Coordinator is now used as follows Planning Coordinator (Planning Authority). Obviously, proposed new Standards or versions must use the currently accepted terms.</p> <p>Item 3: R1 and R2 are dealing with the differentiation between lines that fall into IROL/WECC Transfer Path definition and those lines that do not. Keep in mind that this standard refers to all transmission lines over 200-kV.</p> <p>Item 4: The SDT believes replacing the word “shall” with the word “should” in Requirement 7 changes the requirement to a recommendation.</p>				
Pawel Krupa	Seattle City Light	1	Affirmative	<p>The revisions to the proposed FAC-003-2 Standards produced a better version through greater clarity, appropriate pragmatism, and technical foundation; A few good points that highlight this follow:</p> <ol style="list-style-type: none"> 1. Definition of Terms Used in Standard: The revised definition of Right-of-Way (ROW) establishes the width of the corridor from a technical basis with the following statement "The width of the corridor is established by engineering or construction standards..." 2. Introduction, Applicability, Section 4.2 Facilities: Section 4.2.4 which pertains to substations clarifies that this standard does not apply to applicable transmission lines, inside the substation, just to "any portion of the span of the

Voter	Entity	Segment	Vote	Comment
				<p>transmission line that is crossing the substation fence".</p> <p>3. Requirements and Measures: Requirement 1 underscores sensible purpose by replacing the wording of "preventing outages from vegetation" to "manage vegetation to prevent encroachments..."</p> <p>4. Guideline and Technical Basis Section: Requirement 7 contains a great practice reference explanation as it pertains to the annual work plan. Requirement 7 explains: ..." the vegetation management approach should use the full extent of the Transmission Owner's easement, fee simple and other legal rights allowed. A comprehensive approach that exercises the full extent of legal rights on the ROW is superior to incremental management in the long term because it reduces the overall potential for encroachment, and it ensures that future planned work and future planned inspection cycles are sufficient".</p>
<p>Response: The SDT thanks you for your comments.</p>				
William G. Hutchison	Southern Illinois Power Coop.	1	Negative	I believe that the reliability region should have the right to exclude lines below 200KV. Not all lines above 100KV negative impact the BES.
<p>Response: The SDT thanks you for your comment. This issue is presently before FERC and NERC and is outside the scope of the SDT.</p>				
Keith V Carman	Tri-State G & T Association, Inc.	1	Affirmative	There needs to be a change in the footnote 2 and footnote 4 to remove the exemption for "arboricultural activities or horticultural or agricultural activities" and replace it with the term " installation of".

Voter	Entity	Segment	Vote	Comment
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
Brandy A Dunn	Western Area Power Administration	1	Affirmative	There needs to be a change in the footnote 2 and footnote 4 to remove the exemption for “arboricultural activities or horticultural or agricultural activities” and replace it with the term “ installation of”
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
Gregory L Pieper	Xcel Energy, Inc.	1	Affirmative	Xcel Energy still believes the requirement in R6 that mandates an annual inspection is an ineffective approach and may actually go against the Commission’s determination in FERC Order No. 693. The drafting team’s response to our last round of comments on this issue was that “...the SDT was directed by Order 693 to set a minimum inspection criteria”. It is clear in Order 693 that the Commission is not satisfied with allowing entities to choose their own inspection cycles, as the standard currently allows. However, we fail to see where the Commission mandated a minimum inspection cycle to be uniformly applied continent-wide. We urge the drafting team to revisit paragraphs 719 through 721 of Order 693. According to paragraph 721, the Commission recognizes that unique intervals by region, “based on local factors”, are reasonable and appropriate. By use of the plural term “cycles”, FERC anticipates the resolution may include multiple inspection cycles. Furthermore, in paragraph 719, FERC acknowledges that a minimum inspection cycle may not be the only way to address their concern. In fact, mandating an annual inspection cycle may actually go against the Commission’s guidance in paragraph 720. Here is an excerpt: “...the

Voter	Entity	Segment	Vote	Comment
				<p>Commission is dissuaded from requiring the ERO to create a backstop inspection cycle at this time. Instead, the Commission agrees that an entity’s vegetation management program should be tailored to anticipated growth in the region and take into account other environmental factors. The goal is to assure that transmission owners conduct inspections at reasonable intervals.”</p> <p>As an alternative, we propose a mid-cycle inspection. A mid-cycle inspection is based on an interval that is justified with data and technical expertise. A mid-cycle inspection would still require entities to conduct inspections at a specified interval, while allowing for differences based upon “physical and geographic factors”. Not only would this approach fully address the Commissions concerns, but it would take into account the interests of stakeholders, landowners and rate-payers. We recognize that a mid-cycle inspection interval is not as easy to audit as an annual requirement, but it is a far more practical and cost-effective approach that, when applied based on an entity’s expertise with its own facilities, ensures reliability.</p>
<p>Response: The SDT thanks you for your comments. The SDT recognizes that a number of Transmission Owners in North America may prefer to set their own inspection intervals. The SDT can also see attractiveness for a mid-cycle inspection concept; however, this introduces new complexities in planning, documentation and auditing. Because there is substantial industry support for an annual inspection interval the SDT believes that the industry is best served with this approach.</p>				
Mark B Thompson	Alberta Electric System Operator	2	Abstain	Due to slow vegetation growth rates in many parts of Alberta, not all transmission right-of-ways require annual inspection as required in R6. TOs should be able to include planned inspection cycles in their Transmission Vegetation Management Plan.

Voter	Entity	Segment	Vote	Comment
<p>Response: The SDT thanks you for your comments. In FERC Order 693, para. 721, FERC stated, “The Commission continues to be concerned with leaving complete discretion to the transmission owners in determining inspection cycles, which limits the effectiveness of the Reliability Standard.”</p> <p>The SDT established an inspection cycle at least once per calendar year and with no more than 18 calendar months between inspections on the same ROW. There was a survey of the industry in a previous request for comments to this standard. The response to that survey is the basis for the use of the 1-year period. While there was a range of growth rates across the continent, the SDT had sufficient feedback to recommend the 1-year cycle. The inspection also would cover inspecting for fall-in threats. Please note that vegetation inspections can also be combined with other line inspections.</p>				
Alden Briggs	New Brunswick System Operator	2	Affirmative	The term “encroachment” has to be defined, and the use of that term and the clearances required clarification. The Table listing the clearances also needed clarification.
<p>Response: The SDT thanks you for your comment. The SDT endorses the standard dictionary definition of the term “encroachment” and as such it does not require a NERC-specific definition. The use of encroachment regarding the clearance table is explained in detail in the Technical Reference Document.”</p>				
Richard J. Mandes	Alabama Power Company	3	Affirmative	There needs to be a change in the footnote 2 and footnote 4 to remove the exemption for “arboricultural activities or horticultural or agricultural activities” and replace it with the term “ installation of”.
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
Steven Norris	APS	3	Negative	The objective, as written, is about outages that can lead to cascading and not about reliability. Recommended change to Standard Objective: To maintain a reliable electric transmission system, implement a defense-in-depth strategy to manage vegetation located on transmission rights of way (ROW) and minimize encroachments from vegetation located adjacent to the ROW.

Voter	Entity	Segment	Vote	Comment
<p>Response: The SDT thanks you for your comment. With respect to the Purpose as written in the proposed standard, the language clearly states “To improve the reliability of the electric Transmission system...”. The SDT made it a point to keep the Purpose as concise as possible without getting into issues that are covered further in the body of the standard.</p>				
<p>Rebecca Berdahl</p>	<p>Bonneville Power Administration</p>	<p>3</p>	<p>Affirmative</p>	<p>In R1 and R2 and their associated VSLs, the SDT added the phrase “in order of increasing severity” and added the sentence, “The types of encroachments are listed in order of increasing degrees of severity in non-compliant performance as it relates to a failure of a TO’s vegetation maintenance program.” to the Rationale boxes for R1/R2. Do you agree? If answer is no, please explain.</p> <p>BPA prefers the stratified levels of violation severity presented in the table for R1 and R2.</p> <p>Foot note # 2 on page 8 needs to be clarified with respect to arboricultural activities or horticultural or agricultural activities.</p> <p>Foot note # 4 on page 12 needs to be clarified with respect to arboricultural activities or horticultural or agricultural activities.</p> <p>In response to comments received that requirement R3 is unclear with respect to intent, the SDT added “maintenance strategies.” Do you agree this clarifies the intent? If answer is no, please offer alternative language.</p> <p>The TO procedures / policies and specifications shall demonstrate the TO’s ability to manage the system at all rated conditions to maintain reliability. BPA believes that the intent is clear, but the fundamental approach of using the MVCD (table 2) to manage a vegetation program is still</p>

Voter	Entity	Segment	Vote	Comment
				<p>problematic. These values are flashover distances and are way too close. This is acknowledged in a footnote to table 2 but no identification of allowable buffers/distances between energized phase conductors at rated temperatures and vegetation is discussed (this is left up the transmission owners). Clarity is needed on this topic. Setting a finite distance limit based on recognized standards, good science and risk avoidance should be done for the industry. BPA has previously made this comment during the drafting of the standard. It was not addressed then, nor has it been addressed now.</p>
<p>Response: The SDT thanks you for your comments. Footnotes #2 and #4 have been changed to reflect your suggestion to clarify arboricultural or horticultural or agricultural activities.</p> <p>With respect to comments about the MVCD, R3 does not suggest the MVCD be used as a distance to manage vegetation. The MVCD was established as a beginning of a series of “building blocks” for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions.</p> <p>R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner’s overall vegetation management approach. The net result of this “building block” approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD</p> <p>In a performance based standard, requirements are focused on “what” needs to be accomplished to achieve desired results and avoids prescriptive requirements of “how” to achieve that result. TO’s are in the best position to determine the appropriate management approach suited for their system, rather than a “one size fits all” or “fill in the blank” requirement that could suppress best practices for vegetation management.</p>				
<p>Matt Culverhouse</p>	<p>City of Bartow, Florida</p>	<p>3</p>	<p>Negative</p>	<p>The suggested Measures are not sufficient evidence to prove compliance with that interpretation of the requirement. For instance, most encroachments do not result in outages; hence, lack of outages cannot prove that there were no encroachments, and real time observations</p>

Voter	Entity	Segment	Vote	Comment
				<p>are insufficient because it is a spot-check that does not cover the audit period.</p> <p>There are other weaknesses in the standard, such as R4 being un-measurable therefore unenforceable. However, in the guilty until proven innocent paradigm we live in, FMPA's primary concern is that industry could be put into a no-win situation of not being able to prove compliance with the standard if R1 and R2 are interpreted as "prevent encroachment", and if R1 and R2 are interpreted as "manage" then it is not a performance based standard as advertised.</p>
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that “...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation” (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated. Also please reference footnote 3.</p>				
Bryan Y Harper	Cleco Utility Group	3	Negative	<p>Cleco disagrees with the SDT revising the definition for Right-of-Way (ROW). Right-of-Way is a term that has had a consistent meaning throughout history. If NERC tries to redefine the term, it will only add confusion because most entities will not reference the NERC glossary for a term which is widely used in the industry. In lieu of "Active Transmission Line ROW", please use another term such as Transmission Corridor. No assumptions would be made when reading in the Standard the the Entity is to maintain vegetation located within the Transmission Corridor. Since the term is not commonly used, the NERC glossary would be referenced.</p> <p>Also, Cleco disagrees that an encroachment into the MCVD</p>

Voter	Entity	Segment	Vote	Comment
				<p>that does not cause an outage should be considered non-compliant as stated in R1 and R2. The encroachment should only be reportable similar to misoperations as is in the PRC-004 standard.</p>
<p>Response: Thanks for your comments. The existing ROW definition in the glossary was created by and for the FAC-003-1 and was moved there when that standard was adopted. The definition includes a series of options that give the Transmission Owner latitude in establishing ROW width. It does not require selecting a single method for its system. The term blowout standard is not capitalized and is not a defined term. This phrase in the definition allows a Transmission Owner to use its internal engineering standards or the general engineering standards that were in effect when the line was constructed to determine the ROW width. The SDT has limited the definition of Right-of-Way to a corridor of land with a defined width to operate a transmission line. This does not include danger tree rights. The definition of the MVCD is now added to this Standard. While use of the pre-2007 records is a compliance issue and is not in the purview of the SDT, it is the intent of the language in the definition that you could use this information.</p> <p>Regarding your second comment, the MVCD was established as a beginning of a series of “building blocks” for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions.</p> <p>R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner’s overall vegetation management approach. The net result of this “building block” approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD.</p> <p>Other related requirements of this “Defense in Depth” Standard serve to address any number of scenarios which may arise or hinder the TO’s ability to always strictly adhere to the management approach(s) established within R3. Thus the other requirements of this Standard provide the latitude for appropriate actions to remedy the condition without penalty. Further, trees which have encroached inside the MVCD are evidence of a deficiency in vegetation maintenance.</p>				
Peter T Yost	Consolidated Edison Co. of New York	3	Affirmative	<p>Reply to Question 5 on Comment Form: The added language for the annual work plan percentage complete calculation is shown in R7 not M7 as stated in the question.</p> <p>In the Guideline and Technical Basis Section for Requirement R6, there is a sample calculation shown for the amount of lines the TO failed to inspect. An example should</p>

Voter	Entity	Segment	Vote	Comment
				<p>also be included for Requirement R7 since there is some confusion regarding how modifications to the work plan affect the calculation. In the Lower VSL column for R7, it states that the TO failed to complete up to 5% of its annual vegetation work plan (including modifications if any). If a TO operates 100 lines and submits a justified modification that affects 10 miles of lines, the total number of units in the final amended plan is 90 miles. When you read the VSL, it is somewhat confusing since the information in parenthesis says that the calculation 'includes' the modifications. Should it state 'excludes modifications if any' or the VSLs can simply be re-written to state that ..The TO failed to complete up to x% of the final amended plan.'</p> <p>Also, the VSLs in R6 and R7 should be consistent with each other: R6 says '...TO failed to inspect 5% or less....' and R7 says '...TO failed to complete up to 5%....' They both should use the same verbiage in each VSL whether it is 'x% or less' or 'up to and including x%'.</p>
<p>Response: The SDT thanks you for your comments. Your correction is accurate. The percentage should be based on the plan as modified. The SDT has changed the language in the standard to reflect this more clearly. The VSLs have been modified to be consistent as suggested.</p>				
David A. Lapinski	Consumers Energy	3	Negative	<p>Comments on FAC-003-2 February 25, 2011 Consumers Energy submits the following comments on FAC-003-2: In general we are please with FAC-003-2 and the many clarifications that the STD has made in this version of the standard. However, we do have one major disagreement with the STD and cannot support this standard as drafted.</p>

Voter	Entity	Segment	Vote	Comment
				<p>We disagree with the use of the Minimum Vegetation Clearance Distance (MVCD) developed by the drafting team for Requirements R1 and R2. These distances are not the design distances used for designing and constructing transmission facilities as stated in the document for minimum distances between conductors and grounded objects. The proposed Table 2 provides a distance of 3.12 feet as the acceptable distance for an alternate current 345kV line at sea level. This distance is considerably less than the distance used for line design to separate the grounded tower structure from the energized conductor. If the distance in Table 2 is acceptable to prevent energized portions of a transmission line from grounding to a tree why then is this distance not the design criteria used for tower design to prevent flashover from conductor to tower? The STD needs to explain why a ground tree should have a different standard than a grounded steel tower or wood pole structure.</p> <p>The STD erroneously viewed the possibility of transient over voltage as only occurring during re-energizing and not from natural events such as a lightning strike that can occur and does occur to energized operating lines. Secondly, the proposed distances in Table 2 are considerably less than the distances specified in OSHA requirements for air gap clearance required by tree workers to safely remove trees or limbs from conductors energized at the voltages specified. A transmission owner/operator could let a tree grow to within 3.5 feet of a 345 kV line and not be in violation of this proposed standard. To remove the tree, the</p>

Voter	Entity	Segment	Vote	Comment
				<p>line would have to be de-energized, tagged, tested de-energized, and grounded. Working clearance would have to be established by the operating entity and then the tree crew could remove the tree. The net result is the loss of the capacity of the line because an outage was forced on the line in order to remove the tree that did not trigger a violation of FAC-003-2. This situation, in our opinion, is a violation of the intent of the standard, which is to ensure the continued operation of the line. Therefore, the minimum distance any tree should be able to approach a conductor is more than the minimum requirement for air gap distance between the tree and conductor as required by OSHA worker standards. The STD did not like referring to another standard to provide the distance requirements for R1 and R2. This can be alleviated by putting in a table with the IEEE 516 distances but not reference it as the IEEE 516 standard. The distances provided in the current draft do not adequately provide or ensure the continued safe operation of the transmission facilities in the United States and the reasoning for the distances provided is unfounded and not based on current design practices.</p>
<p>Response: The SDT thanks you for your comments. You are correct that these distances do not represent complete design specifications for towers, nor define and describe safe worker approach distances. These practices are correctly specified in the other standards you referenced. The SDT feels the standard is clear in that regard. The footnote associated with the Table 2 distances clearly states that these are only distances to prevent flashover under appropriate conditions. The SDT would also like to point out that the transient overvoltage factors used to derive these distances are the maximums normally seen with a transmission line in steady state service. Thus, a tower design would have to account for the larger overvoltage factors that are possible while taking lines out of service.</p> <p>As has been stated before, these distances were derived using a known set of line design equations and only represent distances that will prevent spark-over from the transmission line to a grounded object. These are not distances to be managed to – they have been established as a beginning of a series of “building blocks” for a program to ensure reliability of a</p>				

Voter	Entity	Segment	Vote	Comment
<p>Transmission line within its rating and all rated electrical operating conditions.</p> <p>R3 requires that a Transmission Owner' consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner's overall vegetation management approach. The net result of this "building block" approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD.</p> <p>These distances are smaller than safety standard distances that have many other factors involved in the determination, such as inadvertent human movement and larger safety factors. In regard to the over-voltages caused by lightning, even the maximum overvoltage factors contained in the IEEE-516 tables do not account for these.</p>				
<p>Russell A Noble</p>	<p>Cowlitz County PUD</p>	<p>3</p>	<p>Negative</p>	<p>Referring back to Cowlitz' negative vote made on the 7/9-19/2010 ballot, Cowlitz tried to convey the problem that the statement in R4 "without intentional time delay" will require subjective judgment on the part of the auditor. In other words, maintaining equal auditing standard throughout the interconnection will be impossible with this verbiage in a requirement. Cowlitz agrees with the SDT that establishing an equitable time frame is very difficult (it may be impossible!); however leaving it to the judgment of the auditor to determine whether an intentional delay was made is most disagreeable. Cowlitz respectfully points out that the SDT did not adequately address the subjective nature the auditor is forced into with this requirement. If establishing "[t]he time required by the to report an issue is subject to many variables..." and "[f]or this reason it is difficult to establish a time period which would fairly apply to all TO's," how does leaving this to the auditor to decide going to make it any better?</p>
<p>Response: The SDT believes that it was not prudent to suggest a quantitative time element for notification in R4. The technical reference offers examples of acceptable unintentional delays for your review. The SDT notes that this language is already embodied in at least one other FERC-approved, in-force Standard.</p>				

Voter	Entity	Segment	Vote	Comment
Kevin Querry	FirstEnergy Solutions	3	Affirmative	FirstEnergy supports standard FAC-003-2 and would appreciate consideration of our comments submitted through the formal comment period.
<p>Response: The SDT thanks you for your comments. Please see our consideration of your comments within the responses to the formal comments.</p>				
Lee Schuster	Florida Power Corporation	3	Affirmative	There needs to be a change in the footnote 2 and footnote 4 to remove the exemption for “arboricultural activities or horticultural or agricultural activities” and replace it with the term “installation of.”
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
Anthony L Wilson	Georgia Power Company	3	Affirmative	There needs to be a change in the footnote 2 and footnote 4 to remove the exemption for “arboricultural activities or horticultural or agricultural activities” and replace it with the term “ installation of”.
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
Charles Locke	Kansas City Power & Light Co.	3	Negative	The Standard lacks clarity regarding the facilities that are subject to Requirement 7. It is important that a Standard be clear and not introduce ambiguity or confusion. There are several references throughout the Standard to "for all applicable lines" and it should be made clear the work plan is specific to "all applicable lines".
<p>Response: The SDT thanks you for your comments. The team has made the appropriate modifications where necessary.</p>				
Mace Hunter	Lakeland Electric	3	Affirmative	R1. Each Transmission Owner shall manage vegetation to prevent encroachments of the types shown below, -----

Voter	Entity	Segment	Vote	Comment
				<p>---- and all Rated Electrical Operating Conditions.2 1. An encroachment into the MVCD as shown in FAC-003-Table 2, observed in Real-time, absent a Sustained Outage, that is not corrected within 5 working days of discovery, Make the same change to R2 Type 1 encroachment and reflect the changes in Table 1. Rational: This condition would enable an entity to discover an encroachment and clear it without having to self report a possible violation as long as the conditions was corrected within 5 working days. The change should encourage extra inspections for problem areas more often than annually as required in R6. There should be no negative consequences for diligent inspection of lines as long as the problem is clear with a defined time such as 5 or 10 working days.</p>
<p>Response: The SDT thanks you for your comment. As a general rule, a revised standard should not be less stringent than the existing standard it replaces. In the existing standard, a violation occurs when the encroachment occurs. A ‘find and fix’ of five days would be viewed as a lowering of the level of required performance established by the current standard.</p>				
Bruce Merrill	Lincoln Electric System	3	Affirmative	<p>While supportive of the drafting team’s efforts, LES believes a change is warranted in Footnote 2 and Footnote 4 to remove the exemption for “arboricultural activities or horticultural or agricultural activities” and replace with the term “installation of”. As currently drafted, the wording could potentially be construed to mean that the TO would or could be constrained or refused permission to prune and remove any and all vegetation in the ROW in accordance with the full legal rights of the ROW agreement(s).</p>
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
Don Horsley	Mississippi Power	3	Affirmative	<p>There needs to be a change in the footnote 2 and footnote 4 to remove the exemption for “arboricultural activities or</p>

Voter	Entity	Segment	Vote	Comment
				horticultural or agricultural activities” and replace it with the term “ installation of”.
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
Terry L Baker	Platte River Power Authority	3	Negative	<p>FAC-003-2 Comments Vegetation Inspection: Is the intent of “... and those vegetation conditions under the TO’s control” to clarify that an entity must have ownership of the transmission line and right-of-way in addition to maintenance or operational responsibility (control), or something different? In situations where a TO owns one circuit on a double circuit, but the other circuit, facilities and ROW belong to another TO who has maintenance, and vegetation management responsibility, who would be responsible for violations?</p> <p>If the definition was modified to allow both maintenance and vegetation inspections to be performed concurrently, the intent might be clearer if it read: “This may be combined with other line inspections”, or “This may be combined with a maintenance inspection” opposed to a general line inspection.</p> <p>R1 and R2: Does R1 correlate to facilities in 4.2.2. and 4.2.3. (overhead transmission lines operated below 200 kV) and R2 correlate to facilities in 4.2.1. (overhead transmission lines operated at 200kV or higher)? It isn’t clear why the two requirements are split. Could it be one requirement which reads “...identified as a facility in Section 4.2”?</p> <p>R4: Our current imminent threat procedure requires a call</p>

Voter	Entity	Segment	Vote	Comment
				<p>to the Manager who confirms the existence of a vegetation condition that is likely to cause a Fault at any moment prior to notifying the control center. We assume notification, without any intentional time delay, would take place after managerial confirmation but feel like the enforcement authorities could interpret this differently based on how it is written in R4. If the intent of the requirement is how we interpret it, the requirement might be clearer if it read: After a Transmission Owner has confirmed a vegetation condition likely to cause a Fault at any moment, they shall notify the control center holding switching authority for the associated applicable transmission line, without any intentional delay.</p>
<p>Response: The SDT thanks you for your comment. With regard to responsibility for a violation, the TO is the accountable party even if it has an agreement with another TO to inspect and manage vegetation.</p> <p>With regard to your suggestion in changing the definition of Vegetation Inspection, the SDT does not believe the proposed changes are necessary for the definition to be clear.</p> <p>With regard to R1 and R2, they applicability applies to 4.2.1 thru 4.2.3. The distinction between the requirement is R1 applies to all lines designated as having an Interconnection Reliability Operating Limit (IROL) in the planning horizon by the Planning Coordinator; or lines designated as Major Western Electricity Coordinating Council (WECC) transfer path(s).</p> <p>With regard to your imminent threat procedure, the standard is not prescriptive to define a TO’s imminent threat procedure. So, if your procedure includes managerial confirmation, then this would not be considered intentional delay.</p>				
Dana Wheelock	Seattle City Light	3	Affirmative	<p>The revisions to the proposed FAC-003-2 Standards produced a better version through greater clarity, appropriate pragmatism, and technical foundation; A few good points that highlight this follow:</p> <ol style="list-style-type: none"> 1. Definition of Terms Used in Standard: The revised definition of Right-of-Way (ROW) establishes the width of the corridor from a technical basis with the following

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				<p>statement "The width of the corridor is established by engineering or construction standards..."</p> <p>2. Introduction, Applicability, Section 4.2 Facilities: Section 4.2.4 which pertains to substations clarifies that this standard does not apply to applicable transmission lines, inside the substation, just to "any portion of the span of the transmission line that is crossing the substation fence".</p> <p>3. Requirements and Measures: Requirement 1 underscores sensible purpose by replacing the wording of "preventing outages from vegetation" to "manage vegetation to prevent encroachments..."</p> <p>4. Guideline and Technical Basis Section: Requirement 7 contains a great practice reference explanation as it pertains to the annual work plan. Requirement 7 explains: ..." the vegetation management approach should use the full extent of the Transmission Owner's easement, fee simple and other legal rights allowed. A comprehensive approach that exercises the full extent of legal rights on the ROW is superior to incremental management in the long term because it reduces the overall potential for encroachment, and it ensures that future planned work and future planned inspection cycles are sufficient".</p>
<p>Response: The SDT thanks you for your comments.</p>				
Michael Ibold	Xcel Energy, Inc.	3	Affirmative	Xcel Energy still believes the requirement in R6 that mandates an annual inspection is an ineffective approach and may actually go against the Commission's

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				<p>determination in FERC Order No. 693. The drafting team’s response to our last round of comments on this issue was that “...the SDT was directed by Order 693 to set a minimum inspection criteria”. It is clear in Order 693 that the Commission is not satisfied with allowing entities to choose their own inspection cycles, as the standard currently allows. However, we fail to see where the Commission mandated a minimum inspection cycle to be uniformly applied continent-wide. We urge the drafting team to revisit paragraphs 719 through 721 of Order 693. According to paragraph 721, the Commission recognizes that unique intervals by region, “based on local factors”, are reasonable and appropriate. By use of the plural term “cycles”, FERC anticipates the resolution may include multiple inspection cycles. Furthermore, in paragraph 719, FERC acknowledges that a minimum inspection cycle may not be the only way to address their concern. In fact, mandating an annual inspection cycle may actually go against the Commission’s guidance in paragraph 720. Here is an excerpt: “...the Commission is dissuaded from requiring the ERO to create a backstop inspection cycle at this time. Instead, the Commission agrees that an entity’s vegetation management program should be tailored to anticipated growth in the region and take into account other environmental factors. The goal is to assure that transmission owners conduct inspections at reasonable intervals.”</p> <p>As an alternative, we propose a mid-cycle inspection. A mid-cycle inspection is based on an interval that is justified with data and technical expertise. A mid-cycle inspection would still require entities to conduct inspections at a specified interval, while allowing for differences based upon “physical</p>

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				<p>and geographic factors”. Not only would this approach fully address the Commissions concerns, but it would take into account the interests of stakeholders, landowners and rate-payers. We recognize that a mid-cycle inspection interval is not as easy to audit as an annual requirement, but it is a far more practical and cost-effective approach that, when applied based on an entity’s expertise with its own facilities, ensures reliability.</p>
<p>Response: The SDT thanks you for your comments. The SDT recognizes that a number of Transmission Owners in North America may prefer to set their own inspection intervals. The SDT can also see attractiveness for a mid-cycle inspection concept; however, this introduces new complexities in planning, documentation and auditing. Because there is substantial industry support for an annual inspection interval the SDT believes that the industry is best served with this approach.</p>				
Rick Syring	Cowlitz County PUD	4	Negative	<p>Referring back to Cowlitz’ negative vote made on the 7/9-19/2010 ballot, Cowlitz tried to convey the problem that the statement in R4 “without intentional time delay” will require subjective judgment on the part of the auditor. In other words, maintaining equal auditing standard throughout the interconnection will be impossible with this verbiage in a requirement. Cowlitz agrees with the SDT that establishing an equitable time frame is very difficult (it may be impossible!); however leaving it to the judgment of the auditor to determine whether an intentional delay was made is most disagreeable. Cowlitz respectfully points out that the SDT did not adequately address the subjective nature the auditor is forced into with this requirement. If “[t]he time required by the entity to report an issue is subject to many variables...” and “[f]or this reason it is difficult to establish a time period which would fairly apply to all TO’s,” how does leaving this to the auditor to decide going to make it any better? You will be forcing the audited entity to "prove the negative."</p>

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<p>Response: The SDT believes that it was not prudent to suggest a quantitative time element for notification in R4. The technical reference offers examples of acceptable unintentional delays for your review. The SDT notes that this language is already embodied in at least one other FERC-approved, in-force Standard.</p>				
<p>Frank Gaffney</p>	<p>Florida Municipal Power Agency</p>	<p>4</p>	<p>Negative</p>	<p>R1 and R2 requirement reads: "Each Transmission Owner shall manage to prevent encroachment". The results of manage would be invoices of tree trimming actually performed, documentation of a vegetation management program that would be managed to, etc. However, the Measures proposed are all actual outages which are neither evidence of management nor evidence of encroachment since there can be encroachment without an outage, and in fact, many if not most encroachments do not result in outages. Hence, the Measures are inconsistent with the requirements.</p> <p>Further, there is ambiguity of the action required in requirements R1 and R2 - e.g., do entities need evidence that they: 1) "manage", or 2) "prevent encroachment"; or 3) as implied by the Measures, prevent vegetation related outages?. In other words, what needs to be proven through evidence? Certainly the third, prevent vegetation related outages, is not in the Requirement; yet, that us what is proposed for the Measures, highlighting the inconsistency between Requirements and Measures. But, how would the ambiguity between "manage" and "prevent encroachment" be resolved? One auditor could interpret that the requirement is to "manage" and accept a vegetation management program and plan and proof that the plan was executed as appropriate evidence. Another auditor could interpret that "prevent" is the key word and look for evidence proving that there was never a vegetation</p>

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				<p>encroachment. How would evidence be produced to provide the auditor that vegetation never encroached? Would video cameras and other surveillance measures need to operate 24 hours a day? Would we cause an entity to survey the lines periodically? One can easily see that "prevent encroachment" is inappropriate here since it is infeasible to create evidence of compliance.</p> <p>FMPA suggests one of two approaches:</p> <p>Eliminate the word manage, but do not focus on encroachment and instead focus on outages. For instance: "Each Transmission Owner shall prevent vegetation related outages (except as noted in Footnote 2) of any of its applicable line(s) ..." Evidence of outages is practical to gather and provide, evidence of encroachment is not.</p> <p>Focus on the word "manage", similar to the existing FAC-003 standard, and move R3 to a new R1 to develop a management plan, and then the existing R1 and R2 become R2 an R3 and require execution of that plan in the words of R7, which would in turn enables elimination of R7.</p>
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that "...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation" (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated.</p>				
Thomas W. Richards	Fort Pierce Utilities	4	Negative	R1 and R2 requirement reads: "Each Transmission Owner shall manage to prevent encroachment". The results of

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	Authority			<p>manage would be invoices of tree trimming actually performed, documentation of a vegetation management program that would be managed to, etc. However, the Measures proposed are all actual outages which are neither evidence of management nor evidence of encroachment since there can be encroachment without an outage, and in fact, many if not most encroachments do not result in outages. Hence, the Measures are inconsistent with the requirements.</p> <p>Further, there is ambiguity of the action required in requirements R1 and R2 - e.g., do entities need evidence that they: 1) "manage", or 2) "prevent encroachment"; or 3) as implied by the Measures, prevent vegetation related outages?. In other words, what needs to be proven through evidence? Certainly the third, prevent vegetation related outages, is not in the Requirement; yet, that is what is proposed for the Measures, highlighting the inconsistency between Requirements and Measures. But, how would the ambiguity between "manage" and "prevent encroachment" be resolved? One auditor could interpret that the requirement is to "manage" and accept a vegetation management program and plan and proof that the plan was executed as appropriate evidence. Another auditor could interpret that "prevent" is the key word and look for evidence proving that there was never a vegetation encroachment. How would evidence be produced to provide the auditor that vegetation never encroached? Would video cameras and other surveillance measures need to operate 24 hours a day? Would we cause an entity to survey the lines periodically? One can easily see that "prevent encroachment" is inappropriate here since it is</p>

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				<p>infeasible to create evidence of compliance.</p> <p>FPUA suggests one of two approaches:</p> <ol style="list-style-type: none"> 1. Eliminate the word manage, but do not focus on encroachment and instead focus on outages. For instance: "Each Transmission Owner shall prevent vegetation related outages (except as noted in Footnote 2) of any of its applicable line(s) ..." Evidence of outages is practical to gather and provide, evidence of encroachment is not. 2. Focus on the word "manage", similar to the existing FAC-003 standard, and move R3 to a new R1 to develop a management plan, and then the existing R1 and R2 become R2 an R3 and require execution of that plan in the words of R7, which would in turn enables elimination of R7.
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that “...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation” (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated.</p>				
Joseph G. DePoorter	Madison Gas and Electric Co.	4	Affirmative	<p>“While supportive of the drafting team’s efforts, The MGE believes a change is warranted in Footnote 2 and Footnote 4 to remove the exemption for “arboricultural activities or horticultural or agricultural activities” and replace with the term “installation of”. As currently drafted, the wording could potentially be construed to mean that the TO would or could be constrained or refused permission to prune and remove any and all vegetation in the ROW in accordance</p>

Voter	Entity	Segment	Vote	Comment
				with the full legal rights of the ROW agreement(s)."
Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.				
Douglas Hohlbaugh	Ohio Edison Company	4	Affirmative	FirstEnergy supports standard FAC-003-2 and would appreciate consideration of our comments submitted through the formal comment period.
Response: The SDT thanks you for your comments. Please see our consideration of your comments within the responses to the formal comments.				
Hao Li	Seattle City Light	4	Affirmative	<p>The revisions to the proposed FAC-003-2 Standards produced a better version through greater clarity, appropriate pragmatism, and technical foundation; A few good points that highlight this follow:</p> <ol style="list-style-type: none"> 1. Definition of Terms Used in Standard: The revised definition of Right-of-Way (ROW) establishes the width of the corridor from a technical basis with the following statement "The width of the corridor is established by engineering or construction standards..." 2. Introduction, Applicability, Section 4.2 Facilities: Section 4.2.4 which pertains to substations clarifies that this standard does not apply to applicable transmission lines, inside the substation, just to "any portion of the span of the transmission line that is crossing the substation fence". 3. Requirements and Measures: Requirement 1 underscores sensible purpose by replacing the wording of "preventing outages from vegetation" to "manage vegetation to prevent encroachments..."

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				<p>4. Guideline and Technical Basis Section: Requirement 7 contains a great practice reference explanation as it pertains to the annual work plan. Requirement 7 explains: ..." the vegetation management approach should use the full extent of the Transmission Owner's easement, fee simple and other legal rights allowed. A comprehensive approach that exercises the full extent of legal rights on the ROW is superior to incremental management in the long term because it reduces the overall potential for encroachment, and it ensures that future planned work and future planned inspection cycles are sufficient".</p>
<p>Response: The SDT thanks you for your comments.</p>				
<p>Brock Ondayko</p>	<p>AEP Service Corp.</p>	<p>5</p>	<p>Affirmative</p>	<p>American Electric Power believes that the phrase "arboricultural activities or horticultural or agricultural activities" was mistakenly introduced into Footnotes 2 and 4, and should be deleted from both footnotes. If the phrase remains in the Standard, it may empower orchard growers, landowners and others to plant trees on the right of way and challenge Transmission Owners' rights to perform maintenance on the presumption that the standard will exempt the TO from violating the outage or encroachment requirements.</p> <p>For increased clarity, AEP offers the following change to the second paragraph of M1, as well as the second paragraph of M2. The original text "If a later confirmation of a Fault by the Transmission Owner shows that a vegetation encroachment within the MVCD has occurred from vegetation within the ROW, this shall be considered the</p>

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				<p>equivalent of a Real-time observation” should be replaced with “If a later confirmation of a Fault by the Transmission Owner shows that a vegetation encroachment within the MVCD has occurred from vegetation growing into or blowing together with the conductor within the ROW, this shall be considered the equivalent of a Real-time observation. A brief encroachment caused by falling vegetation passing through the MVCD is not considered an encroachment in this requirement”.</p>
<p>Response: Thanks you for your comments. The SDT made suggested changes. Regarding the issue of fall-ins, the SDT is sympathetic to your concern. In fact, the SDT had originally crafted language similar to that which you suggested. However, due to concerns expressed by regulators and others, the exemption for encroachment violations due to falling vegetation from inside the right of way was removed.</p>				
Francis J. Halpin	Bonneville Power Administration	5	Affirmative	<p>In R1 and R2 and their associated VSLs, the SDT added the phrase “in order of increasing severity” and added the sentence, “The types of encroachments are listed in order of increasing degrees of severity in non-compliant performance as it relates to a failure of a TO’s vegetation maintenance program.” to the Rationale boxes for R1/R2. Do you agree? If answer is no, please explain.</p> <p>BPA prefers the stratified levels of violation severity presented in the table for R1 and R2.</p> <p>Foot note # 2 on page 8 needs to be clarified with respect to arboricultural activities or horticultural or agricultural activities.</p> <p>Foot note # 4 on page 12 needs to be clarified with respect to arboricultural activities or horticultural or agricultural activities.</p>

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				<p>In response to comments received that requirement R3 is unclear with respect to intent, the SDT added “maintenance strategies.” Do you agree this clarifies the intent? If answer is no, please offer alternative language. The TO procedures / policies and specifications shall demonstrate the TO’s ability to manage the system at all rated conditions to maintain reliability.</p> <p>BPA believes that the intent is clear, but the fundamental approach of using the MVCD (table 2) to manage a vegetation program is still problematic. These values are flashover distances and are way too close. This is acknowledged in a footnote to table 2 but no identification of allowable buffers/distances between energized phase conductors at rated temperatures and vegetation is discussed (this is left up the transmission owners). Clarity is needed on this topic. Setting a finite distance limit based on recognized standards, good science and risk avoidance should be done for the industry. BPA has previously made this comment during the drafting of the standard. It was not addressed then, nor has it been addressed now.</p>
<p>Response: The SDT thanks you for your comments. The footnotes were changed to conform with your suggestions. With respect to comments about the MVCD, R3 does not suggest the MVCD be used as a distance to manage vegetation. The MVCD was established as a beginning of a series of “building blocks” for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions.</p> <p>R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner’s overall vegetation management approach. The net result of this “building block” approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD distances.</p>				

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<p>In a performance based standard, requirements are focused on “what” needs to be accomplished to achieve desired results and avoids prescriptive requirements of “how” to achieve that result. TO’s are in the best position to determine the appropriate management approach suited for their system rather than a “one size fits all” or “fill in the blanks” requirements that could suppress best practices for vegetation management.</p>				
<p>Wilket (Jack) Ng</p>	<p>Consolidated Edison Co. of New York</p>	<p>5</p>	<p>Affirmative</p>	<p>Reply to Question 5 on Comment Form: The added language for the annual work plan percentage complete calculation is shown in R7 not M7 as stated in the question. In the Guideline and Technical Basis Section for Requirement R6, there is a sample calculation shown for the amount of lines the TO failed to inspect. An example should also be included for Requirement R7 since there is some confusion regarding how modifications to the work plan affect the calculation. In the Lower VSL column for R7, it states that the TO failed to complete up to 5% of its annual vegetation work plan (including modifications if any). If a TO operates 100 lines and submits a justified modification that affects 10 miles of lines, the total number of units in the final amended plan is 90 miles. When you read the VSL, it is somewhat confusing since the information in parenthesis says that the calculation 'includes' the modifications. Should it state 'excludes modifications if any' or the VSLs can simply be re-written to state that ..The TO failed to complete up to x% of the final amended plan.'</p> <p>Also, the VSLs in R6 and R7 should be consistent with each other: R6 says '...TO failed to inspect 5% or less....' and R7 says '...TO failed to complete up to 5%....' They both should use the same verbiage in each VSL whether it is 'x% or less' or 'up to and including x%'.</p>

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<p>Response: The SDT thanks you for your comments.</p> <p>The percentage should be based on the plan as modified. The SDT has changed the language in the standard to reflect this more clearly, and has modified the VSLs to be consistent as you have suggested.</p>				
<p>James B Lewis</p>	<p>Consumers Energy</p>	<p>5</p>	<p>Negative</p>	<p>Consumers Energy submits the following comments on FAC-003-2: In general we are please with FAC-003-2 and the many clarifications that the STD has made in this version of the standard. However, we do have one major disagreement with the STD and cannot support this standard as drafted.</p> <p>We disagree with the use of the Minimum Vegetation Clearance Distance (MVCD) developed by the drafting team for Requirements R1 and R2. These distances are not the design distances used for designing and constructing transmission facilities as stated in the document for minimum distances between conductors and grounded objects. The proposed Table 2 provides a distance of 3.12 feet as the acceptable distance for an alternate current 345kV line at sea level. This distance is considerably less than the distance used for line design to separate the grounded tower structure from the energized conductor. If the distance in Table 2 is acceptable to prevent energized portions of a transmission line from grounding to a tree why then is this distance not the design criteria used for tower design to prevent flashover from conductor to tower? The STD needs to explain why a ground tree should have a different standard that a grounded steel tower or wood pole structure.</p> <p>The STD erroneously viewed the possibility of transient over</p>

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				<p>voltage as only occurring during re-energizing and not from natural events such as a lightning strike that can occur and does occur to energized operating lines. Secondly, the proposed distances in Table 2 are considerably less than the distances specified in OSHA requirements for air gap clearance required by tree workers to safely remove trees or limbs from conductors energized at the voltages specified. A transmission owner/operator could let a tree grow to within 3.5 feet of a 345 kV line and not be in violation of this proposed standard. To remove the tree, the line would have to be de-energized, tagged, tested de-energized, and grounded. Working clearance would have to be established by the operating entity and then the tree crew could remove the tree. The net result is the loss of the capacity of the line because an outage was forced on the line in order to remove the tree that did not trigger a violation of FAC-003-2. This situation, in our opinion, is a violation of the intent of the standard, which is to ensure the continued operation of the line. Therefore, the minimum distance any tree should be able to approach a conductor is more than the minimum requirement for air gap distance between the tree and conductor as required by OSHA worker standards. The STD did not like referring to another standard to provide the distance requirements for R1 and R2. This can be alleviated by putting in a table with the IEEE 516 distances but not reference it as the IEEE 516 standard. The distances provided in the current draft do not adequately provide or ensure the continued safe operation of the transmission facilities in the United States and the reasoning for the distances provided is unfounded and not based on current design practices.</p>

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<p>Response: The SDT thanks you for your comments. You are correct that these distances do not represent complete design specifications for towers, nor define and describe safe worker approach distances. These practices are correctly specified in the other standards you referenced. The SDT feels the standard is clear in that regard. The footnote associated with the Table 2 distances clearly states that these are only distances to prevent flashover under appropriate conditions. The SDT would also like to point out that the transient overvoltage factors used to derive these distances are the maximums normally seen with a transmission line in steady state service. Thus, a tower design would have to account for the larger overvoltage factors that are possible while taking lines out of service.</p> <p>As has been stated before, these distances were derived using a known set of line design equations and only represent distances that will prevent spark-over from the transmission line to a grounded object. These are not distances to be managed to – they have been established as a beginning of a series of “building blocks” for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions.</p> <p>R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner’s overall vegetation management approach. The net result of this “building block” approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD.</p> <p>These distances are smaller than safety standard distances that have many other factors involved in the determination, such as inadvertent human movement and larger safety factors. In regard to the over-voltages caused by lightning, even the maximum overvoltage factors contained in the IEEE-516 tables do not account for these.</p>				
Bob Essex	Cowlitz County PUD	5	Negative	Referring back to Cowlitz’ negative vote made on the 7/9-19/2010 ballot, Cowlitz tried to convey the problem that the statement in R4 “without intentional time delay” will require subjective judgment on the part of the auditor. In other words, maintaining equal auditing standard throughout the interconnection will be impossible with this verbiage in a requirement. Cowlitz agrees with the SDT that establishing an equitable time frame is very difficult (it may be impossible!); however leaving it to the judgment of the auditor to determine whether an intentional delay was made is most disagreeable. Cowlitz respectfully points out that the SDT did not adequately address the subjective nature the auditor is forced into with this requirement. If

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				establishing "[t]he time required by the to report an issue is subject to many variables..." and "[f]or this reason it is difficult to establish a time period which would fairly apply to all TO's," how does leaving this to the auditor to decide going to make it any better?
<p>Response: The SDT believes that it was not prudent to suggest a quantitative time element for notification in R4. The technical reference offers examples of acceptable unintentional delays for your review. The SDT notes that this language is already embodied in at least one other FERC-approved, in-force Standard.</p>				
Kenneth Dresner	FirstEnergy Solutions	5	Affirmative	FirstEnergy supports standard FAC-003-2 and would appreciate consideration of our comments submitted through the formal comment period.
<p>Response: The SDT thanks you for your comments. Please see our consideration of your comments within the responses to the formal comments.</p>				
David Schumann	Florida Municipal Power Agency	5	Negative	<p>R1 and R2 requirement reads: "Each Transmission Owner shall manage to prevent encroachment". The results of manage would be invoices of tree trimming actually performed, documentation of a vegetation management program that would be managed to, etc. However, the Measures proposed are all actual outages which are neither evidence of management nor evidence of encroachment since there can be encroachment without an outage, and in fact, many if not most encroachments do not result in outages. Hence, the Measures are inconsistent with the requirements.</p> <p>Further, there is ambiguity of the action required in requirements R1 and R2 - e.g., do entities need evidence that they: 1) "manage", or 2) "prevent encroachment"; or 3) as implied by the Measures, prevent vegetation related outages?. In other words, what needs to be proven through evidence? Certainly the third, prevent vegetation related</p>

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				<p>outages, is not in the Requirement; yet, that us what is proposed for the Measures, highlighting the inconsistency between Requirements and Measures. But, how would the ambiguity between "manage" and "prevent encroachment" be resolved? One auditor could interpret that the requirement is to "manage" and accept a vegetation management program and plan and proof that the plan was executed as appropriate evidence. Another auditor could interpret that "prevent" is the key word and look for evidence proving that there was never a vegetation encroachment. How would evidence be produced to provide the auditor that vegetation never encroached? Would video cameras and other surveillance measures need to operate 24 hours a day? Would we cause an entity to survey the lines periodically? One can easily see that "prevent encroachment" is inappropriate here since it is infeasible to create evidence of compliance. FMPA suggests one of two approaches: Eliminate the word manage, but do not focus on encroachment and instead focus on outages. For instance: "Each Transmission Owner shall prevent vegetation related outages (except as noted in Footnote 2) of any of its applicable line(s) ..." Evidence of outages is practical to gather and provide, evidence of encroachment is not. Focus on the word "manage", similar to the existing FAC-003 standard, and move R3 to a new R1 to develop a management plan, and then the existing R1 and R2 become R2 an R3 and require execution of that plan in the words of R7, which would in turn enables elimination of R7.</p>
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that "...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation" (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines</p>				

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<p>how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated.</p>				
Richard J. Padilla	Pacific Gas and Electric Company	5	Affirmative	There needs to be a change in the footnotes 2 and 4 to remove the exemption for “arboricultural activities or horticultural or agricultural activities” and replace it with the term “ installation of”
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
Wayne Lewis	Progress Energy Carolinas	5	Affirmative	There needs to be a change in the footnote 2 and footnote 4 to remove the exemption for “arboricultural activities or horticultural or agricultural activities” and replace it with the term “installation of.
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
Liam Noailles	Xcel Energy, Inc.	5	Affirmative	Xcel Energy still believes the requirement in R6 that mandates an annual inspection is an ineffective approach and may actually go against the Commission’s determination in FERC Order No. 693. The drafting team’s response to our last round of comments on this issue was that “...the SDT was directed by Order 693 to set a minimum inspection criteria”. It is clear in Order 693 that the Commission is not satisfied with allowing entities to choose their own inspection cycles, as the standard currently allows. However, we fail to see where the Commission mandated a minimum inspection cycle to be uniformly applied continent-wide. We urge the drafting team to revisit paragraphs 719 through 721 of Order 693. According to paragraph 721, the Commission recognizes that unique intervals by region, “based on local factors”, are reasonable and appropriate. By use of the plural term “cycles”, FERC anticipates the resolution may include multiple inspection

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				<p>cycles. Furthermore, in paragraph 719, FERC acknowledges that a minimum inspection cycle may not be the only way to address their concern. In fact, mandating an annual inspection cycle may actually go against the Commission’s guidance in paragraph 720. Here is an excerpt: “...the Commission is dissuaded from requiring the ERO to create a backstop inspection cycle at this time. Instead, the Commission agrees that an entity’s vegetation management program should be tailored to anticipated growth in the region and take into account other environmental factors. The goal is to assure that transmission owners conduct inspections at reasonable intervals.”</p> <p>As an alternative, we propose a mid-cycle inspection. A mid-cycle inspection is based on an interval that is justified with data and technical expertise. A mid-cycle inspection would still require entities to conduct inspections at a specified interval, while allowing for differences based upon “physical and geographic factors”. Not only would this approach fully address the Commissions concerns, but it would take into account the interests of stakeholders, landowners and rate-payers. We recognize that a mid-cycle inspection interval is not as easy to audit as an annual requirement, but it is a far more practical and cost-effective approach that, when applied based on an entity’s expertise with its own facilities, ensures reliability.</p>
<p>Response: The SDT thanks you for your comments. The SDT recognizes that a number of Transmission Owners in North America may prefer to set their own inspection intervals. The SDT can also see attractiveness for a mid-cycle inspection concept; however, this introduces new complexities in planning, documentation and auditing. Because there is substantial industry support for an annual inspection interval , the SDT believes that the industry is best served with this approach.</p>				

Voter	Entity	Segment	Vote	Comment
Edward P. Cox	AEP Marketing	6	Affirmative	<p>American Electric Power believes that the phrase "arboricultural activities or horticultural or agricultural activities" was mistakenly introduced into Footnotes 2 and 4, and should be deleted from both footnotes. If the phrase remains in the Standard, it may empower orchard growers, landowners and others to plant trees on the right of way and challenge Transmission Owners' rights to perform maintenance on the presumption that the standard will exempt the TO from violating the outage or encroachment requirements.</p> <p>For increased clarity, AEP offers the following change to the second paragraph of M1, as well as the second paragraph of M2. The original text "If a later confirmation of a Fault by the Transmission Owner shows that a vegetation encroachment within the MVCD has occurred from vegetation within the ROW, this shall be considered the equivalent of a Real-time observation" should be replaced with "If a later confirmation of a Fault by the Transmission Owner shows that a vegetation encroachment within the MVCD has occurred from vegetation growing into or blowing together with the conductor within the ROW, this shall be considered the equivalent of a Real-time observation. A brief encroachment caused by falling vegetation passing through the MVCD is not considered an encroachment in this requirement".</p>
<p>Response: Thanks you for your comments. The SDT made the suggested changes to the footnotes.</p> <p>Regarding the issue of fall-ins, the SDT is sympathetic to your concern. In fact, the SDT had originally crafted language similar to that which you suggested. However, due to concerns expressed by regulators and others, the exemption for encroachment violations due to falling vegetation from inside the right of way was removed.</p>				

Voter	Entity	Segment	Vote	Comment
Brenda S. Anderson	Bonneville Power Administration	6	Affirmative	<p>BPA Comments with Yes Vote: In R1 and R2 and their associated VSLs, the SDT added the phrase “in order of increasing severity” and added the sentence, “The types of encroachments are listed in order of increasing degrees of severity in non-compliant performance as it relates to a failure of a TO’s vegetation maintenance program.” to the Rationale boxes for R1/R2. Do you agree? If answer is no, please explain.</p> <p>BPA prefers the stratified levels of violation severity presented in the table for R1 and R2.</p> <p>Foot note # 2 on page 8 needs to be clarified with respect to arboricultural activities or horticultural or agricultural activities.</p> <p>Foot note # 4 on page 12 needs to be clarified with respect to arboricultural activities or horticultural or agricultural activities.</p> <p>In response to comments received that requirement R3 is unclear with respect to intent, the SDT added “maintenance strategies.” Do you agree this clarifies the intent? If answer is no, please offer alternative language. The TO procedures / policies and specifications shall demonstrate the TO’s ability to manage the system at all rated conditions to maintain reliability.</p> <p>BPA believes that the intent is clear, but the fundamental approach of using the MVCD (table 2) to manage a vegetation program is still problematic. These values are</p>

Voter	Entity	Segment	Vote	Comment
				<p>flashover distances and are way too close. This is acknowledged in a footnote to table 2 but no identification of allowable buffers/distances between energized phase conductors at rated temperatures and vegetation is discussed (this is left up the transmission owners). Clarity is needed on this topic. Setting a finite distance limit based on recognized standards, good science and risk avoidance should be done for the industry. BPA has previously made this comment during the drafting of the standard. It was not addressed then, nor has it been addressed now.</p>
<p>Response: The SDT thanks you for your comments. The footnotes were changed to conform with your suggestions.</p> <p>With respect to comments about the MVCD, R3 does not suggest the MVCD be used as a distance to manage vegetation. The MVCD was established as a beginning of a series of “building blocks” for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions.</p> <p>R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner’s overall vegetation management approach. The net result of this “building block” approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD distances.</p> <p>In a performance based standard, requirements are focused on “what” needs to be accomplished to achieve desired results and avoids prescriptive requirements of “how” to achieve that result. TO’s are in the best position to determine the appropriate management approach suited for their system rather than a “one size fits all” or “fill in the blanks” requirements that could suppress best practices for vegetation management.</p>				
Matthew D Cripps	Cleco Power LLC	6	Negative	<p>Cleco disagrees with the SDT revising the definition for Right-of-Way (ROW). Right-of-Way is a term that has had a consistent meaning throughout history. If NERC tries to redefine the term, it will only add confusion because most entities will not reference the NERC glossary for a term which is widely used in the industry. In lieu of "Active Transmission Line ROW", please use another term such as Transmission Corridor. No assumptions would be made when reading in the Standard the the Entity is to maintain</p>

Voter	Entity	Segment	Vote	Comment
				<p>vegetation located within the Transmission Corridor. Since the term is not commonly used, the NERC glossary would be referenced.</p> <p>Also, Cleco disagrees that an encroachment into the MCVD that does not cause an outage should be considered non-compliant as stated in R1 and R2. The encroachment should only be reportable similar to misoperations as is in the PRC-004 standard.</p>
<p>Response: Thanks for your comments. The existing ROW definition in the glossary was created by and for the FAC-003-1 and was moved there when that standard was adopted. The definition includes a series of options that give the Transmission Owner latitude in establishing ROW width. It does not require selecting a single method for its system. The term blowout standard is not capitalized and is not a defined term. This phrase in the definition allows a Transmission Owner to use its internal engineering standards or the general engineering standards that were in effect when the line was constructed to determine the ROW width. The SDT has limited the definition of Right-of-Way to a corridor of land with a defined width to operate a transmission line. This does not include danger tree rights. The definition of the MVCD is now added to this Standard. While use of the pre-2007 records is a compliance issue and is not in the purview of the SDT, it is the intent of the language in the definition that you could use this information.</p> <p>Regarding your second comment (begins with Also,): the MVCD was established as a beginning of a series of “building blocks” for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions. R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner’s overall vegetation management approach. The net result of this “building block” approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD.</p> <p>Other related requirements of this “Defense in Depth” Standard serve to address any number of scenarios which may arise or hinder the TO’s ability to always strictly adhere to the management approach(s) established within R3. Thus the other requirements of this Standard provide the latitude for appropriate actions to remedy the condition without penalty. Further, trees which have encroached inside the MVCD are evidence of a deficiency in vegetation maintenance.</p>				
Nickesha P Carrol	Consolidated Edison Co. of	6	Affirmative	Reply to Question 5 on Comment Form: The added language for the annual work plan percentage complete calculation is

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	New York			shown in R7 not M7 as stated in the question. In the Guideline and Technical Basis Section for Requirement R6, there is a sample calculation shown for the amount of lines the TO failed to inspect. An example should also be included for Requirement R7 since there is some confusion regarding how modifications to the work plan affect the calculation. In the Lower VSL column for R7, it states that the TO failed to complete up to 5% of its annual vegetation work plan (including modifications if any). If a TO operates 100 lines and submits a justified modification that affects 10 miles of lines, the total number of units in the final amended plan is 90 miles. When you read the VSL, it is somewhat confusing since the information in parenthesis says that the calculation 'includes' the modifications. Should it state 'excludes modifications if any' or the VSLs can simply be re-written to state that ..The TO failed to complete up to x% of the final amended plan.'
<p>Response: The SDT thanks you for your comments. The percentage should be based on the plan as modified. The SDT has changed the language in the standard to reflect this more clearly.</p>				
Mark S Travaglianti	FirstEnergy Solutions	6	Affirmative	FirstEnergy supports standard FAC-003-2 and would appreciate consideration of our comments submitted through the formal comment period.
<p>Response: The SDT thanks you for your comments. Please see our consideration of your comments within the responses to the formal comments.</p>				
Thomas E Washburn	Florida Municipal Power Pool	6	Negative	The concern is that entities may not be able prove compliance with the standard. R1 and R2 say that: "Each Transmission Owner shall manage vegetation to prevent encroachments ...". If the requirements were interpreted such that "manage" is the operative word, then, we are OK because we can provide evidence of managing a program,

Voter	Entity	Segment	Vote	Comment
				<p>such as a vegetation management plan and evidence of executing that plan (which does not align with the Measures). However, that 1) would cause the standard to not be performance based, and 2) it would be duplicative of the other requirements of the standard.</p> <p>If the requirements were interpreted with "prevent encroachment" as the operative phrase (which would be an incorrect interpretation from the construct of the sentence) there is no way to provide sufficient evidence that encroachment was prevented during the audit-period. The suggested Measures are not sufficient evidence to prove compliance with that interpretation of the requirement. For instance, most encroachments do not result in outages; hence, lack of outages cannot prove that there were no encroachments, and real time observations are insufficient because it is a spot-check that does not cover the audit period.</p> <p>There are other weaknesses in the standard, such as R4 being un-measurable therefore unenforceable. However, in the guilty until proven innocent paradigm we live in, FMPA's primary concern is that industry could be put into a no-win situation of not being able to prove compliance with the standard if R1 and R2 are interpreted as "prevent encroachment", and if R1 and R2 are interpreted as "manage" then it is not a performance based standard as advertised.</p> <p>Performance based focused on preventing vegetation related outages. For instance: "Each Transmission Owner</p>

Voter	Entity	Segment	Vote	Comment
				<p>shall prevent vegetation related outages (except as noted in Footnote 2) of any of its applicable line(s) ..." Evidence of outages is practical to gather and provide, evidence of encroachment is not.</p> <p>Modify the standard to be similar to the currently mandatory non-results based standard and focus on the word "manage". This would essentially mean eliminating R1 and R2 since the rest of the standard focuses on having a plan and managing to that plan..</p>
<p>Response: The SDT thanks you for your comments. In Order 693, FERC was very specific that "...FAC-003-1 is designed to minimize transmission outages from vegetation located on or near transmission rights-of-way by maintaining safe clearances between transmission lines and vegetation" (emphasis added). The drafting team followed that concept and used R1 and R2 to move the clearance from a documentation requirement to a performance requirement. Item 1 in the requirements defines how an encroachment without an outage would be documented. Each Transmission Owner is also required to conduct inspections in which clearances are evaluated.</p>				
Silvia P. Mitchell	Florida Power & Light Co.	6	Affirmative	<p>1. The SDT proposes a revised NERC Glossary definition for Right-of-Way (ROW). This revised definition will be used in lieu of the Active Transmission Line ROW. Do you agree? If answer is no, please explain. Yes</p> <p>2. In R1 and R2 and their associated VSLs, the SDT added the phrase "in order of increasing severity" and added the sentence "The types of encroachments are listed in order of increasing degrees of severity in non-compliant performance as it relates to a failure of a TO's vegetation maintenance program." to the Rationale boxes for R1/R2. Do you agree? If answer is no, please explain. Yes Although NextEra Energy Inc. (NextEra), including Florida Power & Light Company, agrees with the changes referenced for R1</p>

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				<p>and R2, NextEra is concerned that the exemptions identified in footnote 2 for “...arboricultural activities or horticultural or agricultural activities...,” and similar language in footnote 4, are too broad. For example, this language appears to include an exemption for a landowner, who, during arboricultural activities or horticultural or agricultural activities, causes a vegetation contact with a transmission line (e.g., cutting or lifting a tree into a transmission line). This places the Transmission Owner in the difficult position of a landowner arguing it is exempt from a controllable risk. Thus, the “...arboricultural activities or horticultural or agricultural activities...” references should be removed from footnote 2, and the similar language in footnote 4</p> <p>3. In response to comments received regarding the term “investigation” in M1/M2, the SDT substituted “confirmation...by the Transmission Owner..” in its place, among other minor edits to these measures. Do you agree? If answer is no, please explain. Yes</p> <p>4. In response to comments received that requirement R3 is unclear with respect to intent, the SDT added “maintenance strategies”. Do you agree this clarifies the intent? If answer is no, please offer alternative language. Yes</p> <p>5. The SDT added clarifying language in M7 to explain how the annual work plan percentage complete calculation is to be performed. Is this adequate? If no, please provide improved examples. Yes</p>

Voter	Entity	Segment	Vote	Comment
<p>Response: The SDT thanks you for your comments. The team has made the appropriate modifications to the footnotes as you suggested.</p>				
Thomas Saitta	Kansas City Power & Light Co.	6	Negative	The Standard lacks clarity regarding the facilities that are subject to Requirement 7. It is important that a Standard be clear and not introduce ambiguity or confusion. There are several references throughout the Standard to "for all applicable lines" and it should be made clear the work plan is specific to "all applicable lines".
<p>Response: The SDT thanks you for your comments. The phrase, "applicable lines" was added to R7 in support of your suggestion.</p>				
Eric Ruskamp	Lincoln Electric System	6	Affirmative	While supportive of the drafting team's efforts, LES believes a change is warranted in Footnote 2 and Footnote 4 to remove the exemption for "arboricultural activities or horticultural or agricultural activities" and replace with the term "installation of". As currently drafted, the wording could potentially be construed to mean that the TO would or could be constrained or refused permission to prune and remove any and all vegetation in the ROW in accordance with the full legal rights of the ROW agreement(s).
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
John T Sturgeon	Progress Energy	6	Affirmative	There needs to be a change in the footnote 2 and footnote 4 to remove the exemption for "arboricultural activities or horticultural or agricultural activities" and replace it with the term "installation of".
<p>Response: The SDT thanks you for your comments. The footnotes have been changed as proposed.</p>				
David F. Lemmons	Xcel Energy, Inc.	6	Affirmative	Xcel Energy still believes the requirement in R6 that mandates an annual inspection is an ineffective approach and may actually go against the Commission's

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				<p>determination in FERC Order No. 693. The drafting team’s response to our last round of comments on this issue was that “...the SDT was directed by Order 693 to set a minimum inspection criteria”. It is clear in Order 693 that the Commission is not satisfied with allowing entities to choose their own inspection cycles, as the standard currently allows. However, we fail to see where the Commission mandated a minimum inspection cycle to be uniformly applied continent-wide. We urge the drafting team to revisit paragraphs 719 through 721 of Order 693. According to paragraph 721, the Commission recognizes that unique intervals by region, “based on local factors”, are reasonable and appropriate. By use of the plural term “cycles”, FERC anticipates the resolution may include multiple inspection cycles. Furthermore, in paragraph 719, FERC acknowledges that a minimum inspection cycle may not be the only way to address their concern. In fact, mandating an annual inspection cycle may actually go against the Commission’s guidance in paragraph 720. Here is an excerpt: “...the Commission is dissuaded from requiring the ERO to create a backstop inspection cycle at this time. Instead, the Commission agrees that an entity’s vegetation management program should be tailored to anticipated growth in the region and take into account other environmental factors. The goal is to assure that transmission owners conduct inspections at reasonable intervals.”</p> <p>As an alternative, we propose a mid-cycle inspection. A mid-cycle inspection is based on an interval that is justified with data and technical expertise. A mid-cycle inspection would still require entities to conduct inspections at a specified interval, while allowing for differences based upon “physical</p>

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				<p>and geographic factors”. Not only would this approach fully address the Commissions concerns, but it would take into account the interests of stakeholders, landowners and rate-payers. We recognize that a mid-cycle inspection interval is not as easy to audit as an annual requirement, but it is a far more practical and cost-effective approach that, when applied based on an entity’s expertise with its own facilities, ensures reliability.</p>
<p>Response The SDT thanks you for your comments. The SDT recognizes that a number of Transmission Owners in North America may prefer to set their own inspection intervals. The SDT can also see attractiveness for a mid-cycle inspection concept; however, this introduces new complexities in planning, documentation and auditing. Because there is substantial industry support for an annual inspection interval and due to the vastly simpler auditing associated with an annual interval, the SDT believes that the industry is best served with this approach.</p>				
<p>Jacque Smith</p>	<p>ReliabilityFirst Corporation</p>	<p>10</p>	<p>Negative</p>	<p>ReliabilityFirst votes “No” on the proposed FAC-003-2 because ReliabilityFirst believes that the currently effective FAC-003-1, despite any weaknesses it may have, better ensures the reliability of the bulk electric system.</p> <p>First, under the proposed FAC-003-2, Requirements 1 and 2, the minimum clearances are reduced.</p> <p>Second, under the proposed structure of FAC-003-2, Requirements 1 and 2, violations would only occur where an encroachment of the Minimum Vegetation Clearance Distance (“MVCD”) is observed in real time or after vegetation contact, i.e., after actual harm has occurred. Consequently, the proposed structure appears to convert a preventative maintenance standard into a standard that is essentially only violated after it is too late. The current structure from Version 1 of the standard (i.e., the Clearance</p>

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				<p>1 and 2 requirements) better ensures reliability because they seek to ensure that registered entities discover problematic vegetation conditions prior to encroachments leading to flashover or vegetation contacts. For example, the current Clearance 1 is the “clearance distances to be achieved at the time of transmission vegetation management work.” And the current Clearance 2 is the “specific radial clearances to be maintained under all rated electrical operating conditions.” See FAC-003-1, R1.2.1 and R1.2.2 (emphasis added).</p> <p>Third, the draft standard appears to inappropriately and unnecessarily reduce the risk factor assigned to some failures to manage vegetation. It draws a distinction between those transmission lines that are elements of IROLS or Major Western Electricity Coordinating Council (“WECC”) transfer paths and those that are not. This distinction is apparently based on the assumption that vegetation management violations on transmission lines that are not elements of IROLS or Major WECC transfer paths are less important. ReliabilityFirst disagrees with this assumption. Simply put, both are serious issues and the distinction is inappropriate and unnecessary. <u>The Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations</u>, highlights the importance of all vegetation management work by identifying inadequate vegetation management as one of the causes of the 2003 Blackout. See Blackout Report, at p. 20.</p> <p>Finally, ReliabilityFirst disagrees with the proposed Violation Risk Factors (“VRFs”) and Violation Severity Levels (“VSLs”)</p>

Voter	Entity	Segment	Vote	Comment
				<p>because they are premised on the same inappropriate and unnecessary distinction that vegetation management violations on transmission lines that are not elements of IROLS or Major WECC transfer paths are less important.</p> <p>For the foregoing reasons, ReliabilityFirst votes “No” on the proposed FAC-003-2.</p>
<p>Response: As with a Transmission Owner's determination of its Clearance 1 distances under version 1 of the Standard, Requirement 3 of the revised Standard begins with the MVCD distances (just as Clearance 1 began with IEEE-516 distances) and then requires additional consideration for conductor movement, vegetation growth variables, and the utility's maintenance approach. These are essentially the same considerations required by version 1 of the existing Standard when developing Clearance 1 distances. Therefore, nothing has been lost in the revised Standard.</p> <p>The MVCD was established as a beginning of a series of “building blocks” for a program to ensure reliability of a Transmission line within its rating and all rated electrical operating conditions.</p> <p>R3 requires that a Transmission Owner consider the MVCD distances, as well as variables of conductor movement and vegetation growth, when designing the Transmission Owner’s overall vegetation management approach. The net result of this “building block” approach is that when entities implement R7, their efforts will result in vegetation management at clearance distances greater than the MVCD distances.</p> <p>The defense-in-depth strategy for reliability standards development recognizes that each requirement in a NERC reliability standard has a role in preventing system failures, and that these roles are complementary and reinforcing. Reliability standards should not be viewed as a body of unrelated requirements, but rather should be viewed as part of a portfolio of requirements designed to achieve an overall defense-in-depth strategy and comport with the quality objectives of a reliability standard. The draft, when taken in whole, does present a "preventative" maintenance standard.</p> <p>The Standard has been designed utilizing a "Defense in Depth" strategy which provides for multiple layers of defense against a MVCD encroachment or an outage. These other layers of defense are identified in requirements R3 through R7. R3 through R7 are the same preventative maintenance requirements as contained in Version 1 of the Standards. Additionally, Measure 3 for R3 now tests the reasonableness and practicality of a TO’s vegetation management approach long before field work is implemented; other requirements such as R7 require preventative maintenance work to be completed before encroachments occur.</p> <p>The SDT asserts that different VRF’s for IROL and non-IROL lines strengthens the reliability of the standard. Vegetation</p>				

Voter	Entity	Segment	Vote	Comment
				<p>managers that do not know which lines have IROLs or are designated as WECC Transfer Paths may be inappropriately limiting resources allocated to vegetation management for a line with an IROL or a line designated as a WECC Transfer Path. A vegetation manager must ensure that the lines with IROLs and lines designated as WECC transfer paths are absolutely clear. By correctly identifying the risk associated with lines with IROLs line and/or lines designated as WECC Transfer Paths, the standard helps to assure that appropriate resources are applied.</p>