

**Consideration of Comments on Initial Ballot — Project 2007-07 Vegetation Management FAC-003-2**  
**Date of Initial Ballot: 7/9/2010 - 7/19/2010**

**Summary Consideration: In general, there were no common themes and as such each comment was responded to individually.**

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, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.<sup>1</sup>

Voter	Entity	Segment	Vote	Comment
Kirit S. Shah	Ameren Services	1	Negative	(1) Need clarification on Footnote number 2 and Table 3 : Does this mean wider ROW easements will need to be acquired to be compliant or will this apply to ROW's for new circuits going forward? (2)R7 - Funding Adjustments (increase or decrease) - need more description to imply only when planned vegetation work is "over and above". (3) R5 - What constitutes a "potential risk"? Breaking the MVCD or getting close to it? (4) R7 - No work plan can ensure that NO vegetation encroachments will occur; can language be added similar to "to ensure that no vegetation encroachments 'from vegetation within the active right of way' occur within the MVCD"?
<p><b>Response:</b></p> <p>(1) <b>No, the SDT has re-established the concept of an Active Transmission Line ROW by changing the definition of Right of Way with the same principles which was almost universally accepted by industry. After thorough analysis of potential modifications to Table 3 and other alternatives, the team found no specific, prescriptive, or formulaic language which can be applied across the US, Canada and Mexico, thus the team reverted to the Active Transmission Line ROW, removed Footnote 2 and Table 3.</b></p> <p>(2) <b>The SDT limits the reasons for plan adjustment by whether the changes place the system at risk of a violation of the MVCD as defined in R1 and R2.</b></p> <p>(3) <b>The SDT recognizes that defining any risk is subjective. Removing the term does not change the fact that each TO must determine the risk and respond accordingly.</b></p> <p>(4) <b>The SDT has incorporated your suggestions.</b></p>				
Danny McDaniel	Cleco Power LLC	1	Negative	1. Encroachment into the MVCD should require the owner to take immediate corrective action to mitigate the threat. But such an encroachment should not be reportable as a violation. Owners may be hesitant to report if they know it is a violation. Recommend the SDT consider modifying the measures for R1 and R2 to be applicable only in the interruption of transmission facility or allow the reporting but don't make it a violation of compliance. R4 states "Each Transmission Owner, without any intentional time delay, shall notify the control center holding switching authority for the associated transmission line when qualified
Bryan Y Harper	Cleco Utility Group	3	Negative	

<sup>1</sup> The appeals process is in the Reliability Standards Development Procedure: [http://www.nerc.com/files/RSDP\\_V6\\_1\\_12Mar07.pdf](http://www.nerc.com/files/RSDP_V6_1_12Mar07.pdf).

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Matthew D Cripps	Cleco Power LLC	6	Negative	personnel confirm the existence of a vegetation condition that is likely to cause a Fault at any moment" 2. In R4, the use of "intentional" is a vague term. As other standards prescribe, set a time at which the control center should be notified. R5 states: "Each Transmission Owner shall take corrective action when it is constrained from performing planned vegetation work, where a transmission line is put at potential risk due to the constraint." 3. In R5, the use of "potential risk" is a vague term. R5 should read as follows: Each Transmission Owner shall take corrective action when it is constrained from performing planned vegetation work. R7 states: "Each Transmission Owner shall complete the work in an annual vegetation work plan to ensure no vegetation encroachments occur within the MVCD ...." 4. The first sentence should not include the phrase "to ensure no vegetation encroachments occur within the MVCD" since the requirement is to do the work in the work plan. The added phrase adds ambiguity, e.g., if there is an encroachment, is R7 violated since it does not meet the "ensure" phrase? Would this cause a double jeopardy situation with R1 and R2?
<p><b>Response:</b></p> <ol style="list-style-type: none"> <li><b>The SDT discussed this issue at length. However, NERC and FERC interpret vegetation growing into MAID as too great a risk to allow. While MAID is replaced with the MVCD the risk is still there.</b></li> <li><b>The SDT debated a set time limit. The team could not find a time that would fit all situations. Intentional would apply if a TO withheld notification after having confirmed that risk conditions exist.</b></li> <li><b>The SDT removed the vague language.</b></li> <li><b>There are opportunities for double jeopardy between R1/R2 and R7 without this language. The occurrence of double jeopardy has not been born out.</b></li> </ol>				
Saurabh Saksena	National Grid	1	Negative	1. The recent addition of a centerline distance to edge of Active ROW is not acceptable to National Grid. In many areas we use design standards that allow a much lesser ROW width with no compromise to "cleared width" or tree related reliability of the line. Instead of using the term "Centerline" as referenced on Table 3, the use of "outer phase" or "phase closest to tree line" would be more appropriate. 2. National Grid also has issues with the term "easements" in the definition and seek clarification on several questions - is there a reason the Active ROW only includes easements, not fee ownership, license or some other right to occupy and manage the ROW? Would Active ROW include "danger tree rights" on land?
Michael Schiavone	Niagara Mohawk (National Grid Company)	3	Negative	
<p><b>Response: 1&amp;2. The SDT thanks you for your comments. Based on your comment and others, the , the SDT has re-established the concept of an Active Transmission Line ROW by changing the definition of Right of Way with the same principles which was almost universally accepted by industry. After thorough analysis of potential modifications to Table 3 and other alternatives, the team found no specific, prescriptive, or formulaic language which can be applied across the US, Canada and Mexico, thus the team reverted to the Active Transmission Line ROW, removed Footnote 2 and Table 3.</b></p>				
Claudiu	GDS Associates, Inc.	1	Negative	All comments have been included in the NERC comment form.

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Cadar				
<b>Response: Please refer to the SDT responses on the comment form.</b>				
Michael Gammon	Kansas City Power & Light Co.	1	Negative	Although the proposed FAC-003 standard has many improvements and advancements that are desirable over the existing FAC-003 standard, the handling and treatment of encroachments as proposed without consideration of recognizing an organizations efforts in responding to an encroachment situation makes this proposal less desirable and is a major concern regarding the risk that the associated penalties and assessments place on organizations.
Scott Heidtbrink	Kansas City Power & Light Co.	5	Negative	
<b>Response: The SDT thanks you for your comments. Zero tolerance for vegetation caused outages is a stated goal of FERC and NERC as it relates to this standard. Quote from NERC:</b>				
<i>Vegetation Management</i> — While four transmission outages due to vegetation occurred in a single afternoon five years ago, preliminary data suggests that only six such outages occurred in the first six months of 2008 – none of which caused customers to lose power. Transmission line outages due to vegetation contact are still a cause for concern, however, and this remains a top priority for NERC. Through its standards and compliance enforcement, NERC now has a zero-tolerance policy in place, where the goal is to correct issues that may arise long before any customers are affected.				
<b>This policy is part of FAC-003-1 and in concept did not change with the proposed version. The SDT recognizes this concern and has developed gradation taking into account line criticality in VRF’s and type of outage not contained in the current version FAC-003-1. Finally, It is also important to note that each and every incident or potential violation is investigated and addressed based on the specific circumstances surrounding the particular event. These investigations should necessarily take into consideration and recognize the utility’s individual efforts in responding to an encroachment situation.</b>				
Thomas R. Glock	Arizona Public Service Co.	3	Negative	APS supports retention of FAC-003-1 as currently effective, as it is working well for the industry. APS does not support a change to this standard for the following reasons: <ul style="list-style-type: none"> <li>o The minimum clearances must be sufficient to avoid any sustained vegetation-related outages for all applicable conditions. ? . ? Clearance 1 should remain in the standard as it ensures clear direction to the utility on how the system is to be maintained, and provides assistance to the Transmission Owners in dealings with federal land agencies on vegetation management issues. Elimination of the discretion in clearance 1 will significantly degrade this support. ? ANSI-A300 should remain in the standard. Though simply a footnote in the currently effective version, ANSI-A300 should be a requirement in the standard. Relevant Registered Entities should be held to following ANSI A-300 standards and BMP’s for best management practices.</li> <li>o APS does not agree with the removal of ‘fill in the blank’ components where the Transmission Owner determines the requirement with no limits or direction. Examples include and “personnel requirements” in version 1. The SDT removed this requirement from the current version. ? Personnel qualifications should be remain a requirement. The standard should recognize certification programs through the International Society of Arboriculture that certify a minimum level of competence to manage</li> </ul>

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				<p>a vegetation management program which required ongoing training and education to keep up with the latest technologies on UVM. ? There are other standards that require qualifications and training. ? The revised standard dilutes accountability for maintaining the full width of utilities easement. The active ROW should be wide enough to prevent outages caused by grow-in and blow-in events. ? The changes to R1, allowing a real-time observations to evidence encroachments, does not take into account all rated conditions and the time the recording was made. Real-time observations will not account for changing conditions and increase in load. Available technologies, such as LIDAR, can simulate all-rated conditions, contour and tree height to remove these potential trees hazards before an outage occurs. ? The utilities should be required to inspect all the lines annually. ? The standard should include a footnote that provides that a utility will not be held accountable for not completing its annual work plan if federal or state agencies fail to approve annual work plans within 90 days of submittal, or that takes into account the time it takes the utility to get approval.</p>

**Response:** Thank you for your comments.

- **The SDT is changing the Standard in response to the SAR. The success of the existing standard will be preserved and enhanced with this revision.**
- **If vegetation is maintained as required in this draft of the standard in requirements R1 and R2, then no vegetation-related sustained outages, caused by vegetation from within the ROW, within the control of the TO can occur.**
- **Clearance 1 was a fill-in the blank requirement and did not provide the TO any new easement rights, or land permit rights across any lands whether those land be privately owned or publicly owned; therefore Clearance 1 remains removed from this draft. Furthermore, the relevance of Clearance 1 depends on several other factors such as length of maintenance cycles, inspection frequency and growth rates. R3 is now used as a more comprehensive method to address these concerns in lieu of a Clearance 1 requirement.**
- **In order to meet the SAR FAC-003 is required. ANSI-A300 is not sufficient to meet the SAR requirements and contains many elements that do not need to be related to transmission system electrical reliability.**
- **The SDT suggests that the submittal of a NERC SAR on the PER standards be considered to address any proposed personnel qualifications, certifications or training issues.**
- **The SDT is following NERC guidelines as they understand them.**
- **The SDT has re-established the concept of an Active Transmission Line ROW by changing the definition of Right of Way with the same principles which was almost universally accepted by industry. Outages arising from vegetation from outside the ROW are not violations of the standard. The SDT had determined this to be the most appropriate assignment of an area of maintenance responsibility considering the numerous variations in easements and permit rights across North America.**
- **The Standard requires the maintenance to be performed such that loading to Rating and Rated Conditions, and the dynamics of sag and sway are taken into consideration. Additionally any real time observations of encroachments into the MVCD are to be reported as violations of the standard. The SDT does not see the need to be prescriptive as to the technology or tools the TO used to be compliant with the Standard, but is confident that if the vegetation in maintained such that no encroachments are ever observed, and no outages are ever occur, then the reliability purpose of the standard will be fully accomplished. Furthermore, the results from a LIDAR survey are temporal in nature.**

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<p>Any program relying on LIDAR would incur a substantial cost with a long term commitment that may not be justified for many Transmission Owners.</p> <ul style="list-style-type: none"> <li>• FERC requested a defined period for inspection. The SDT agrees with you that annual inspection is required. Therefore the SDT has made annual inspections a Requirement of this Standard. As to all lines versus applicable lines, FERC has accepted the 200 kV bright line for this standard. They did order the SDT to ensure that no sub-200 kV lines that are important to the Bulk Electric System are missing from the Applicability of the standard. The SDT has incorporated a FERC accepted test (as found in the referenced Standard) to make sure no such important lines are missing.</li> <li>• The SDT agrees that erroneous obstacles to compliance with the standard should be addressed. However, they cannot be resolved in this forum, or through language inserted in this standard. This Standard places requirements on the Transmission Owners, not on landowners. There is no legal mechanism for this Standard to take rights from property owners and assign them to the Transmission Owner.</li> </ul>				
John J. Moraski	Baltimore Gas & Electric Company	1	Negative	BGE feels that the new standard does nothing to improve reliability over the existing standard. Furthermore, it could be argued that it potentially diminishes reliability, based on the new MVCD vs. Clearance 2 guidelines. It also includes requirements which could be perceived as being more confusing than the existing requirements in the current standard, e.g., the Active Right-of-Way, Calendar Year Inspections, etc. The new standard, If adopted, would almost certainly require a complete restructuring of all TVMPs and related compliance processes, with no commensurate value-added for individual utilities or the industry in general. In addition, it would do little to enhance the overall intent of the standard, which is to improve vegetation-related transmission reliability in North America.
<p><b>Response:</b> The SDT thanks you for your comments. The SDT believes the proposed version addresses concerns outlined in FERC Order 693 and improves reliability of the BES. The industry overwhelmingly agrees the MVCD based on the Gallet Equation is superior to that of the Clearance 2 fill-in the blank requirement in the current version and in fact can be a greater distance depending on the basis used for Clearance 2 determination. Based on your comment and others, the SDT has re-established the concept of an Active Transmission Line ROW by changing the definition of Right of Way with the same principles which were almost universally accepted by industry. After thorough analysis of potential modifications to Table 3 and other alternatives, the team found no specific, prescriptive, or formulaic language which can be applied across the US, Canada and Mexico, thus the team reverted to a ROW definition, removed Footnote 2 and Table 3. While it is true that any change to the standard may result in changes to current documentation of practices and procedures (such as the TVMP), the SDT believes changes will be minor and be an improvement.</p>				

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Paul Rocha	CenterPoint Energy	1	Negative	CenterPoint Energy believes the proposed FAC-003-2 is not a performance-based standard, despite being labeled as such, because it remains too focused on processes and procedures. CenterPoint Energy fails to see much difference in the approach from the current Standard. CenterPoint Energy believes a performance based requirement would provide performance criteria that an entity would be measured against. An example of a performance based requirement would be the following: R1. "Each Transmission Owner shall manage vegetation to prevent encroachment that results in no more than one (1) Sustained Outage per XXX circuit miles of applicable lines within any twelve (12) month period." M1. Each Transmission Owner has evidence that it had no more than one (1) Sustained Outage per XXX circuit miles of applicable lines within any twelve (12) month period. Examples of acceptable forms of evidence may include dated reports of vegetation-related Sustained Outages or dated attestations as to no vegetation-related Sustained Outages have occurred.
<b>Response: The SDT thanks you for your comments. FAC-003-2 is a "results based standard" (RBS) with a stated objective to prevent outages that could lead to cascading. Any requirement that has an allowance for a certain number of outages does not meet that objective.</b>				
Russell A Noble	Cowlitz County PUD	3	Negative	Cowlitz votes negative with reluctance over two items: 1. Requirement R4 has a qualitative nature in the statement "without intentional time delay" which will leave room for subjective judgment on the part of the auditor in determining intent or the state of mind of the Transmission Owner. Cowlitz understands the need to communicate to the control center a vegetation condition that may cause a Fault at any moment as soon as possible. In this light, it is not possible to set a quantitative time limit for this report to occur for all occasions. In one scenario, a very short time limit may be arguable due to the proximity of available radio/telephone communications. However, in another remote situation it may take up to several hours to access communication equipment after discovery. Compounding the problem is the need to document the time of day versus location progress of the vegetation inspector to establish a discovery time stamp; this is not covered in M4. Cowlitz suggests the following changes (see standards VAR-002-1, IRO-006-3, TOP-003-0, TOP-

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Bob Essex	Cowlitz County PUD	5	Negative	007-0 for similar verbiage): R4. Each Transmission Owner shall notify the control center holding switching authority for the associated transmission line when qualified personnel confirm the existence of a vegetation condition that is likely to cause a Fault at any moment as soon as possible, but no longer than one hour with the following exception: In areas where communication with the control center is not possible within one hour due to lack of radio/telephone service, the Transmission Owner shall document these areas along with the reasonable time frame for reaching radio/telephone service. 2. Cowlitz agrees with United Illuminating in that R7, as proposed, requires a VMP to be completed to ensure no encroachment occurs. The Supplemental Reference for R7 does not describe the requirement of the annual vegetation work plan to ensure no vegetation encroachments occur within the MVCD. The Reference states the requirement is established to diminish the risk of encroachment; very different from ensuring no encroachment. In the reference for R7 the word "ensure" is only used to describe that flexibility in the VMP is allowed to ensure the reliability of the Transmission System. M7 is measuring work plan completion not the prevention of encroachment. United Illuminating and Cowlitz suggest that R7 be changed to: Each Transmission Owner shall complete the work in an annual vegetation work plan to manage the prevention of vegetation encroachments occur within the MVCD. In this way, a violation of R1/R2 does not necessarily mean R7 is violated. The entity does not avoid a penalty for an encroachment because a violation of R1/R2 occurs for actual encroachment. If an encroachment occurs the compliance enforcement authority can review the entities vegetation management plan to determine if it is compliance with R7/M7.

**Response: The SDT thanks you for your comments.**

1. **The time required by the TO to report an issue is subject to many variables such as available communication for the area which could be a hike-in location with no radio or cell phone coverage. For this reason it is difficult to establish a time period which would fairly apply to all TO's.**
2. **Please refer to the following responses to questions (which are responsive to your reference to your concurrence with the United Illuminating):**
  - Question 1: Comment 12**
  - Question 5: Comment 6**
  - Question 6: Comment 44**
  - Question 7: Comment 14**
  - Question 8: Comment 39**

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Jason L. Murray	Alberta Electric System Operator	2	Negative	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.
<p><b>Response: Thank you for your comment. For the sake of consistency for all applicable entities, the SDT believes that an annual inspection complements the required annual work plan. The standard allows for both maintenance inspections and vegetation inspections to be performed concurrently. Additionally, annual inspections are useful to not only track growth, but also other potential issues such as identifying danger trees, landslides, erosion, and tree damage caused by animals.</b></p>				
Ralph Frederick Meyer	Empire District Electric Co.	1	Negative	<p>EDE agrees with the concerns raised by United Illuminating and therefore also provides the following comments related to R7 and R4 for FAC-003-2. R4: The use of intentional time delay is a qualitative attribute and not a quantitative measure. It will lead to endless arguments over intentional versus non-intentional. EDE agrees with UI's comment: "In R4 the phrase: without any intentional time delay, is a concern. There is a time line between identification and reporting of an imminent hazard that represents the minimal time required to complete this Requirement. Any situation where the time between observation and reporting is greater than this minimal time line indicates a time delay occurred. It will be left to the compliance enforcement authority to determine if this delay was intentional or not. It is not proper for the test to be based on Intentional versus Non-Intentional. Using other synonyms such as reasonable, expeditious, prompt, immediate or without hesitation all introduce a qualitative not a quantitative attribute to the measurement. The Supplemental Reference for R4 indicates that the imminent threat requirement is measured in minutes or hours; again no guidance for enforcement. R4 would be improved with an explicit time requirement of 6 hours between observation and report. This is measurable and clear. M4 becomes Each Transmission Owner that has a vegetation condition likely to cause a Fault at any moment, as confirmed by qualified personnel, will have evidence that it notified the control center holding switching authority for the associated transmission line within 6 hours of observation." R7: R7, as proposed, requires a VMP to be completed to ensure no encroachment occurs. The Supplemental Reference for R7 does not describe the requirement of the annual vegetation work plan to ensure no vegetation encroachments occur within the MVCD. The Reference states the requirement is established to diminish the risk of encroachment; very different from ensuring no encroachment. In the reference for R7 the word "ensure" is only used to describe that flexibility in the VMP is allowed to ensure the reliability of the Transmission System. M7 is measuring work plan completion not the prevention of encroachment. EDE agrees with United Illuminating suggestion that R7 be changed to: Each Transmission Owner shall complete the work in an annual vegetation work plan to manage the prevention of vegetation encroachments occur within the MVCD. In this way, a violation of R1/R2 does not necessarily mean R7 is violated. The entity does not avoid a penalty for an encroachment because a violation of R1/R2 occurs for actual</p>



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				encroachment. If an encroachment occurs the compliance enforcement authority can review the entities vegetation management plan to determine if it is compliance with R7/M7. EDE also agrees with concerns raised by FMPA that Periodic data submittals as written are really periodic self-certifications and ought to be named such, or 100% compliance reduced to a more reasonable target

**Response: Thank you for your comment. 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. Confirmation that a threat actually exists due to vegetation is key.**

**Based on comments, the language in R7 has been modified.**

Robert Martinko	FirstEnergy Energy Delivery	1	Negative	FirstEnergy appreciates the hard work of the drafting team, but unfortunately we must cast a Negative vote for the standard as written. If the SDT agrees with our comments below and makes the suggested changes, we will consider supporting this standard in the recirculation ballot. In the latest Draft 4, the SDT added a Table 3 titled "Minimum Distance from the Centerline of the Circuit to the edge of the active transmission line ROW". We do not support the addition of Table 3 because we believe it adds unnecessary prescriptiveness to the requirements. It is also not clear if this Table was intended to be mandatory because the only reference in the table is in Footnote #2. Furthermore, the SDT did not offer any rationale for the minimum distances shown. If the SDT feels this table is a useful tool that should be included in the standard, then we suggest adding it to the Guidelines and Technical basis section as optional information with a discussion of the basis for the values chosen. The standard being balloted includes an R1 and R2 detailing requirements for managing vegetation. In addition, the SDT has asked for industry feedback on an alternate R1/R2 through the comment form which may lead to changes to the standard after this initial ballot. FirstEnergy supports the alternate R1/R2 but as we stated in the comment form, we still need to see the final verbiage of the alternate R1/R2 along with their associated measures M1 and M2 which have not yet been developed. Therefore, we cannot support the standard until the alternate R1, R2, M1 and M2 are developed.
Kevin Querry	FirstEnergy Solutions	3	Negative	
Douglas Hohlbaugh	Ohio Edison Company	4	Negative	
Kenneth Dresner	FirstEnergy Solutions	5	Negative	
Mark S Travaglianti	FirstEnergy Solutions	6	Negative	

**Response: Thank you for your comment. In response to comments regarding the addition of the "Minimum Distance from the Centerline of the Circuit to the edge of the active transmission line ROW" Table 3, the SDT agrees to remove this table and use the new definition of Right of Way. Additionally, language in M1/M2 has been modified based on comments received.**

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Frank Gaffney	Florida Municipal Power Agency	4	Negative	<p>My biggest problem is with R1 and R2 "Each Transmission Owner shall manage vegetation to prevent encroachment that could result in a Sustained Outage of applicable lines .... Types of encroachment include: 1. An encroachment into the Minimum Vegetation Clearance Distance (MVCD) as shown in Table 2, observed in real time, absent a Sustained Outage, 2. An encroachment due to a fall-in from inside the active transmission line ROW that caused a vegetation-related Sustained Outage, 3. An encroachment due to blowing together of applicable lines and vegetation located inside the active transmission line ROW that caused a vegetation-related Sustained Outage, 4. An encroachment due to a grow-in that caused a vegetation-related Sustained Outage" One fundamental problem with all the standards is the demand for no faults, no errors, 100% compliance. Requirements 1 and 2 basically say that any vegetation related outage, except for blow ins from outside the ROW, is a violation. A few issues with this: How would we "prove" that an outage is vegetation related or not, and if vegetation related, where the vegetation came from? Would this be a "guilty until proven innocent" paradigm, e.g., if we don't know what the cause was, then we assume guilty, or an "innocent until proven guilty" paradigm, e.g., clear evidence is needed to prove guilt? Current compliance monitoring and enforcement methods are to assume guilt with the need for clear evidence of innocence until a hearing is requested, at which point the paradigm is reversed. If this is how we expect it to happen? I could see a large number of "Possible" and "Alleged" violations where the cause of the sustained outage or the source of the vegetation is unknown, and a large number of hearings, unless we begin with the paradigm with "innocent until proven guilty", which is not the approach monitoring and enforcement take currently. The requirement and the measures do not match. The requirement is to "manage". Sometimes a well managed environment can still fail. The measures are "failures". If the measures are failures and any failure is a violation, then, the requirement should be to "prevent" not to "manage". Staff's proposed VSLs highlight this inconsistency. The 100% compliance requirement, as opposed to a statistical measure such as 99.99% availability, and Measures that say that any Sustained Outage is a possible violation unless proven otherwise leads us to extreme methods of management, such as possibly having video cameras monitoring the ROW at all times. Is this what the Drafting Team intends? FMPA would suggest that if performance is the real purpose of these standards, then "manage" is the wrong requirement, and "prevent" is a more appropriate term. If prevention is the real requirement, then we need a paradigm of "innocent until proven guilty" and any unknown source of a sustained outage is assumed not to be a violation until proven guilty, and, 100% is not a reasonable target, 99.99% or similar number over a number of years (e.g., so many years rolling average) is a more reasonable target. Do we require 100% compliance with vehicle brakes (ala Toyota Prius)? Or tire blowouts (ala Ford Explorer)? With associated fines? If we did, the auto manufacturers would probably not offer cars to the American market due to too much risk and liability. TQM (total</p>

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				<p>quality management) processes, such as six sigma (i.e., 6 standard deviations) do not mandate 100% reliability because 100% reliability is too expensive. Rather, we need a conservative target where outliers beyond regional management controls do not result in huge fines and huge liability (especially in consideration with FERC's proposed Policy Statement on Sanctions) R4 "Each Transmission Owner, without any intentional time delay, shall notify the control center holding switching authority for the associated transmission line when qualified personnel confirm the existence of a vegetation condition that is likely to cause a Fault at any moment" How is R4 even measurable? How are we to measure how someone would determine "the existence of a vegetation condition that is likely to cause a Fault at any moment"? Having the requirement in the standard may have the unintended consequence of reverse psychology e.g., not notifying may not even open up the question of compliance with this requirement. However, if a sustained outage were to occur as a result violating R1 or R2, would this requirement necessitate launching an investigation of whether or not "qualified" personnel would have seen a problem. I see this requirement as fraught with difficulties. Would this requirement essentially require a procedure for "detecting" in R3 in addition to "preventing" If 100% compliance is the chosen method for R1 and R2, why is R4 (and R5 for that matter) even needed? Obviously, if there is an impending failure that would cause a violation of R1 and R2, then there is obviously incentive to report it to the System Operator. R7 "Each Transmission Owner shall complete the work in an annual vegetation work plan to ensure no vegetation encroachments occur within the MVCD. Modifications to the work plan in response to changing conditions or to findings from vegetation inspections may be made and documented provided they do not put the transmission system at risk of a vegetation encroachment. Examples of reasons for modification to annual plan may include ...." The first sentence should not include the phrase "to ensure no vegetation encroachments occur" since the requirement is to do the work in the work plan. The added phrase simply adds ambiguity, e.g., if there is an encroachment, is R7 violated since it does not meet the "ensure" phrase in addition to R1 and R2? Periodic Data Submittals Due to R1 and R2, this is really a self-certification process because essentially only violations to R1 and R2 as currently drafted would be reported. So, this section should be deleted in favor of a CMEP process for periodic self-certifications on the standard.</p>

**Response: Thank you for your comments. Based on recommendations, the language in M1/M2 has been modified. Proof that an outage was vegetation related will be determined through the investigation of the outage. If clear evidence as determined by the Transmission Owner exists, the entity would then self-report. R4 exists to ensure that "expeditious communication between the Transmission Owner and proper operating personnel when a critical situation is confirmed." This situation does not necessarily imply a violation of R1 and R2. The intent is to minimize the risk of an event that could cause a cascading event. Regarding the inclusion of the phrase "to ensure no vegetation encroachments occur" in R7, the intent of the SDT is to include language to indicate who should do what when, where, and why as part of the Results Based Standards format.**

Voter	Entity	Segment	Vote	Comment
Silvia P Mitchell	Florida Power & Light Co.	6	Negative	NextEra Energy, Inc believes that this standard is a step in the right direction; however, it is not ready for ballot. The posted version uses the Measures and Compliance sections to define and interpret Requirements. The Requirements should stand by themselves. This version of the standard lumps grow-in violations with fall-in and blow-in violations. Fall-in and grow-in violations have no correlation to the cascading events stated in the purpose. We believe it needs more work before ballot approval.
<b>Response: The SDT thanks you for your comment. The SDT modified R1 and R2 to incorporate the severity into the requirement. This will allow for a graded VSL. The team also modified the measure so that it does not qualify the requirement. These changes should resolve your issues.</b>				
Larry E Watt	Lakeland Electric	1	Negative	<ul style="list-style-type: none"> <li>o The draft standard requires perfection, which is an unreasonable performance metric</li> <li>o The standard is prone to arguments of whether or not an outage was caused by vegetation encroachment in the current "guilty until proven innocent" paradigm we are currently in</li> <li>o Are the requirements measurable (e.g., R4 and R5)?</li> <li>o Goals of requirements should not be mixed with the requirement itself. Goals add ambiguity of what is being measured, the requirement (e.g., "complete the work plan" in R7) or the goal (e.g., "ensure no vegetation encroachment occurs").</li> <li>o Periodic data submittals as written are really periodic self-certifications and ought to be named such, or 100% compliance reduced to a more reasonable target</li> </ul>
<b>Response: The SDT thanks you for your comments. The SDT recognizes that the Standard as written is zero tolerance and believes it is compelled to write it that way. FERC staff and NERC assert that a revised standard cannot result in less reliability than the one it replaces, and, their belief is the current Standard is zero tolerance. The SDT believes that R4 and R5 are measurable as described. The RBS process is essentially "Who should perform What actions under What conditions." Thus the Goals are included. Finally, FERC would prefer to have early warnings that reliability is at risk, rather than wait for that indication when the next blackout occurs. Hopefully, periodic data offers that early warning detection.</b>				
David H. Boguslawski	Northeast Utilities	1	Negative	Our main issue is with the change in the Active ROW definition. The recent addition of a centerline distance to edge of Active ROW is not acceptable as it does not take into consideration the construction of the line (e.g., mono-pole vs. H-frame). For mono-pole construction, the use of the Table 3 centerline distance could result in additional clearing of the forested edge on existing ROWs with no value added to system reliability. Instead of using the term "Centerline" as referenced on Table 3, the use of "outer phase" or "phase closest to tree line" would be more appropriate.
<b>Response: The SDT thanks you for your response. Due to many commenters having issues with trying to define a "minimum" width, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.</b>				
Mace Hunter	Lakeland Electric	3	Negative	Perfection is not a reasonable performance metric
<b>Response: The SDT thanks you for your comment. The SDT recognizes that the Standard as written is zero tolerance and believes it is compelled to</b>				

Voter	Entity	Segment	Vote	Comment
<b>write it that way. FERC staff and NERC assert that a revised standard cannot result in less reliability than the one it replaces, and, their belief is the current Standard is zero tolerance.</b>				
Brenda L Truhe	PPL Electric Utilities Corp.	1	Negative	Please refer to the Comments submitted by Earl Burnside, PPL Electric Utilities, via the NERC Comment Form on 7/16/2010.
<b>Response: See responses to Earl Burnside, PPL Electric Utilities.</b>				
Mark A. Heimbach	PPL Generation LLC	5	Negative	Please refer to the comments submitted by Earl Burnside, PPL Electric Utilities, on 7/16/10.
<b>Response: See responses to Earl Burnside, PPL Electric Utilities.</b>				
John C. Collins	Platte River Power Authority	1	Negative	PRPA appreciates the SDT's reliability objective through a defense-in-depth strategy and the improvements made to the standard since its last posting. However, several issues will cause us to vote negative. Our first concern is that a violation caused by an encroachment into the Minimum Vegetation Clearance Distance as shown in Table 2, observed in real time, absent a Sustained Outage does not improve reliability of the BES. Instead we believe the clearances to be achieved in the current version of the standard under R1.2. are a better measurement of expectations because they establish a clearance to be achieved at the time of work. Our next concern is with the ambiguity of the wording "without any intentional time delay" in R4 of the proposed standard. For instance, would a call from the lineworkers to his/her supervisor prior to a call to the control center constitute an intentional delay or would that be part of the confirmation process? We also question what constitutes qualified personnel in R4. Does this imply that R1.3. in the current standard requiring appropriate qualifications and training is still applicable although not implicated stated and will those qualifications be audited as they are now? Our last concern is that landowners will intentionally constrain and delay work through court orders pointing to our Federal requirement to take corrective action. We know this isn't the intent of the requirement but have some concern that it might be misinterpreted by landowners as their defense to force us to investigate or perform alternate work methodology.
Terry L Baker	Platte River Power Authority	3	Negative	
<b>Response: Thank you for your comments. While the SDT has struggled with the issue of encroachments into the MVCD being a violation, the fact that a TO would allow vegetation to approach, let alone encroach the MVCD indicates a serious flaw in the TO's vegetation management program and its application. The TO has every right and should under the proposed standard establish clearance distances at the time of work (Clearance 1 in FAC-003-1) to allow for growth. With regard to Clearance 1 of version 1 the SDT considered it a "fill in the blank" requirement. Thus, including it in version 2 was considered prescriptive and unnecessary.</b>				
<b>The time required by the TO to report an issue is subject to many variables such as available communication for the area which could be a hike-in location with no radio or cell phone coverage. For this reason it is difficult to establish a time period which would fairly apply to all TO's. Thus, the SDT has taken the approach which does create some subjectivity. With regard to your question regarding a call from a line worker to a supervisor being viewed as intentional delay, we would need to know if this call is part of your process for reporting imminent threats. If your process has this</b>				

Voter	Entity	Segment	Vote	Comment
<p>check point or the flexibility for the lone worker to call a supervisor, then the SDT would not view this as an intentional delay.</p>				
<p>Qualified personnel is a function of many variables such as the size of the TO's system, type and density of vegetation, access and complexity of the vegetation management program. All these factors will drive the qualification requirements as defined by the TO for personnel developing and administering the program. For instance a TO with little vegetation on its ROW may require little in the way of knowledge and methodologies in meeting this standard while those TO's with extensive and significant vegetation must use varied methodologies to control vegetation on its ROW such as mechanical control, manual control, herbicides and so on. Thus, the standard leaves it to the TO to define what defines qualified personnel. Refer to the reference document for more guidance.</p> <p>As you point out, it is not the intent of this standard to cause the landowner to intentionally constrain and delay work. But, it is also not the intent of the standard to drive the land owner or land manager to any other behaviors. It is the TO's responsibility to manage relationships and develop methodologies within and to the full extent of the easement or permit language. Requirement R5 deals with this issue and additional clarification is given in the Rationale for this requirement.</p>				
David Schumann	Florida Municipal Power Agency	5	Negative	<p>R1 &amp; R2 My biggest problem is with R1 and R2 "Each Transmission Owner shall manage vegetation to prevent encroachment that could result in a Sustained Outage of applicable lines .... Types of encroachment include: 1. An encroachment into the Minimum Vegetation Clearance Distance (MVCD) as shown in Table 2, observed in real time, absent a Sustained Outage, 2. An encroachment due to a fall-in from inside the active transmission line ROW that caused a vegetation-related Sustained Outage, 3. An encroachment due to blowing together of applicable lines and vegetation located inside the active transmission line ROW that caused a vegetation-related Sustained Outage, 4. An encroachment due to a grow-in that caused a vegetation-related Sustained Outage" One fundamental problem with all the standards is the demand for no faults, no errors, 100% compliance. Requirements 1 and 2 basically say that any vegetation related outage, except for blow ins from outside the ROW, is a violation. A few issues with this: How would we "prove" that an outage is vegetation related or not, and if vegetation related, where the vegetation came from? Would this be a "guilty until proven innocent" paradigm, e.g., if we don't know what the cause was, then we assume guilty, or an "innocent until proven guilty" paradigm, e.g., clear evidence is needed to prove guilt? Current compliance monitoring and enforcement methods are to assume guilt with the need for clear evidence of innocence until a hearing is requested, at which point the paradigm is reversed. If this is how we expect it to happen? I could see a large number of "Possible" and "Alleged" violations where the cause of the sustained outage or the source of the vegetation is unknown, and a large number of hearings, unless we begin with the paradigm with "innocent until proven guilty", which is not the approach monitoring and enforcement take currently. The requirement and the measures do not match. The requirement is to "manage". Sometimes a well managed environment can still fail. The measures are "failures". If the measures are failures and any failure is a violation, then, the requirement should be to "prevent" not to "manage". Staff's proposed VSLs highlight this inconsistency. The 100% compliance requirement, as opposed to a statistical measure such</p>

Voter	Entity	Segment	Vote	Comment
				<p>as 99.99% availability, and Measures that say that any Sustained Outage is a possible violation unless proven otherwise leads us to extreme methods of management, such as possibly having video cameras monitoring the ROW at all times. Is this what the Drafting Team intends? FMPA would suggest that if performance is the real purpose of these standards, then "manage" is the wrong requirement, and "prevent" is a more appropriate term. If prevention is the real requirement, then we need a paradigm of "innocent until proven guilty" and any unknown source of a sustained outage is assumed not to be a violation until proven guilty, and, 100% is not a reasonable target, 99.99% or similar number over a number of years (e.g., so many years rolling average) is a more reasonable target. Do we require 100% compliance with vehicle brakes (ala Toyota Prius)? Or tire blowouts (ala Ford Explorer)? With associated fines? If we did, the auto manufacturers would probably not offer cars to the American market due to too much risk and liability. TQM (total quality management) processes, such as six sigma (i.e., 6 standard deviations) do not mandate 100% reliability because 100% reliability is too expensive. Rather, we need a conservative target where outliers beyond regional management controls do not result in huge fines and huge liability (especially in consideration with FERC's proposed Policy Statement on Sanctions) R4 "Each Transmission Owner, without any intentional time delay, shall notify the control center holding switching authority for the associated transmission line when qualified personnel confirm the existence of a vegetation condition that is likely to cause a Fault at any moment" How is R4 even measurable? How are we to measure how someone would determine "the existence of a vegetation condition that is likely to cause a Fault at any moment"? Having the requirement in the standard may have the unintended consequence of reverse psychology e.g., not notifying may not even open up the question of compliance with this requirement. However, if a sustained outage were to occur as a result violating R1 or R2, would this requirement necessitate launching an investigation of whether or not "qualified" personnel would have seen a problem. I see this requirement as fraught with difficulties. Would this requirement essentially require a procedure for "detecting" in R3 in addition to "preventing" If 100% compliance is the chosen method for R1 and R2, why is R4 (and R5 for that matter) even needed? Obviously, if there is an impending failure that would cause a violation of R1 and R2, then there is obviously incentive to report it to the System Operator. R7 "Each Transmission Owner shall complete the work in an annual vegetation work plan to ensure no vegetation encroachments occur within the MVCD. Modifications to the work plan in response to changing conditions or to findings from vegetation inspections may be made and documented provided they do not put the transmission system at risk of a vegetation encroachment. Examples of reasons for modification to annual plan may include ...." The first sentence should not include the phrase "to ensure no vegetation encroachments occur" since the requirement is to do the work in the work plan. The added phrase simply adds ambiguity, e.g., if there is an</p>

Voter	Entity	Segment	Vote	Comment
				<p>encroachment, is R7 violated since it does not meet hte "unsure" phrase in addition to R1 and R2? Periodic Data Submittals Due to R1 and R2, this is really a self-certification process because essentially only violations to R1 and R2 as curently drafted would be reported. So, this section should be deleted in favor of a CMEP process for periodic self-certifications on the standard.</p>
<p><b>Response:</b> Thank you for your comments. Your concern with respect to the cause of an outage is well-taken. As you know, transmission systems are subject to many different influences which can cause a sustained outage. Among those causes is the encroachment of vegetation into the MVCD which could be due to improper maintenance of vegetation on one’s ROW. However, there are many other causes which can initiate a sustained outage. A TO usually investigate a sustained outage in the field to determine, if possible, the cause of the outage. Typically, a vegetation caused outage will leave some evidence of the flashover such as burn marks on the conductor together with burned portions of the vegetation. Indications may be found to explain the outage due to other causes but in some cases the cause cannot be determined and the line is successfully re-energized without ever knowing what caused the outage. It is incumbent upon the TO to self- report those outages obviously caused by vegetation but unexplained outages would not fall under this requirement or standard.</p> <p>The SDT believes the language in the requirement matches the language in the measure such as in R1 “Each Transmission Owner shall manage vegetation to prevent encroachment...” and in M1 “Each Transmission Owner has evidence that it managed vegetation to prevent encroachment...”. Your suggestion of using statistical analysis may work well with large TO’s with many miles of transmission ROW to spread small numbers of outages over but would disadvantage the small TO with significantly fewer miles of line. Only one outage on its system could result in huge fines.</p> <p>The SDT believes R4 is a valid “Risk Based Requirement” giving guidance to industry on what to do upon discovery of an encroachment into the MVCD in order to prevent a sustained outage. The key is for the TO to communicate with the appropriate switching authority and the measure is evidence of such communication when a potential vegetation imminent threat occurs. R7, as documented in the Rationale, “...sets the expectation that the work identified in the annual work plan will be completed as planned”. Documentation of the work completed (and any necessary modifications) as written together with the lack of of a violation to either Requirement 1 or Requirement 2 is the overall reliability goal. The metric for the work plan is the percentage of the plan complete. The lack of a violation of R1 or R2 is the outcome of the ideal work plan. It is the responsibility of the TO to manage the quality of the work plan and its associated modifications to mitigate the risk of a violation of R1 or R2. With Version 2, an outage is now clearly a violation of R1 and R2 and should not be linked to a failure of the work plan. The measure for the work plan is the percentage of the completed as planned and we do not need to be subjectively trying to evaluate the quality of the TOs plan with this measure. With regard to the “Periodic Reporting Data Submittal” section the SDT agrees with reporting outage to the Regional Entity on a quarterly basis. In addition regulatory authorities are looking for leading reliability indicators which will support quarterly reporting rather than an annual self-certification.</p>				
Kenneth Simmons	Gainesville Regional Utilities	3	Negative	<p>R4 The use of intentional time delay is a qualitative attribute and not a quantitative measure. How does one judge intentional versus non-intentional on a qualitative basis; subjective at best leading to many arguments between auditor and auditee?</p>
<p><b>Response:</b> Thank you for your comment. We agree the time required by the TO to report an issue is subject to many variables such as available communication for the area which could be a hike-in location with no radio or cell phone coverage. For this reason it is difficult to establish a time period which would fairly apply to all TO’s. Thus, the SDT has taken the approach which does create some subjectivity. The key is for the TO to have an imminent threat process that includes the communication with the appropriate switching authority. The measure for compliance will be evidence such as written and taped radio/telephone logs maintained by the control center; written daily diaries kept by the patrollers and inspectors could also be used for this purpose.</p>				



Voter	Entity	Segment	Vote	Comment
Luther E. Fair	Gainesville Regional Utilities	1	Negative	<p>R4: The use of intentional time delay is a qualitative attribute and not a quantitative measure. It will lead to endless arguments over intentional versus non-intentional. R4 should be: Each Transmission Owner shall notify the control center holding switching authority for the associated transmission line no more than 6 hours of a qualified personnel confirm the existence of a vegetation condition that is likely to cause a Fault at any moment. R7: R7, as proposed, requires a VMP to be completed to ensure no encroachment occurs. The Supplemental Reference for R7 does not describe the requirement of the annual vegetation work plan to ensure no vegetation encroachments occur within the MVCD. The Reference states the requirement is established to diminish the risk of encroachment; very different from ensuring no encroachment. In the reference for R7 the word "ensure" is only used to describe that flexibility in the VMP is allowed to ensure the reliability of the Transmission System. The above comments are from United Illuminating and shared by myself. Earl</p>
<p><b>Response: Thank you for your comments. We agree the time required by the TO to report an issue is subject to many variables such as available communication for the area which could be a hike-in location with no radio or cell phone coverage. For this reason it is difficult to establish a time period which would fairly apply to all TO's. Thus, the SDT has taken the approach which does create some subjectivity. The key is for the TO to have a imminent threat process that includes the communication with the appropriate switching authority. The measure for compliance will be evidence such as written and taped radio/telephone logs maintained by the control center; written daily diaries kept by the patrollers and inspectors could also be used for this purpose.</b></p> <p><b>R7, as documented in the Rationale, "...sets the expectation that the work identified in the annual work plan will be compiled as planned". Documentation of the work completed (and any necessary modifications) as written together with the lack of of a violation to either Requirement 1 or Requirement 2 is the overall reliability goal. The metric for the work plan is the percentage of the plan complete. The lack of a violation of R1 or R2 is the outcome of the ideal work plan. It is the responsibility of the TO to manage the quality of the work plan and its associated modifications to mitigate the risk of a violation of R1 or R2. With Version 2, an outage is now clearly a violation of R1 and R2 and should not be linked to a failure of the work plan. The measure for the work plan is the percentage of the completed as planned and we do not need to be subjectively trying to evaluate the quality of the TOs plan with this measure.</b></p>				
David A. Lapinski	Consumers Energy	3	Negative	Table 3 does not adequately address ROW width requirements based on the type of construction used for structures, especially for the two lower voltage classes, 69-138kV and

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David Frank Ronk	Consumers Energy	4	Negative	139-230 kV. Lines constructed on H-Frame structures have a much wider footprint across the ROW than do single pole construction and most steel tower construction types. The minimum ROW width listed in Table 3 for a 138 kV line constructed on a wooden H-Frame may put the outside conductor within MVCD under windy conditions due to wind displacement of conductors and trees. Consumers Energy recommends that Table 3 be modified to describe the minimum distance in the table is the vertical plane of the outside conductor to the edge of the active transmission ROW and therefore independent of the width of the structure construction type. M1 and M2 fail to provide examples of acceptable forms of evidence to prove that a Transmission Owner actively managed vegetation to prevent encroachment into the MVCD. The Measures should require proof of active ROW clearing activity in accordance with the transmission vegetation management plan, such as invoicing or crew field reports or vegetation inspection data from the annual vegetation inspection R3 avoids defining a minimum clearance specification and is not practical. As written, this would require each Transmission Owner to define and document the procedures, processes or specification by individual span for every line owned or operated by the Transmission Owner. Each span varies in length and profile and a single line may have several different conductor types with different load ratings. Line loadings will vary along the line based on substation taps, etc. The dynamics described in the language could only be done on an individual span basis to be reasonably accurate. This is not practical from a planning standpoint or from a standpoint of implementing clearing work in the field.

**Response: The SDT thanks you for your comments.**

- 1) Based on your comment and others, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way. Subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.**
- 2) M1 and M2 do provide samples of acceptable forms of evidence. The examples you have provided in your comment would also be acceptable forms of evidence. The SDT recognizes that there are many acceptable forms of evidence and only included three specific examples in both Measures M1 and M2 utilizing the phrase ‘may include’ so that the list is not limited to the samples provided.**

**R3 specifically states that the TO shall prevent encroachment into the MVCD which is a defined minimum clearance distance, contrary to your comment. To prevent a Sustained Outage, each TO must recognize that each transmission line is unique and establish a general plan that encompasses each scenario. In their procedures or processes or specifications, the TO shall establish a maintenance strategy that ensures vegetation will never violate the MVCD. This strategy should take into consideration the dynamics of vegetation growth and conductor movement as explained in the Guidelines and Technical Basis section of the Standard (Page 21). This strategy does not necessarily require a span by span analysis.**

Bernard Pelletier	Hydro-Quebec TransEnergie	1	Negative	Table 3 is not acceptable for HQTE. In many places, our standard of design allow us a ROW width much narrower. We think that Table 3 should cover only the lines operated at 200 kV or higher. Finally, the Table 3 should not be a requirement of the FAC-003-2.
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**Response: Based on your comment and others, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.**

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Stan T. Rzad	Keys Energy Services	1	Negative	The draft standard requires perfection, which is an unreasonable performance metric The standard is prone to arguments of whether or not an outage was caused by vegetation encroachment in the current "guilty until proven innocent" paradigm we are currently in Are the requirements measurable (e.g., R4 and R5)? Goals of requirements should not be mixed with the requirement itself. Goals add ambiguity of what is being measured, the requirement (e.g., "complete the work plan" in R7) or the goal (e.g., "ensure no vegetation encroachment occurs"). Periodic data submittals as written are really periodic self-certifications and ought to be named such, or 100% compliance reduced to a more reasonable target

**Response: The SDT thanks you for your comments.**

- 1. The SDT recognizes that the Standard as written is zero tolerance and believes it is compelled to write it that way because FERC staff and NERC assert that a revised standard cannot result in less reliability than the one it replaces and their belief is the current Standard is zero tolerance.**
- 2. As explained in M1 and M2, only real time observations confirmed by a qualified person would constitute an encroachment. There may be some difficulty proving whether or not an outage was caused by vegetation but, if an investigation at any time reveals definitive evidence of a vegetation contact as determined by the Transmission Owner, this would be the proof.**
- 3. The SDT believes that R4 and R5 are measurable as described in the Draft but would gladly accept suggestions for revision in future postings. The RBS process essentially is "Who should do what, under what conditions, when, and why?" Thus the Goals are included. Finally, FERC staff has stated that they would prefer to have early warnings that reliability is at risk rather than wait for that indication when the next blackout occurs. Thus, periodic data offers that early warning detection.**

**Periodic data submittal is not only restricted to self-certifications so the SDT has chosen to keep the language the same as currently drafted.**

Thomas W. Richards	Fort Pierce Utilities Authority	4	Negative	The draft standard requires perfection, which is an unreasonable performance metric. Also, the standard is prone to arguments of whether or not an outage was caused by vegetation encroachment in the current "guilty until proven innocent" paradigm we are currently in. I have the question about the ability to measure compliance with R4 and R5 as written. Goals of requirements should not be mixed with the requirement itself. Goals add ambiguity of what is being measured, the requirement (e.g., "complete the work plan" in R7) or the goal (e.g., "ensure no vegetation encroachment occurs"). Periodic data submittals as written are really periodic self-certifications and ought to be named such, or 100% compliance reduced to a more reasonable target
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**Response: The SDT thanks you for your comments.**

- 1. The SDT recognizes that the Standard as written is zero tolerance and believes it is compelled to write it that way because FERC staff and NERC assert that a revised standard cannot result in less reliability than the one it replaces and their belief is the current Standard is zero tolerance.**
- 2. As explained in M1 and M2, only real time observations confirmed by a qualified person would constitute an encroachment. There may be**

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<p>some difficulty proving whether or not an outage was caused by vegetation but, if an investigation at any time reveals definitive evidence of a vegetation contact as determined by the Transmission Owner, this would be the proof.</p> <p>3. The SDT believes that R4 and R5 are measurable as described in the Draft but would gladly accept suggestions for revision in future postings. The RBS process essentially is “Who should do what, under what conditions, when, and why?” Thus the Goals are included. Finally, FERC staff has stated that they would prefer to have early warnings that reliability is at risk rather than wait for that indication when the next blackout occurs. Thus, periodic data offers that early warning detection.</p> <p>4. Periodic data submittal is not only restricted to self-certifications so the SDT has chosen to keep the language the same as currently drafted.</p>				
Thomas E Washburn	Florida Municipal Power Pool	6	Negative	The draft standard requires perfection, which is an unreasonable performance metric The standard is prone to arguments of whether or not an outage was caused by vegetation encroachment in the current "guilty until proven innocent" paradigm we are currently in Are the requirements measurable (e.g., R4 and R5)? Goals of requirements should not be mixed with the requirement itself. Goals add ambiguity of what is being measured, the requirement (e.g., "complete the work plan" in R7) or the goal (e.g., "ensure no vegetation encroachment occurs"). Periodic data submittals as written are really periodic self-certifications and ought to be named such, or 100% compliance reduced to a more reasonable target
<p><b>Response: The SDT thanks you for your comments.</b></p> <p>1. The SDT recognizes that the Standard as written is zero tolerance and believes it is compelled to write it that way because FERC staff and NERC assert that a revised standard cannot result in less reliability than the one it replaces and their belief is the current Standard is zero tolerance.</p> <p>2. As explained in M1 and M2, only real time observations confirmed by a qualified person would constitute an encroachment. There may be some difficulty proving whether or not an outage was caused by vegetation but, if an investigation at any time reveals definitive evidence of a vegetation contact as determined by the Transmission Owner, this would be the proof.</p> <p>3. The SDT believes that R4 and R5 are measurable as described in the Draft but would gladly accept suggestions for revision in future postings. The RBS process essentially is “Who should do what, under what conditions, when, and why?” Thus the Goals are included. Finally, FERC staff has stated that they would prefer to have early warnings that reliability is at risk rather than wait for that indication when the next blackout occurs. Thus, periodic data offers that early warning detection.</p> <p>4. Periodic data submittal is not only restricted to self-certifications so the SDT has chosen to keep the language the same as currently drafted.</p>				
Laurie Williams	Public Service Company of New Mexico	1	Negative	The draft standard suggests that the expectation for compliance is perfection or zero encroachments at all times. It would be cost prohibitive to maintain the system under those rules and should be amended to include a provision to account this issue - particularly for small utilities that operate over very large geographic region with sparsely distributed

Voter	Entity	Segment	Vote	Comment
				transmission assets.
<p><b>Response: The SDT thanks you for your comments. The SDT recognizes that the Standard as written is zero tolerance and believes it is compelled to write it that way because FERC staff and NERC assert that a revised standard cannot result in less reliability than the one it replaces and their belief is the current Standard is zero tolerance.</b></p>				
Matt Culverhouse	City of Bartow, Florida	3	Negative	The proposed standard requires perfection which we feel is unreasonable.
<p><b>Response: The SDT thanks you for your comments. The SDT recognizes that the Standard as written is zero tolerance and believes it is compelled to write it that way because FERC staff and NERC assert that a revised standard cannot result in less reliability than the one it replaces and their belief is the current Standard is zero tolerance.</b></p>				
Robert D Smith	Arizona Public Service Co.	1	Negative	<p>The reasons for APS to vote NO. The standard drafting team went above and beyond and changed the whole standard and didn't address all of FERC's concerns.</p> <p>(0) The minimum clearances must be sufficient to avoid any sustained vegetation-related outages for all applicable conditions.</p> <p>(1) The team eliminated clearance 1 requirement which isn't addressed in this revision according to FERC's request. FERC wanted this requirement to be standardized. Elimination of clearance 1 doesn't give utilities leverage when dealing with federal land agencies. They are making decisions without any education or knowledge on UVM activities which affect transmission reliability. There needs to be a clearance 1 requirement in the standard. If utilities are required to follow this standard it gives them leverage with dealing with these federal land agencies.</p> <p>(2) They removed ANSI-A300 from the standard. It was a footnote but should be part of the standard. Utilities should be held to following ANSI A-300 standards and BMP's for best management practices. By following these standards there wouldn't be a need for the FAC-003 standard.</p> <p>(3) Removal of 'fill in the blank' components where the Transmission Owner determines the requirement with no limits or direction. Examples include and "personnel requirements" in version 1. The SDT removed this requirement from the current version. ? Personnel qualifications should be a requirement. There are certification programs through the International Society of Arboriculture that certify a minimum level of competence to manage a vegetation management program. This also requires ongoing training and education to keep up with the latest technologies on UVM. ? There are other standards that require qualifications and training.</p>

Voter	Entity	Segment	Vote	Comment
				<p>(4) Application of new NERC Drafting Team Guidelines (DTG) to the standard. Examples include the replacement of the current compliance section with Violation Risk Factors (VRFs) and Violation Severity Levels (VSLs) as referenced in the Sanction Guidelines. Additionally, documentation and implementation elements are separated into different requirements in the proposed standard as required by the DTG.</p> <p>(5) This requirement in regard to outages from within the ROW was diluted to remove accountability from maintaining the full width of utilities easement. An outage is an outage from a grow-in or from a blow in. If a utility has rights to maintain vegetation there shouldn't be any outages due to vegetation from blowing into the conductors. The active ROW should be wide enough to prevent these types of outages.</p> <p>o Address the applicability and appropriateness of IEEE 516 in determining clearance distances. ? No issues with the change to Gallet equation. ?</p> <p>The issue is each Transmission Owner has evidence that it managed vegetation to prevent encroachment into the MVCD as described in R1. Examples of acceptable forms of evidence may include dated attestations, dated reports containing no Sustained Outages associated with encroachment types 2 through 4 above, or records confirming no Real-Time observations of any MVCD encroachments. ?</p> <p>(6) A real-time observation doesn't take into account all rated conditions and the time the recording was made. Conditions change and if load is increased those previous observations could be potential outages. I would assume our Energy Control people would want to be confident there wouldn't be any tree-related issues if load had to be increased. ? There is technology available with LIDAR to simulate all-rated conditions, contour and tree height to remove these potential trees hazards before an outage occurs.</p> <p>o Address applicability of this standard to sub 200kV lines that could place the grid at an unacceptable risk of instability, separation, or cascading failures. ?</p> <p>(7)The utilities should be required to inspect all the lines annually. The change isn't what FERC requested.</p> <p>o Address applicability to federal lands. ?</p>

Voter	Entity	Segment	Vote	Comment
				<p>(8)There should be a footnote that if federal or state agencies fail to approve annual work plans within 90 days of submittal the utility will not be held accountable for not completing its annual work plan or taking into account the time it takes to get approval. We have land agencies that give us approvals within 2 weeks and others that have taken over a year. Utilities are at their mercy on the approval process. If there is turn-over in the land agency the approval process changes again and it is impossible to determine the anticipated timeline by state, tribal and federal agencies. ? The SDT didn't address the need for FERC oversight on federal lands as the example listed above. Agencies are not qualified to make decisions on utility vegetation management and can change utilities TVMP.</p> <p>(9)Finally the current version FAC-003-1 is performing and there is no need to make the change.</p>

**Response: Thank you for your comments.**

**(0)If vegetation is maintained as required in this draft of the standard in requirements R1 and R2, then no vegetation related sustained outages, caused by vegetation from within the ROW, within the control of the TO can occur.**

**(1) Clearance 1 was a fill-in the blank requirement and did not provide the TO any new easement rights, or land permit rights across any lands whether those land be privately owned or publicly owned; therefore Clearance 1 remains removed from this draft. Furthermore, the relevance of Clearance 1 depends on several other factors such as length of maintenance cycles, inspection frequency and growth rates. R3 is now used as a more comprehensive method to address these concerns in lieu of a Clearance 1 requirement.**

**(2) In order to meet the SAR FAC-003 is required. ANSI-A300 is not sufficient to meet the SAR requirements and contains many elements that do not need to be related to transmission system electrical reliability.**

**(3)The SDT suggests that the submittal of a NERC SAR on the PER standards be considered to address any proposed personnel qualifications, certifications or training issues.**

**(4) The SDT is following NERC guidelines as they understand them.**

**(5) The SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way; subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed. Outages arising from vegetation from outside the ROW are not violations of the standard. The SDT had determined this to be the most appropriate assignment of an area of maintenance responsibility considering the numerous variations in easements and permit rights across North America.**

**(6)The Standard requires the maintenance to be performed such that loading to Rating and Rated Conditions, and the dynamics of sag and sway are taken into consideration, additionally any real time observations of encroachments into the MVCD are to be reported as violations of the standard. The SDT does not see the need to be prescriptive as to the technology or tools the TO used to be compliant with the Standard, but is confident that if the vegetation in maintained such that no encroachments are ever observed, and no outages are ever occur, then the reliability purpose of the standard will be fully accomplished. Furthermore, the results from a LIDAR survey are temporal in nature. Any program relying on LIDAR would incur a substantial cost with a long term commitment that may not be justified for many Transmission Owners.**

**(7) FERC requested a defined period for inspection. The SDT agrees with you that annual inspection is required. Therefore the SDT has made annual inspections a Requirement of this Standard. As to all lines versus applicable lines, FERC has accepted the 200 kV bright line for this standard. They did order the SDT to ensure that no sub-200 kV lines that are important to the Bulk Electric System are missing from the Applicability of the standard.**

Voter	Entity	Segment	Vote	Comment
<p>The SDT has incorporated a FERC accepted test (as found in the referenced Standard) to make sure no such important lines are missing.</p> <p>(8)The SDT agrees that erroneous obstacles to compliance with the standard should be addressed. However, they cannot be resolved in this forum, or through language inserted in this standard. This Standard places requirements on the Transmission Owners, not on landowners. There is no legal mechanism for this Standard to take rights from property owners and assign them to the Transmission Owner.</p> <p>(9)The SDT is changing the Standard in responds to the SAR. The success of the existing standard will be preserved and enhanced with this revision.</p>				
Paul Shipps	Lakeland Electric	6	Negative	The standard is prone to arguments of whether or not an outage was caused by vegetation encroachment.
<p><b>Response: Thank you for your comments.</b></p> <p>The Compliance Section of the Standard provides the direction under which the Compliance Monitoring and Enforcement Processes and the TOs must report compliance to this standard. All possible violations need adequate investigation to determine if a vegetation related outage occurred. The SDT recognizes that such determination are often very challenging, however more prescriptive language on investigations has been seen as necessary by the SDT and would not contribute to increased reliability. NERC also requires the TOs to document all outages and their related causes in the TADS system.</p>				
Daniel Brotzman	Commonwealth Edison Co.	1	Negative	The term "Centerline of the Circuit" in Table 3 is not defined. Until it is defined, there is no way to know if the standard is technically reasonable or whether existing circuits would be in violation of the standard and unable to operate. In addition, it is unclear what types of construction and span lengths were used to develop the distances for active right-of-way widths in Table 3. Furthermore, it is not clear whether Table 3 contains requirements against which compliance will be measured or best practice guidelines. Footnote 2, in the background section, compounds this ambiguity. In short, the lack of a definition for "Centerline" combined with Footnote 2 and Table 3 make this draft unclear and unenforceable. Exelon does not necessarily have easement widths for all transmission lines that equal those defined in Table 3 of this draft; This may require the acquisition of additional easements, if even possible.
<p><b>Response: Thank you for your comments.</b></p> <p>In response to your comments and similar comments to yours, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way. Subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.</p>				
Alan Gale	City of Tallahassee	5	Negative	There is still confusion in R7. If I do not complete the work plan, but do not have any encroachments, have I violated R7? As worded I would argue no. I do not believe the ambiguity can remain in the standard. If the goal is to complete the work plan (as modified) leave out the "to ensure no vegetation encroachments..." If the goal is to have no encroachments, do not rely on a work plan to exist. Make the standard "Each TO shall ensure no vegetation encroachments occur." I do agree with the performance based



Voter	Entity	Segment	Vote	Comment
				approach and format.
<b>Response: Thank you for your comments. The SDT considered your response but feels that when one considers all the text in R7, M7, the Rationale and the related VSL, along with the text in the Guidelines and Technical Basis, it is sufficiently clear that this requirement is about the completion of the work plan.</b>				
Roger C Zaklukiewicz		8	Negative	To maintain reliability, the minimum distance from a conductor to tall vegetation should be measured from the conductor nearest the edge of the cleared ROW to the edge of the ROW and not from the center line of the transmission structure. The type of transmission line configuration, horizontal or vertical - monopole versus H-Frame versus lattice-structure versus a V-Guided structure will influence how effective a transmission circuit's performance or reliability is when the measurement is made from the centerline of the transmission line. Table 3 should be modified to reflect this concern to ensure the reliability of the EPS.
<b>Response: In response to your comments and similar comments to yours, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way; subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.</b>				
Brian Evans-Mongeon	Utility Services, Inc.	8	Negative	Utility Services supports the NPCC position on the fixes to this standard proposal.
<b>Response: Thank you for your comments. Please refer to our response to NPCC.</b>				
John K Loftis	Dominion Virginia Power	1	Negative	We do not agree with replacing the term "Active Transmission Line Right of Way" with footnote 2. Our objection is around the distances proposed in Table 3. Minimum Distance from the Centerline of the Circuit to the edge of the active transmission line ROW may not be consistent with the centerline distances cleared and maintained by the TO. For example, a TO maintaining 75' from centerline for a 500kV circuit would be required to clear and maintain an additional 12.5' to meet the proposed standard's requirement. We suggest either allowing individual TOs to maintain active ROW widths consistent with their normal clearing/maintenance practices, going back to Draft 3's definition of Active Transmission Line Right-of-Way, or changing the footnote in Draft 4 to read: A strip or corridor of land
Michael F Gildea	Dominion Resources Services	3	Negative	
Mike Garton	Dominion Resources, Inc.	5	Negative	

Voter	Entity	Segment	Vote	Comment
Louis S Slade	Dominion Resources, Inc.	6	Negative	that is occupied by active transmission facilities. This corridor does not include the parts of the Right-of-Way that are unused or intended for other facilities. However, the portion of the ROW that has been cleared must at least meet design clearance requirements such as National Electric Safety Code or other design criteria, for the reliable operation of active facilities.

**Response: The SDT thanks you for your comments. Based on your comment and others, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way; subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.**

Ronald L Donahey	Tampa Electric Co.	3	Negative	We have concern with the "Minimum Distances" as listed in Table 3. What analytical methodology, criteria and rationale was utilized to determine each recommended distance? In addition, we have concerns regarding the change to a pre-determined distance. This seems to be a major shift from the vegetation to conductor methodology employed previously and throughout this standard? NERC/FERC must recognize that while protecting and securing grid reliability, each utility must also balance the environmental, political, customer and economic issues and impacts which will occur with the implementation of the Table 3 clearances. We question whether this is the most responsible action to take given the current state of the economy as well as the environmental and political sensitivity impacts which will result. Tampa Electric questions whether Table 3 will improve System reliability. Since the inception of standard FAC-003-1 Tampa Electric has not had a Category 1 or Category 2 outage on our 230kV Transmission System. We don't believe that the changes proposed to table 3 will improve overall service reliability. It is Tampa Electric's opinion that each utility should define the width of its own Active Transmission line ROW. However, if such a table is to be utilized, Tampa Electric recommends the following changes or adjustments to Table 3. 1. Expand the table to account for the various types of Transmission construction; i.e. vertical versus horizontal conductor configurations. 2. Use a distance from the outermost conductor, not the centerline. This will account for construction type and better achieve a consistent clearance from conductors. 3. We recommend reducing the distances in Table 3 by 12.5 feet for each voltage category. 4. Specify whether the voltage is based upon the design or operating voltage. 5. Reformat the voltage ranges to 100kV - 200kV, 200kV - 300kV, 300kV - 400kV, etc. as an example; this would create a more appropriate range of voltages and clearance distances. The reformatted voltage ranges eliminate confusion. For example, under the current proposal it is unclear in which category a nominal 230kV line should be since sometimes such a line can operate at up to 232kV during low-load conditions.
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**Response: The SDT thanks you for your comments. Based on your comment and others, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way. Subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.**

Voter	Entity	Segment	Vote	Comment
Joseph O'Brien	Northern Indiana Public Service Co.	6	Negative	<p>While there are some enhancements to the organization and content of the standard such as the addition of the Guidelines and Technical Basis section, clarification of what constitutes evidence of compliance, and tailoring of VSL severity levels for the requirements based on the risk each poses to the likelihood of contributing to a cascade, too many elements present in FAC-003-1 and which are vital to preventing vegetation caused outages and maximizing system reliability, have been eliminated from FAC-003-2. Specifically, the elimination of concrete, declared and audited clearance standards between vegetation and conductors (the existing Clearance 1 and Clearance 2 (R1.2)) Requirements) in the revised standard is a major defect that will decrease system reliability. It has been indispensable for NIPSCO when communicating with stake holders (governments, interest groups, land owners, the public, etc.) to point to these clearance standards to give credibility and support to the kind of tree removal and trimming that is necessary to achieve the stated objective of zero preventable tree caused outages. Without these declared clearance standards in the NERC standard, utility vegetation managers will constantly be challenged by stake holders to show them that such work is required rather than an elective choice on the utility's part. One of the key lessons learned from the 2003 blackout and First Energy's overgrown ROW tree problem was that individual land owners, local governments, and interest groups will exert pressure on the utility to only do the minimum amount of vegetation management. Without external and enforceable Vegetation Clearance Standards and by returning to a pre-2003 regime where the extent of vegetation clearing is left to the individual discretion and pressures at each utility, there is no doubt that tree clearance conditions will deteriorate over time and put system reliability at greater risk of vegetation contact</p>
<p><b>Response:</b> The SDT thanks you for your comments. At the request of FERC in Order 693, the SDT was asked to eliminate the fill-in-the-blank clearance requirements that are currently in FAC-003-1. A proven Engineering calculation was utilized to determine when a transmission line could spark over to vegetation without direct contact. Based on this calculation, each utility must determine what clearance levels need to be maintained as part of their TVMP. The current version does not preclude a utility from removing or pruning vegetation well beyond the MVCD, it just establishes a line in the sand that determines when a violation occurs. Individual TOs must establish a program that addresses the many variables that exist such as growth rates, vegetation management cycles, conductor sag and sway, etc. that could result in an encroachment of the MVCD which would be a direct violation of the standard. Establishing a specific clearance value to be attained during vegetation management activities is too prescriptive and is in direct conflict with the Results-Based Standard initiative that the SDT is currently implementing. Each TO must factor in delays and/or mitigation measures associated with stakeholder concerns but must clearly communicate the challenges with maintaining strict compliance with this zero-tolerance standard.</p>				

Voter	Entity	Segment	Vote	Comment
Greg Lange	Public Utility District No. 2 of Grant County	3	Negative	While this standard as written is a marked improvement to previous versions, to claim R1 and R2 as results based is simply not right. Had this standard revision not been advertised as the first RBS I probably would have voted yes. Results based by definition should be attained by something either happening or not and should be based on evidence that already exists. If you cause an outage and it is vegetation related then you violate. Why all the words around "managing vegetation encroachment" take care of that in the competency requirements.
<p><b>Response: The SDT thanks you for your comments. In a Results Based Standard, there are three different levels of defense to achieve the desired outcome (performance-based requirements, risk-based requirements and competency based requirements). R1 and R2 are considered Performance-Based requirements and are one component in the defense-in-depth strategy that is described in the Background Section of the current Draft. The MVCD is the minimum clearance distance before a spark-over occurs so R1 and R2 were designed to ensure that the TO manages vegetation appropriately before an outage occurs. If the TO was judged based on outages alone, the defense in depth strategy would fail and, thus, a less reliable standard would exist.</b></p>				
Gregory L Pieper	Xcel Energy, Inc.	1	Negative	Xcel Energy votes Negative for several reasons which are outlined in the comments submitted to NERC during the comment period that ran concurrently with this ballot. One of the primary objections is the requirement for an annual vegetation inspection. Xcel Energy urges the retention of the provision in the existing standard that allows the Transmission Owner to set the frequency of inspection.
Michael Ibold	Xcel Energy, Inc.	3	Negative	
Liam Noailles	Xcel Energy, Inc.	5	Negative	
David F. Lemmons	Xcel Energy, Inc.	6	Negative	
<p><b>Response: The SDT thanks you for your comments. In FERC Order 693, the SDT was asked to look at setting a specific frequency for vegetation inspections across North America. This was a difficult task since vegetation characteristics vary across the continent but the team voted to accept an annual inspection frequency as a minimum and provide utilities the flexibility to include this mandatory vegetation inspection as part of a general line inspection.</b></p>				
Terry Harbour	MidAmerican Energy Co.	1	Affirmative	All rationale boxes should have a disclaimer at the top to the effect "For Guidance Only, Not for Enforcement".
Thomas C. Mielnik	MidAmerican Energy Co.	3	Affirmative	
<p><b>Response: The SDT thanks you for your affirmative votes and comments. A "disclaimer" is addressed by the Standards Committee Process Subcommittee however its location remains under discussion.</b></p>				

Voter	Entity	Segment	Vote	Comment
Guy V. Zito	Northeast Power Coordinating Council, Inc.	10	Affirmative	Although NPCC and its members support the results based initiative and this proof of concept standard and format, there has been some concern with the proposed FAC-003-2. Some of NPCC's members that have active vegetation management programs have stated that in the application of Table 3 - specifically, the use of a "Minimum Distance from the Centerline of the Circuit". Mono-pole and frame construction have significantly different footprints which don't support a one size fits all approach. The use of Table 3 for 345kV, mono-pole construction could result in excessive clearing of additional forested edge on existing ROWs with little if any value added to system reliability and at great cost. There is an issue with use of the term "easements" in the definition and seek clarification on several questions-is there a reason the Active ROW only includes easements not fee ownership, license or some other right to occupy and manage the ROW? Would active ROW include "danger tree rights" on land? Not all entities that own transmission facilities and have vegetation management programs agree with these statements however there is cause enough for concern. In addition, this standard represents a "proof of concept for the "reliability based standards" initiative NERC is putting forward. NPCC RSC believe this initiative will result in better standards over time.
<b>Response: The SDT thanks you for your affirmative vote and comments. Based on your comment and others, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way. Subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.</b>				
Jason Shaver	American Transmission Company, LLC	1	Affirmative	ATC raises a concern on including Rationale Boxes plus Guidelines and Technical Basis as part of the NERC Reliability Standard. ATC recommends that the SDT either remove these sections or make them separate from the formal standard to eliminate any risk that these may be construed as requirements. An alternative method is to very clearly identify which parts of the standard are subject to compliance and considered mandatory and which are not considered requirements and are only for guidance in meeting the requirements.
<b>Response: The SDT thanks you for your affirmative vote and comments. A "disclaimer" is addressed by the Standards Committee Process Subcommittee however its location remains under discussion.</b>				
Horace Stephen Williamson	Southern Company Services, Inc.	1	Affirmative	Comments for this ballot are included in the Southern Company submitted comment form - Project 2007-07: Transmission Vegetation Management.
Richard J. Mandes	Alabama Power Company	3	Affirmative	
Anthony L Wilson	Georgia Power Company	3	Affirmative	

Voter	Entity	Segment	Vote	Comment
Gwen S Frazier	Gulf Power Company	3	Affirmative	
Don Horsley	Mississippi Power	3	Affirmative	
<b>Response: The SDT thanks you for your affirmative votes and comments. Please refer to the SDT responses in the Comment Report.</b>				
Ajay Garg	Hydro One Networks, Inc.	1	Affirmative	Hydro One would like to submit the following comments for consideration of the SDT. 1. In the application of Table 3 - specifically, the use of a "Minimum Distance from the Centerline of the Circuit", Mono-pole and frame construction have significantly different footprints which don't support a one size fits all approach. The use of Table 3 for 345kV, mono-pole construction could result in excessive clearing of additional forested edge on existing ROWs with little if any value added to system reliability and at great cost. 2. The use of the term "easements" in the definition needs clarification. For example, is there a reason the Active ROW only includes easements and not ownership, license or some other right to occupy and manage the ROW? Would active ROW include "danger tree rights" on land?
Michael D. Penstone	Hydro One Networks, Inc.	3	Affirmative	
<b>Response: The SDT thanks you for your affirmative vote and comments. Based on your comment and others, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way. Subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.</b>				
Richard J. Padilla	Pacific Gas and Electric Company	5	Affirmative	In principle we agree but we have the following concerns: Removes reference to ANSI A300 as an effective management strategy to comply with the standard. We often point to ANSI A300 to support our position of "wire zone - border zone" vegetation management practices in public education and legal disputes. However, Eastern and Southern utilities, who dominate the VMSDT, feel that ANSI A300 places constraints on their desire to perform bare ground clearing, which A300 and PG&E does not endorse. Most Western utilities support retaining reference to A300. Minimum clearance distances have been reduced from the current IEEE 516 distances to the distances derived from the Gallet equation. Reduced clearance distances make it more difficult to justify some work with property owners. FERC and NERC have also stated they are opposed to reduced clearances. The VMSDT spent much time and effort to construct the standard in a manner where there is violation gradation within some requirements. NERC and FERC have indicated they disagree with the latitude to ignore the VSL's as proposed
<b>Response: The SDT thanks you for your affirmative vote and comments. The proposed draft of FAC-003-2 continues to make reference to ANSI A300 as a best practice but short of endorsement into a requirement. This represents the best compromise that the team could achieve. Use of the Gallet Equation, contrary to your comment, provides for greater distances than IEEE-516-2003 under the same conditions of elevation, voltage and transient overvoltage factor. Please refer to the Technical Reference Document (posted on NERC webpage) for more information. The SDT indeed has worked hard to achieve a technically valid set of VSLs for this standard and believe its perspective is correct.</b>				

Voter	Entity	Segment	Vote	Comment
Steven Grego	MEAG Power	3	Affirmative	MEAG is voting yes in support of the improvements and significant effort that went into modifying FAC-003-2 with the understanding that the vegetation management standard will continue to develop and evolve. Vegetation management's increased visibility and dramatically increased oversight is resulting in increasingly defined and demanding language contained in the standard's requirements. Some of the new requirements overreach but the intent is clear, create and manage a vegetation management program to prevent outages that potentially create a cascading outage threat. As the application of this new standard is reviewed over time, improved requirements and measures based on experience and results should be used to further improve the standard. Additional lines of lesser voltages will now be included under this standard. The tendency may be to include a line when in doubt even if there is a remote possibility that it can potentially cause a threat of a cascading outage. The same philosophy will occur with rights-of-way. The legal right-of-way will be cleared even if it was secured for a future line of greater voltage. We need to continue to review FAC-003-2 for future improvements to achieve reasonableness in protecting against cascading outages without heaping unnecessary costs on electric consumers.
Steven M. Jackson	Municipal Electric Authority of Georgia	3	Affirmative	
<b>Response: The SDT thanks you for your affirmative vote and comments. The SDT agrees with your comments.</b>				
Michael T. Quinn	Oncor Electric Delivery	1	Affirmative	Oncor believes that the proposed standard is a significant improvement over the current standard. We strongly support the suggested VSL's as proposed by the VMSDT. However, we also take the position that adoption of a virtual binary VSL to describe an encroachment without an outage, as a high VSL doesn't adequately address the different levels of encroachment and any potential impact that could lead to Cascading. Oncor is not aware of any vegetation fall-ins or blow-ins that have caused or have lead to Cascading.
<b>Response: The SDT thanks you for your affirmative vote and comments. The SDT has worked hard to achieve a technically valid set of VSLs for this standard and believe its perspective is correct.</b>				
Chifong L. Thomas	Pacific Gas and Electric Company	1	Affirmative	PG&E believes this version is an improvement over the last draft. However, PG&E is concerned with the removal of the reference to ANSI A300 as an effective management strategy to comply with the standard. ANSI A300 provides clarity on the "wire zone - border zone" vegetation management practices. PG&E is also concerned that the minimum clearance distances have been reduced from the current IEEE 516 distances to the distances derived from the Gallet equation. Reduced clearance distances make it more difficult to implement certain types of work needed to support reliability.
<b>Response: The SDT thanks you for your affirmative vote and comments. The proposed draft of FAC-003-2 continues to make reference to ANSI A300 as a best practice but short of endorsement into a requirement. This represents the best compromise that the team could achieve.</b>				

Voter	Entity	Segment	Vote	Comment
Scott M. Helyer	Tenaska, Inc.	5	Affirmative	Please note that further changes may be needed to this standard to address issues related to generation interconnection facilities per other standards development efforts.
<b>Response: The SDT thanks you for your affirmative vote and comments. The SDT is aware that a separate Project 2010-07 Transmission Requirements at the Generator Interface is underway to address the issue you raise.</b>				
Brandy A Dunn	Western Area Power Administration	1	Affirmative	Please see comments provided on Official Comment Form
<b>Response: The SDT thanks you for your affirmative vote and comments. Please refer to the responses in the Comment Report.</b>				
Donald S. Watkins	Bonneville Power Administration	1	Affirmative	Regarding footnote number 2, and the description of an "Active Transmission Line Right of Way", BPA has the following comments: The distance is reasonable in the table, but due to widely varying designs of structures it does not give a relationship of the outside wire to edge of ROW. It should be noted as outside wire, phase or conductor to edge of ROW. In addition, the effective date should allow transmission owners time to achieve this distance, perhaps one cycle. Other Comments: The basis of managing vegetation to MVCD in Table 2 (essentially withstand distances) will likely prove problematic. BPA believes NERC should develop an additional table that calls out minimum "buffers" based on attributes such as line voltage, line rating etc. This table should be a companion to Table 2. It is NERC's responsibility to regulate and we believe that they should do so. In this case, the loss of flexibility for the owners is not necessarily a bad thing.
Rebecca Berdahl	Bonneville Power Administration	3	Affirmative	
Francis J. Halpin	Bonneville Power Administration	5	Affirmative	
Brenda S. Anderson	Bonneville Power Administration	6	Affirmative	
<b>Response: The SDT thanks you for your affirmative votes and comments. Based on your comment and others, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way. Subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.</b>				
Tim Kelley	Sacramento Municipal Utility District	1	Affirmative	SMUD appreciates the efforts of the Drafting Team. However, use of the phrase "intentional time delay" in R4 no clear definitive time frame for "intentional time delay" this leads to difficulty in its definition. SMUD respectfully offers the recommendation for the DT to use a term along the lines of "expeditious."
James Leigh-Kendall	Sacramento Municipal Utility District	3	Affirmative	
Mike Ramirez	Sacramento Municipal Utility District	4	Affirmative	
Bethany Wright	Sacramento Municipal Utility District	5	Affirmative	
<b>Response: The SDT thanks you for your affirmative votes and comments. The SDT struggled with the selection of language in R4 and considered your term among many others. The team ended up with the drafted version as the best compromise.</b>				



Voter	Entity	Segment	Vote	Comment
Marjorie S. Parsons	Tennessee Valley Authority	6	Affirmative	Suggest a clarifying change to the language in footnote 2 and or Table 3 to address those lines that have ROW width variations from the prevailing width due to factors unrelated to the needs for vegetation maintenance for the subject line. Add the following sentence to footnote 2 "The widths and distances in Table 3 shall be that prevailing width of the ROW exclusive of any variations in the prevailing width due to factors unrelated to the needs for vegetation maintenance for the subject line." TVA asserts that the new language in R1, R2, M1, and M2 in concert with new language in R3 and M3 are fully adequate and superior to any of the proposed alternative A-F. TVA asserts that the VSLs as proposed by the SDT are appropriate since they reflect in various degrees the typical types of right of way maintenance failure. For example vegetation removal from under the conductors should be the highest priority work, followed by vegetation removal in the side-growth/blow-out areas, and lastly of all fall-in risks should be removed. TVA suggests that another sentence be added to the end of Section 4.4 Other, as follows: Nothing is this Standard is shall be used to require the Transmission Owner to acquire additional easement rights beyond those currently owned, or to perform any maintenance outside the limits of its legal rights.
<b>Response: The SDT thanks you for your affirmative vote and comments. Please see drafting team responses to your same comments in the Comment Report.</b>				
Paul B. Johnson	American Electric Power	1	Affirmative	The VSL chart states that it is a Lower Violation if the TO has an encroachment into the MVCD observed in real time, absent a sustained outage. While the Moderate and High categories specifically note that the reference is to inside the right-of-way, the Lower level does not. Should the Lower category read: " The Transmission Owner has an encroachment into the MVCD from inside the right-of-way in real time, absent a Sustained Outage"?
Edward P. Cox	AEP Marketing	6	Affirmative	
<b>Response: The SDT thanks you for your affirmative votes and comments. The suggested edit has been considered and the SDT determined that no change to the VSL would be made.</b>				
Robert Smith	Duke Energy	5	Affirmative	This Version 2 of FAC-003 takes a big step forward to clarify expectations and compliance with the standard. The results-based format is a big improvement.
<b>Response: The SDT thanks you for your affirmative vote and comment.</b>				

Voter	Entity	Segment	Vote	Comment
George T. Ballew	Tennessee Valley Authority	5	Affirmative	TVA suggests a clarifying change to the language in footnote 2 and or Table 3 to address those lines that have ROW width variations from the prevailing width due to factors unrelated to the needs for vegetation maintenance for the subject line. Add the following sentence to footnote 2 "The widths and distances in Table 3 shall be used as the prevailing width of the ROW regardless of any variations in width due to factors unrelated to the needs for vegetation maintenance for the subject line." TVA asserts that the VSLs as proposed by the SDT are appropriate since they reflect in various degrees the typical types of right of way maintenance failure. For example vegetation removal from under the conductors should be the highest priority work, followed by vegetation removal in the side-growth/blow-out areas, and lastly of all fall-in risks should be removed. TVA suggests that another sentence be added to the end of Section 4.4 Other, as follows: Nothing in this Standard shall be used to require the Transmission Owner to acquire additional easement rights beyond those currently owned, or to perform any maintenance outside the limits of its legal rights.
<p><b>Response: The SDT thanks you for your affirmative votes and comments. Based on your comment and others, the SDT has revised the definition of Right of Way to embody the concept of an Active Transmission Right of Way. Subsequently the definition of Active Transmission Line Right of Way and Table 3 have been removed.</b></p> <p><b>The SDT agrees with your comment on the VSLs, and the SDT points out that the following sentence at the end of Section 4.4 is comparable to your suggestion, "Nothing in this section should be construed to limit the Transmission Owner's right to exercise its full legal rights on the ROW."</b></p>				
Spencer Tacke	Modesto Irrigation District	4	Affirmative	We approve of the proposed revised standard as written. However, we have a concern about the Minimum Vegetation Clearance Distance (MVCD) of 2.97 feet shown in Table 2 for 230kV lines, as being too small. We will continue to maintain a much larger clearance than specified in Table 2, and in this case, no less than 10 feet of clearance for 230kV lines, taking into consideration the maximum sag designed for a given line. Thank you.
<p><b>Response: The SDT thanks you for your affirmative vote and comments. The MVCD was set up to be a "minimum" distance to never violate. Certainly, each TO must maintain larger clearances in order to account for growth, movement of conductor and other factors that influence the distance between the conductor and vegetation. Use of the Gallet Equation provides for greater distances than IEEE-516-2003 under the same conditions of elevation, voltage and transient overvoltage factor. Please refer to the Technical Reference Document (posted on NERC webpage) for more information.</b></p>				
James L. Jones	Southwest Transmission Cooperative, Inc.	1	Abstain	Entities have a problem with other Government Agencies in tha they are not real receptive for Vegetation Management. Burea of Land Management will usually take 2 years to get permission to trim vegetation in BLM ROW. State Land Department will usually not let you cut any cactuses in ROW on State land. ROW crossing on a Sovereign Indian Reservation is just as bad. If this is such a big issue for FERC/NERC, then they need to get other governmental agencies on board with them.

Voter	Entity	Segment	Vote	Comment
<b>Response: The SDT thanks you for your comments. Jurisdictional issues need to be addressed in other appropriate arenas. The Utility Arborist Association among other groups have sought to coordinate cooperation between agencies in the past.</b>				