

## Revising NERC's Reliability Standard FAC-003-1 - Vegetation Management

This article provides the members of the Utility Arborist Association information about the project of revising NERC Reliability Standard FAC-003-1 – Vegetation Management.

NERC, the North American Electric Reliability Corporation, is a self-regulatory organization subject to oversight by the U.S. Federal Energy Regulatory Commission and governmental authorities in Canada. One of NERC's primary responsibilities is developing and enforcing standards that protect the reliability of the interconnected electric systems in North America. Entities found in violation of a reliability standard may be fined up to \$1 million a day per violation.

NERC has a standard that has been in effect since June 2007 called "FAC-003 - Vegetation Management." This standard requires transmission line owners to control vegetation located on transmission rights-of-way to prevent it from impacting overhead transmission lines. As many utility arborists are aware, there have been instances where vegetation-related outages of overhead transmission lines have contributed to widespread power outages.

When the standard was originally approved, two other needs were identified: the need for additional clarity, and a possible expansion of scope to include lower voltage transmission lines if those lines are critical to reliability.

With this revision project, NERC is implementing a more "results-based" approach to its reliability standards. The standard drafting team engaged the services of consultant Ivy Hooks, the CEO of Compliance Automation, who has worked with a variety of entities including NASA, and is widely regarded as an expert in the creation of results-based standards. Ms. Hooks assisted in identifying the reliability-related requirements in FAC-003, and rephrasing those requirements and their associated measures to reinforce the end goal of what must be accomplished without detailing how to meet the required performance of each requirement.

In addition to the changes in the content of the standard, the drafting team is exploring a new format. The proposed standard has considerably more explanatory information, providing a more complete context for the definitions and requirements. Some of the explanatory information is adjacent to either the definitions (to provide examples) or to the requirements (to provide a rationale for the requirement), and some of the explanatory information is provided in new sections of the standard. Previously, the information in these sections of the standard was contained in a stand-alone reference document.

The drafting team also added a global *force majeure* statement to the standard to clarify that the standard is not applicable under extraordinary circumstances such as hurricanes, tornadoes, etc. This statement is included at the beginning of the standard and applies to all Requirements.

The drafting team is seeking feedback with respect to the requirements proposed in FAC-003-2, and is seeking comments on the format of the revised standard. Comments are due by March 31, 2010. The standard and the associated comment form are posted at:

[http://www.nerc.com/filez/standards/Vegetation-Management\\_Project\\_2007-7.html](http://www.nerc.com/filez/standards/Vegetation-Management_Project_2007-7.html). The drafting team's goal is to complete development so the revised standard can be balloted by August 31, 2010.

A comparison of the requirements in the original standard (FAC-003-1) and the proposed requirements in the revised draft (FAC-003-2) include the following:

FAC-003-1	Proposed FAC-003-2	Comments
	Requirements 1 and 2: Transmission Owner must prevent vegetation from encroaching within the Minimum Vegetation Clearance Distance (MVCD) of each transmission line conductor	These requirements focus on the reliability objective – to prevent vegetation-related outages.
Requirement 1: Transmission Owner must have a Transmission Vegetation Management Plan that addresses a set of topics including vegetation inspections, clearances, qualifications of workers; mitigation plans, and an imminent threat process	Requirement 3: Transmission Owner must have a transmission vegetation management program that focuses on how it conducts work to avoid vegetation-related outages of transmission lines	The revised standard focuses on the objective – have a program – without spelling out all the details of what must be in the program
	Requirement 4: Transmission Owner must conduct a Vegetation Inspection of all applicable transmission lines at least once per calendar year	The original standard required (in Requirement 1) that the Transmission Owner’s Transmission Vegetation Management Plan address “vegetation inspections” but didn’t require that the inspections be conducted. The revised standard requires inspections.
	Requirement 5: The Transmission Owner must take interim corrective action when it is temporarily constrained from performing planned vegetation work	The original standard required (in Requirement 1) the Transmission Owner to “have” a mitigation plan, but didn’t require that the plan be used. The revised standard requires taking corrective action in real-time
	Requirement 6: The Transmission Owner must notify the responsible operations control center when it has verified knowledge of a vegetation imminent threat	The original standard required (in Requirement 1) the Transmission Owner to “have” an imminent threat procedure, but didn’t require that the procedure

	condition	be used. The revised standard requires notifying the appropriate system operator so that the system operator is aware that there is a possibility of a vegetation-related transmission line outage
Requirement 2: Transmission Owner must have an annual vegetation management plan that addresses types of vegetation, environmental factors, scheduling and plan adjustments, and documentation of work accomplished	Requirement 7: The Transmission Owner must execute a flexible annual vegetation work plan to ensure no vegetation encroachments occur within the MVCD.	The original requirement was revised to clarify that the annual program must be implemented. The details of what must be in the program are left to the individual entity.
Requirement 3: Transmission Owner must report quarterly (to its Regional Reliability Organization) on vegetation-related transmission line outages in accordance with specified reporting criteria		There is no reliability-related impact associated with this requirement – the reporting aspects of this standard have been moved into an administrative section of the standard
Requirement 4: Regional Reliability Organization to report vegetation-related transmission line outages quarterly to NERC, including any actions taken		There is no reliability-related impact associated with this requirement – the reporting aspects of this standard have been moved into an administrative section of the standard