

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Vegetation–Related Transmission Outage Report

First Quarter 2013

RELIABILITY | ACCOUNTABILITY



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Executive Summary

The NERC Board of Trustees Compliance Committee has reviewed and accepted this Vegetation-Related Transmission Outage First Quarter 2013 Report.

The reportable¹ vegetation-related transmission outages that occurred in the first quarter of 2013 are being reported in accordance with Requirement 4² of Reliability Standard FAC-003-1.³

Specifically, Requirement 3.4 requires each outage to be categorized as one of the following:

- Category 1 — Grow-ins: Outages caused by vegetation growing into lines from vegetation inside and/or outside of the Right-of -Way (ROW).
- Category 2 — Fall-ins: Outages caused by vegetation falling into lines from inside the ROW.
- Category 3 — Fall-ins: Outages caused by vegetation falling into lines from outside the ROW.

Table 1 is a summary of the vegetation outages that occurred in the first quarter of 2013 by voltage class and category.

Category	RE Designated Critical Lines <200 kV	230 kV	345 kV	500 kV	765 kV	Total
Category 1 — Grow-ins	0	0	0	0	0	0
Category 2 — Fall-ins	0	0	0	0	0	0
Category 3 — Fall-ins	0	2	1	0	0	3
Total	0	2	1	0	0	3

Table 1: Summary of Vegetation-Related Outages, by Voltage Class and Outage Category for First Quarter 2013

¹ Per R3.2 of Reliability Standard FAC-003-1, the Transmission Owner is not required to report to the Regional Entity certain sustained transmission line outages caused by vegetation such as (1) vegetation-related outages that result from vegetation falling into lines from outside the ROW that result from natural disasters or (2) vegetation-related outages due to human or animal activity.

² The Regional Entity shall report the outage information provided to it by Transmission Owners, as required by Requirement 3, quarterly to NERC, as well as any actions taken by the Regional Entity as a result of any of the reported outages.

³ FAC-003-2 was approved on March 21, 2013 by the Federal Energy Regulatory Commission (Commission). The Commission approved the related definitions, violation severity levels, implementation plan, and effective dates proposed by NERC. The Commission also approved the related violation risk factors, except that it directed a revision to the violation risk factor corresponding to one requirement.

The three vegetation-related transmission outages reported in the first quarter of 2013 were classified as Category 3. Two 230 kV outages occurred during periods of high winds/thunderstorms--one involving a tree located 13 feet from the edge of the ROW and another involving a tree approximately 50 feet from the ROW. The third, a 345 kV outage, involved a rotted tree located 60 feet from the edge of the ROW. All three outages involved trees approximately 100 feet tall.

In comparison, during the first quarter of 2012, nine⁴ Category 3 vegetation-related transmission outages were reported. Eight of the nine outages occurred during periods of high winds/storms. Five of these outages involved trees located approximately 20 feet or less from the edge of the ROW, with tree heights ranging from 70 to 106 feet tall. The first quarter of 2011 had three Category 3 outages, and the first quarter of 2010 had five Category 3 outages. Most of these outages involved high winds/storms.

Reported Vegetation-Related Outages for the First Quarter of 2013

The following vegetation-related transmission line outages were reported to NERC in accordance with Requirement 4 of FAC-003-1 for the first quarter of 2013.

Category 1 — Grow-ins

No outage caused by vegetation growing into lines from vegetation inside and/or outside of the ROW was reported during the first quarter 2013.

Category 2 — Fall-ins

No outage caused by vegetation falling into lines from inside the ROW was reported during the first quarter 2013.

Category 3 — Fall-ins

Three (3) outages caused by vegetation falling into lines from outside the ROW were reported during the first quarter 2013.

SERC Reliability Corporation

SERC reported the following two 230 kV vegetation-related transmission outages from outside the ROW:

Outage on January 13, 2013: The transmission owner reported one 230 kV vegetation-related transmission outage caused by vegetation falling from outside the ROW. The outage duration was 23 hours and 58 minutes. A 108-foot green pine had been washed out during a thunderstorm, sliding 20 feet down the creek embankment and across the conductor. The

⁴The nine category 3 outages consisted of six 230 kV, one 345 kV and two Regional Entity designated critical lines under 200 kV.

pine's base had been approximately 80 feet from the outside conductor, placing the tree at 50 feet outside the ROW boundary. The tree could not be removed from the line until wet conditions improved and allowed access. Two additional trees were identified as potential threats and were removed.

Outage on March 31, 2013: The transmission owner reported one 230 kV vegetation-related transmission outage caused by vegetation falling from outside the ROW. The outage duration was 12 hours and 21 minutes. A 97-foot live pine tree located 13 feet outside the ROW was uprooted due to high winds and fell across the line. Several structures north and south of this outage site were inspected for additional vegetation/line issues, but no additional issues were identified. This outage occurred on U.S. Forestry Service property, and Forestry Service personnel were notified on April 1, 2013.

Southwest Power Pool Regional Entity (SPP RE)

SPP RE reported one 345 kV vegetation-related transmission outage from outside the ROW:

Outage on January 29, 2013: The transmission owner reported one 345 kV vegetation-related transmission outage caused by vegetation falling from outside the ROW. The outage duration was 16 hours and 44 minutes. A 113-foot pine tree located 60 feet from the edge of the ROW fell across the outside phase of a 345 kV transmission line which was 52-feet off from the ground. The entity periodically inspects the ROW via helicopter and notes trees that appear to endanger the line. Although the fallen tree appeared to be healthy, upon closer inspection, it was discovered that it had rotted below ground. The entity inspected other pines in the immediate area and found the adjacent trees to be in good health and not in danger of falling on the line. Transmission forestry personnel continue to look for danger trees outside the ROW during their aerial patrols in spring and fall, while performing their normal duties. Once a danger tree has been identified, the forester works with the land owner to remove the tree in question.

Table 2 summarizes the number of transmission outages in 2013 by voltage level, region, and category.

Region		FRCC	MRO	NPCC	RFC	SERC	SPP	TRE	WECC	TOTAL
First Quarter	Category 1									
	Category 2									
	Category 3					2-230kV	1-345kV			2-230kV 1-345kV
Second Quarter	Category 1									
	Category 2									
	Category 3									
Third Quarter	Category 1									
	Category 2									
	Category 3									
Fourth Quarter	Category 1									
	Category 2									
	Category 3									
TOTAL for 2013	Category 1									
	Category 2									
	Category 3					2-230kV	1-345kV			2-230kV 1-345kV
Category 1: GROW-INS (inside/ outside ROW) Category 2: FALL-INS (inside ROW) Category 3: FALL-INS (outside ROW)										

Table 2: Summary of Vegetation-Related Transmission Outages⁵ by Region and by Outage Category for Each Quarter in 2013

⁵ Contains only sustained outages of transmission lines and does not include violations resulting from momentary outages or encroachments into the clearance zone as described in Standard FAC-003.

Figure 1 illustrates the number of outages caused by vegetation growing into transmission lines from within the ROW that have been reported since 2004.

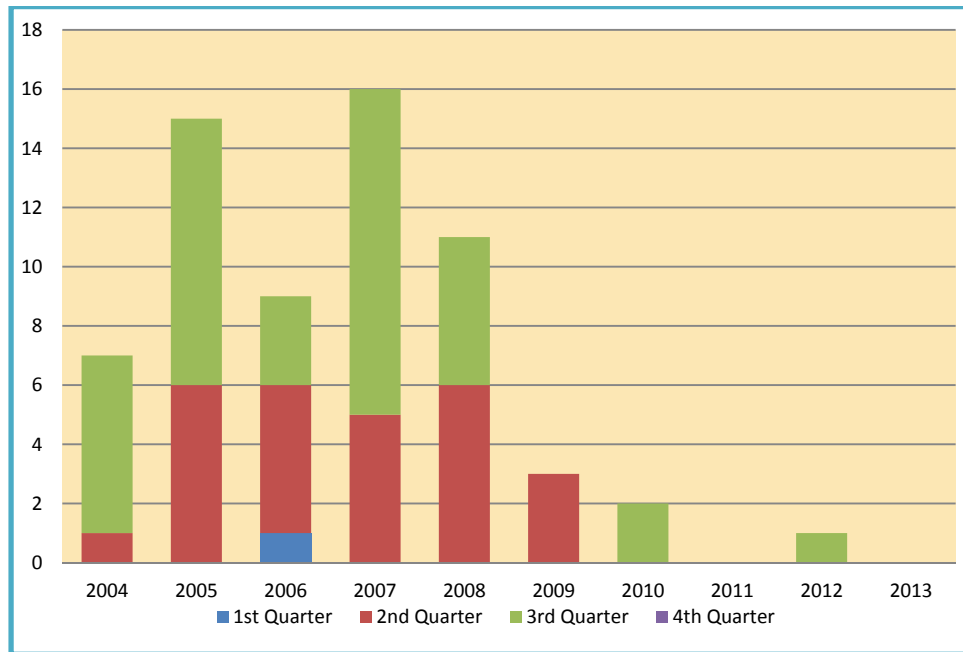


Figure 1: Category 1 — Grow-in Outages Caused by Vegetation Growing into Lines from Inside and/or Outside the ROW.⁶

Figure 2 provides this information by voltage class for each year.

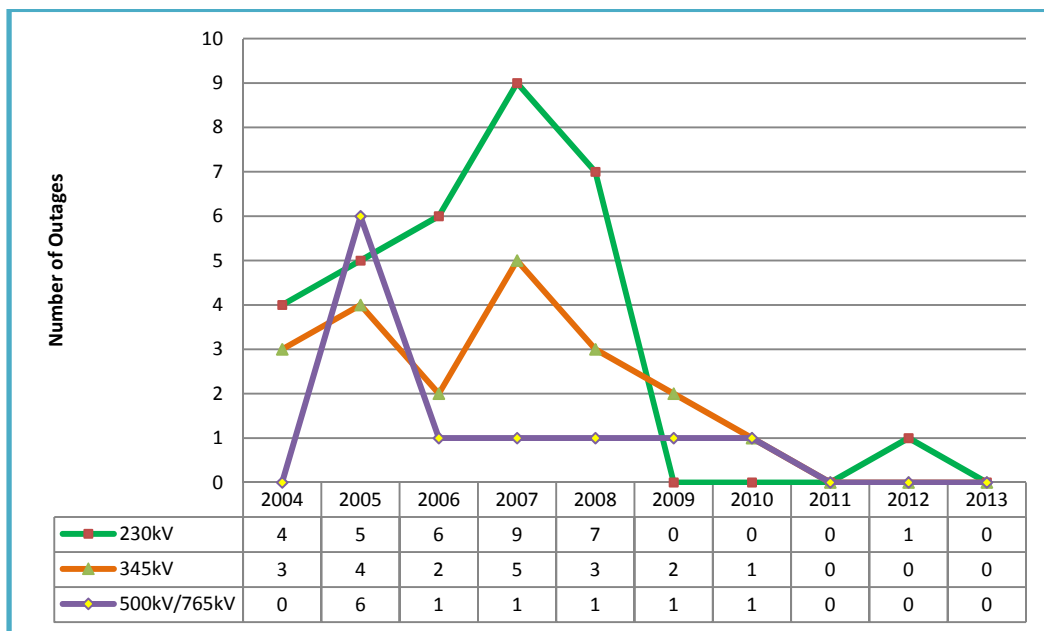


Figure 2: Category 1 — Grow-In Vegetation Related Outages of 230kV and Higher

⁶ Includes one 2007 Category 1 outage caused by vegetation growing into a Regional Entity-designated critical line <200 kV.