

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Vegetation–Related Transmission Outage Report

Fourth Quarter 2012

RELIABILITY | ACCOUNTABILITY



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The NERC Board of Trustees Compliance Committee has reviewed and accepted this Vegetation-Related Transmission Outage Fourth Quarter 2012 Report.

Vegetation-related transmission outages that occurred in the fourth quarter of 2012 are being reported in accordance with Reliability Standard FAC-003-1.

The Reliability Standard 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 fourth quarter by voltage class and category.

Table 1: Fourth Quarter 2012 Summary of Vegetation-Related Outages by Voltage Class and Outage Category

Category	Regional Entity 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	1	1	0	0	2
Total	0	1	1	0	0	2

In comparison, during the fourth quarter of 2011, there was one 230kV Category 3 vegetation-related transmission outage reported.

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 fourth quarter of 2012.

Category 2 — Fall-ins

No outage caused by vegetation falling into lines from inside the ROW were reported during the fourth quarter of 2012.

Category 3 — Fall-ins

Two (2) outages caused by vegetation falling into lines from outside the right-of-way were reported during the fourth quarter of 2012. These outages were reported to the Northeast Power Coordinating Council and the SERC Reliability Corporation:

Northeast Power Coordinating Council

Reported one 345kV vegetation-related transmission outage from outside the right-of-way:

1. The transmission owner reported one 345kV vegetation-related transmission outage caused by vegetation falling from outside the ROW on October 29, 2012 with a duration of 23 hours. During Hurricane Sandy, a white pine tree approximately 100 feet tall and a 40 inch Diameter at Breast Height (DBH) broke approximately 8 feet from the base of the tree, made contact with the closest phase and then cleared itself from the conductor. The tree was located 10 feet outside the ROW easement and 70 feet from the closest phase. Internal insect damage where the tree split and burn marks on the top of the leader were observed. Aerial patrols were also conducted following the outage.

SERC Reliability Corporation

Reported one 230kV vegetation-related transmission outage from outside the right-of-way:

1. The transmission owner reported one 230kV vegetation-related transmission outage caused by vegetation falling from outside the ROW on December 21, 2012 with a duration of 7 hours. A live Loblolly Pine tree, approximately 82 feet tall and a 12 inch DBH, located 1 foot off the ROW fell across two phases resulting in a sustained outage. Local wind gusts may have contributed to the cause. The pine tree was removed from the line and spans in the area assessed. No additional trees in the area were determined to be of concern.

Table 2 summarizes the number of transmission outages by voltage level, region, and category during 2012.

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

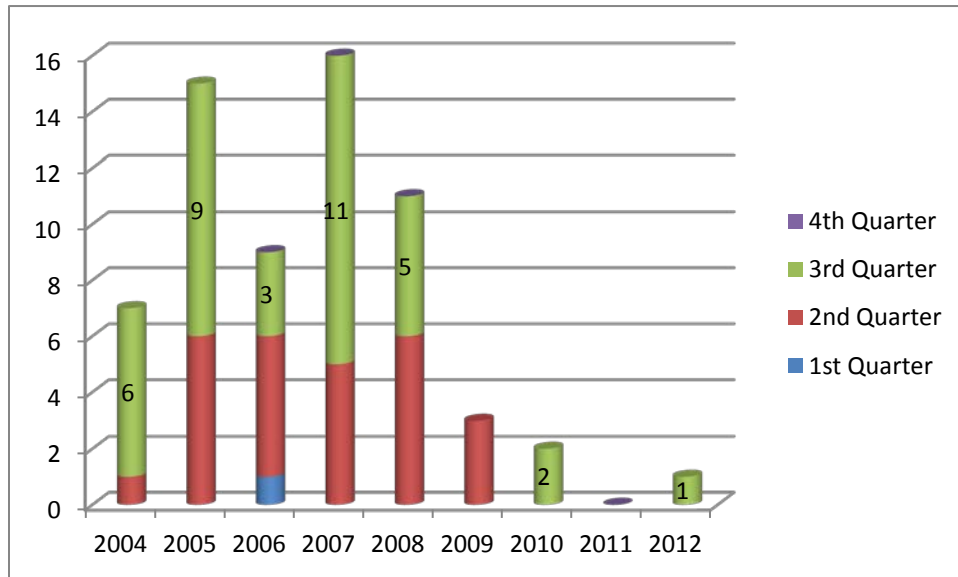
Figure 2 provides this information by voltage class for each year from 2004 to 2012.

Table 2: Summary of Vegetation-Related Transmission Outages¹ by Region and by Outage Category for Each Quarter in 2012

Region	First Quarter			Second Quarter			Third Quarter			Fourth Quarter			TOTAL		
	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3
	GROW-INS (inside/outside ROW)	FALL-INS (inside ROW)	FALL-INS (outside ROW)	GROW-INS (inside/outside ROW)	FALL-INS (inside ROW)	FALL-INS (outside ROW)	GROW-INS (inside/outside ROW)	FALL-INS (inside ROW)	FALL-INS (outside ROW)	GROW-INS (inside/outside ROW)	FALL-INS (inside ROW)	FALL-INS (outside ROW)	GROW-INS (inside/outside ROW)	FALL-INS (inside ROW)	FALL-INS (outside ROW)
FRCC															
MRO															
NPCC			1-345kV			1-230kV	1-230kV					1-345kV	1-230kV		1-230kV 2-345kV
RFC															
SERC			2-230kV			2-230kV			4-230kV			1-230kV			9-230kV
SPP															
TRE															
WECC			2-<200kV 4-230kV												2-<200kV 4-230kV
TOTAL			2-<200kV 6-230kV 1-345kV			3-230kV	1-230kV		4-230kV			1-230kV 1-345kV	1-230kV		2-<200kV 14-230kV 2-345kV

¹ 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 Reliability Standard FAC-003.

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



¹ Includes one 2007 Category 1 outage caused by vegetation growing into a Regional Entity-designated critical line greater than 200 kV pursuant to Reliability Standard FAC-003-1.

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

