

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Vegetation–Related Transmission Outage Report

Second Quarter 2012

**RELIABILITY | ACCOUNTABILITY**



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

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

The 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 Right -of -Way (ROW).
- Category 3 — Fall-ins: Outages caused by vegetation falling into lines from outside the Right-of-Way (ROW).

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

**Table 1: Second Quarter 2012 Summary of Vegetation-Related Outages  
by Voltage Class and Outage 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	3	0	0	0	3
<b>Total</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>

In comparison, during the second quarter of 2011, there were five (5), Category 3 vegetation-related transmission outages reported.

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## Category 1 — Grow-ins

No outages caused by vegetation growing into lines from vegetation inside and/or outside of the ROW were reported during the second quarter 2012.

## Category 2 — Fall-ins

No outages caused by vegetation falling into lines from inside the ROW were reported during the second quarter 2012.

## Category 3 — Fall-ins

Three outages caused by vegetation falling into lines from outside the right-of-way were reported during the second quarter 2012.

### **Northeast Power Coordinating Council**

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

1. The transmission owner reported one 230 kV vegetation-related transmission outage from outside the right-of-way (ROW) on May 29, 2012 with a duration of 21 hours and 34 minutes. During a thunderstorm and possible microburst event, a sugar maple fell into a birch tree, which then hit the transmission line. The birch tree was located 15 feet outside of the ROW and approximately 78 feet from the conductor in a very steep and rocky area. Trees in the area were assessed for additional storm damage and uprooting, and any trees deemed necessary for removal were removed.

### **SERC Reliability Corporation**

Reported two 230 kV vegetation-related transmission outages caused by vegetation falling from outside the right-of-way:

1. The transmission owner reported one 230 kV vegetation-related transmission outage from outside the ROW on June 11, 2012 with a duration of nine (9) hours and 25 minutes. During a thunderstorm with winds exceeding 36 mph, a 70-foot pine tree located two feet off the ROW fell onto the transmission line causing the line to lock out. The area appears to have been subjected to a fire in the last couple of years, which possibly stressed the tree. Although the tree showed no external signs of rot, it was rotting internally from the ground level to the breaking point approximately four feet above ground. The tree was removed, and the ROW was inspected in the area of the event. It was determined that no other trees posed an immediate threat to the transmission line.

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2. The transmission owner reported one 230 kV vegetation-related transmission outage from outside the ROW on April 24, 2012 with a duration of 16 hours and 40 minutes. A 67-foot tall, pine tree located approximately 0.4 feet from the edge of the ROW fell into the transmission line during rain and wind storms. The tree was removed and spans in the area were assessed to determine if any additional trees in the area were impacted by the storms. None were found.

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

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.

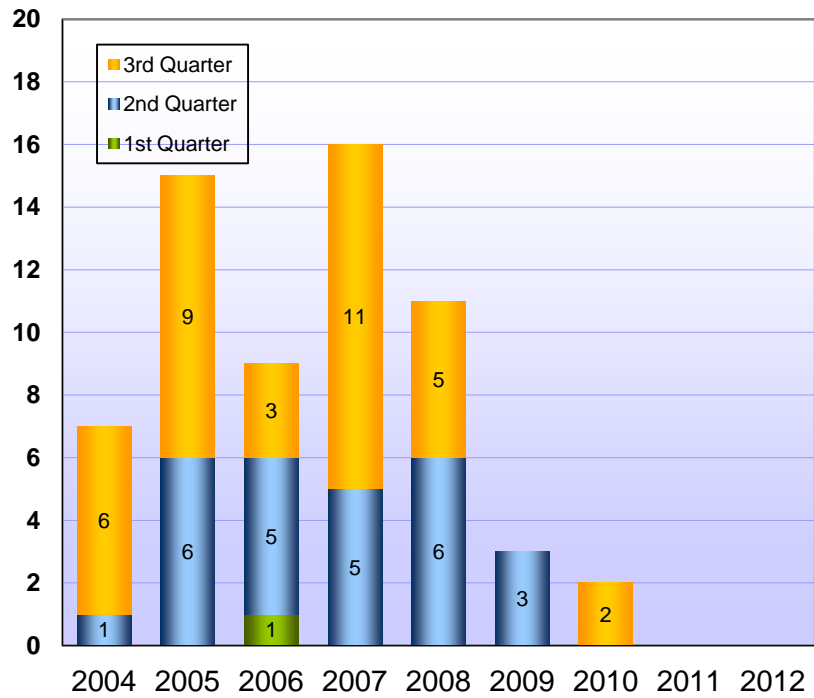
**Table 2: Summary of Vegetation-Related Transmission Outages<sup>1</sup> by Region and by Outage Category for Each Quarter in 2012**

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
RFC															
SERC			2-230kV			2-230kV									4-230kV
SPP															
TRE															
WECC			2-<200kV 4-230kV												2-<200kV 4-230kV
<b>TOTAL</b>			2-<200kV 6-230kV 1-345kV			3-230kV									2-<200kV 9-230kV 1-345kV

<sup>1</sup> 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.

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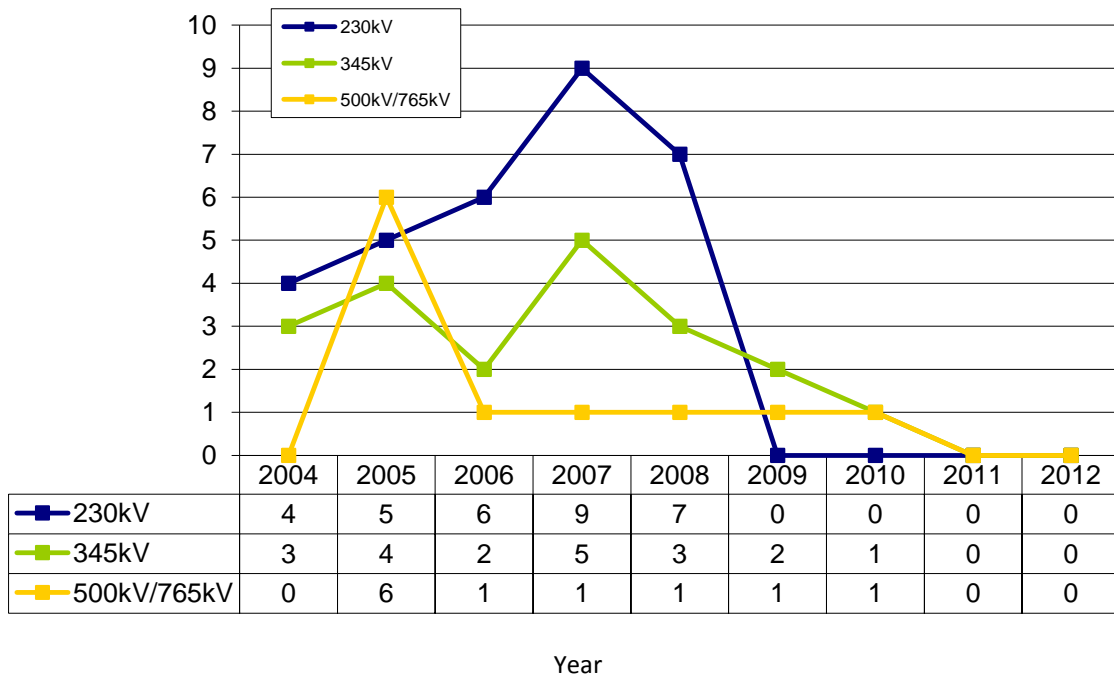
**Figure 1: Category 1 — Grow-in Outages Caused by Vegetation Growing into Lines from Inside and/or Outside the ROW.<sup>1</sup>**



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<sup>1</sup> Includes one 2007 Category 1 outage caused by vegetation growing into a RRO-designated critical line <200 kV.

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



**Transmission by Voltage Class**