

## Vegetation-Related Transmission Outage Report Third Quarter 2009

The NERC Board of Trustees Compliance Committee has reviewed and accepted this Vegetation-Related Transmission Outage Third Quarter 2009 Report.

Vegetation-related transmission outages that occurred in the third quarter of 2009 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 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.

All Category 1 and 2 outages are considered to be violations of NERC standard FAC-003-1, with corresponding levels of noncompliance defined in the standard. The reporting of these violations is handled separately as part of the NERC performance reporting process. Category 3 outages are not considered to be violations of NERC standard FAC-003-1. Table 1 is a summary of the vegetation outages that occurred in the third quarter by voltage class and category.

**Table 1: Third Quarter 2009 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
Category 2 — Fall-ins						0
Category 3 — Fall-ins		3				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 third quarter of 2008, the following 11 vegetation-related transmission outages were reported:

- Five Category 1 outages:
  - 3 - 345 kV
  - 2 - 230 kV
- Six Category 3 outages:
  - 4 - 230 kV
  - 2 - <200 kV

## 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 third quarter 2009.

## Category 2 — Fall-ins

No outages caused by vegetation falling into lines from inside the ROW were reported during the third quarter 2009.

## Category 3 — Fall-ins

Outages caused by vegetation falling into lines from outside the right-of-way:

### **SERC Reliability Corporation**

Reported three 230 kV vegetation-related transmission outages from outside the right-of-way:

1. The transmission owner reported one 230 kV outage from outside the right-of-way on July 26, 2009 with a duration of 28 hours and 41 minutes. A 95-foot tall Poplar tree located 30 feet off the right-of-way was blown into the line during a strong thunderstorm. A crossarm broke off the structure, dropping a conductor onto a distribution line. The area was patrolled for other storm damage and no additional threats were found.
2. The transmission owner reported one 230 kV outage from outside the right-of-way on August 17, 2009 with a duration of 1 hour and 53 minutes. A 90-foot tall Sweet Gum tree located 6 feet off the right-of-way broke off about 8 feet from the ground and fell into the easement during a thunderstorm. The tree made contact with the line causing the outage. A contract tree crew and forester performed an extensive patrol of this section of the line and removed any possible danger trees.
3. The transmission owner reported one 230 kV outage from outside the right-of-way on September 6, 2009 with a duration of 35 hours and 28 minutes. A 34-inch Diameter Breast Height<sup>1</sup>, 94-foot tall Water Oak tree fell from 30 feet off the right-of-way. The ground was saturated and some erosion had occurred at the base from continuous rainy

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<sup>1</sup> Diameter Breast Height (DBH) is defined as the outside bark diameter at 4.5 feet above the forest floor on the uphill side of the tree.

weather. A contract tree crew and forester performed a patrol of this section of line and removed any possible danger trees.

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

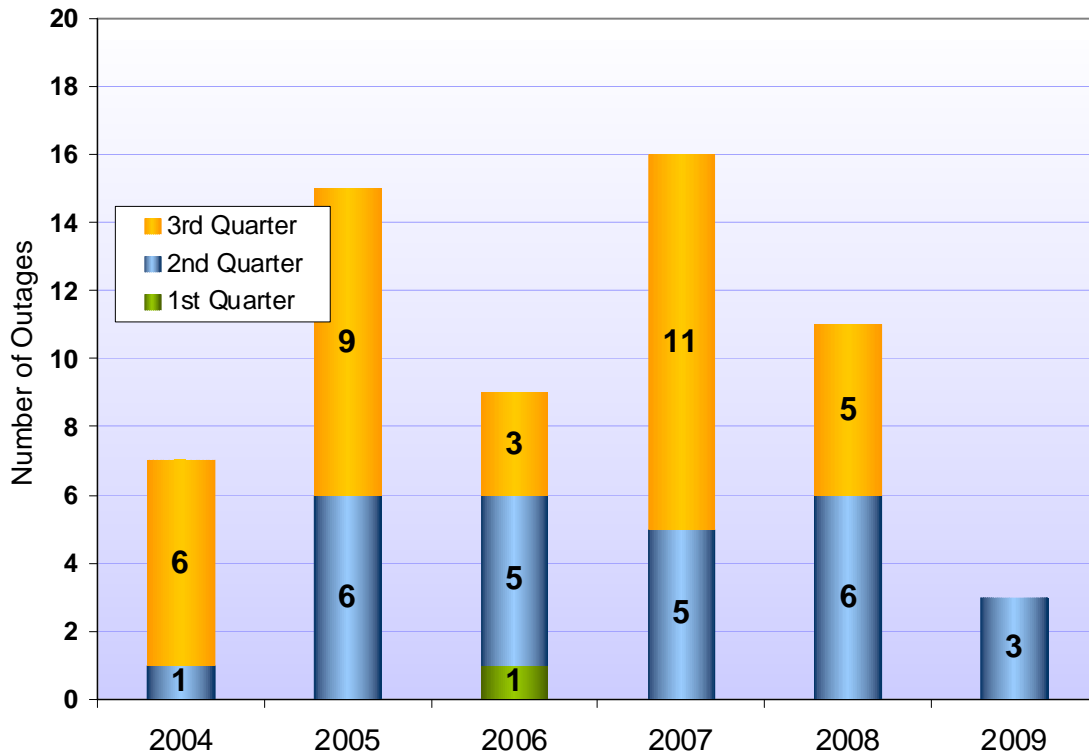
Figure 1 illustrates the number of outages caused by vegetation growing into transmission lines from within the right-of-way that have been reported since 2004. Figure 2 provides this information by voltage class for each year. In the last five years, the majority of grow-ins occurred during the third quarter however, there were no outages resulting from vegetation growing into transmission lines reported in third quarter 2009.

**Table 2: Summary of Vegetation-Related Transmission Outages<sup>†</sup> by Region and by Outage Category for Each Quarter in 2009**

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						1-230 kV									1-230 kV
MRO				1-345 kV		1-230 kV							1-345 kV		1-230-kV
NPCC				1-345 kV 1-765 kV									1-345 kV 1-765 kV		
RFC															
SERC			1-230 kV			3-230 kV			3-230 kV						7-230 kV
SPP															
TRE															
WECC			2-<200 kV 4-230 kV												2-<200 kV 4-230 kV
<b>TOTAL</b>			2-<200 kV 5-230 kV	2-345 kV 1-765 kV		5-230 kV			3-230 kV				2-345 kV 1-765 kV		2-<200 kV 13-230 kV

<sup>†</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.

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



<sup>§</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**

