

Vegetation-Related Transmission Outage Report First Quarter 2010

The NERC Board of Trustees Compliance Committee has reviewed and accepted this Vegetation-Related Transmission Outage First Quarter 2010 Report.

Vegetation-related transmission outages that occurred in the first quarter of 2010 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 first quarter by voltage class and category.

**Table 1: First Quarter 2010 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		4		1		5
Total	0	4	0	1	0	5

In comparison, during the first quarter of 2009, the following 7 vegetation-related transmission outages were reported:

- Category 3 outages:
 - 5 – 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 first quarter 2010.

Category 2 — Fall-ins

No outages caused by vegetation falling into lines from inside the ROW were reported during the first quarter 2010.

Category 3 — Fall-ins

Five outages caused by vegetation falling into lines from outside the right-of-way were reported during the first quarter 2010:

Florida Reliability Coordinating Council

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

1. The transmission owner reported one 230 kV vegetation-related transmission outage from outside the right-of-way on January 21, 2010 with a duration of 10 hours and 10 minutes. An 80 foot Green Slash Pine tree fell into the conductor. At the time of the outage, there were reports of heavy winds, including tornados, in the area. The transmission corridor was inspected and five trees were removed that appeared to pose a potential threat. This event was initially categorized by the transmission owner as a Category 2 outage, however, during a FRCC- initiated compliance spot check, it was determined that the 230 kV transmission outage on January 21, 2010, was a Category 3 event and was primarily caused by weather-related conditions (high winds).

SERC Reliability Corporation

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

1. The transmission owner reported one 230 kV vegetation-related transmission outage from outside the right-of-way on February 10, 2010 with a duration of 26 hours and 15 minutes. A healthy 14-inch dbh¹, Loblolly Pine tree 83 feet tall located 2.5 feet off of the ROW uprooted and fell into the conductor during a high wind event following a wet period in the area. The tree was removed and an additional inspection of the right-of-way in both directions from location of tree revealed no additional risks.

¹ 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.

Western Electricity Coordinating Council, Inc.

Reported one 500 kV and two 230 kV vegetation-related transmission outages from outside the right-of-way:

1. The transmission owner reported one 500 kV vegetation-related transmission outage from outside the right-of-way on March 29, 2010 with a duration of 6 hours and 24 minutes. A tree with root rot was blown into the transmission line from off the right-of-way during strong wind and heavy rain. WECC confirmed the outage was the result of extreme winter weather and will monitor entity for future vegetation-caused outages.
2. The transmission owner reported one 230 kV vegetation-related transmission outage from outside the right-of-way on January 19, 2010 with a duration of 3 hours and 42 minutes. It is felt that the outage may have been caused by a strong wind, resulting in the roots failing on an approximately 130 foot-tall Douglas fir that was about 85 feet-off the centerline. No customers were affected. WECC confirmed the outage was the result of extreme winter weather and will monitor entity for future vegetation-caused outages.
3. The transmission owner reported one 230 kV vegetation-related transmission outage from outside the right-of-way on January 22, 2010 with a duration of 43 hours 25 minutes. A snow storm caused heavy snow loading on a tree. The tree cracked and fell into the transmission line from outside the right-of-way. The line was patrolled and the snow damaged trees were removed or trimmed. WECC confirmed the outage was the result of extreme winter weather and will monitor entity for future vegetation-caused outages.

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

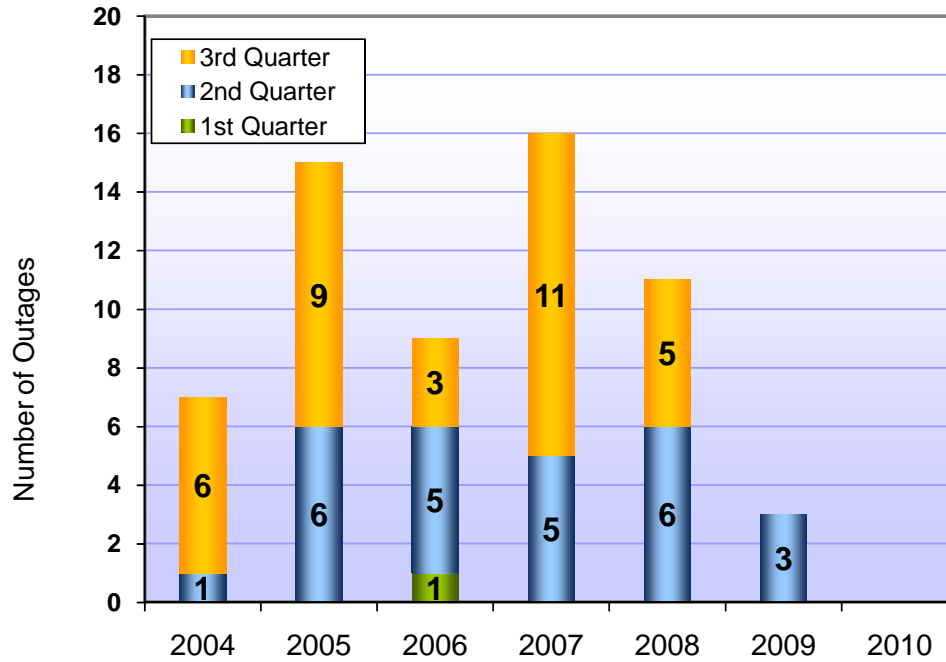
Figure 1 illustrates the number of outages caused by vegetation growing into transmission lines from within the right-of-way that have been reported since 2004. Figure 2 provides this information by voltage class for each year.

Table 2: Summary of Vegetation-Related Transmission Outages[†] by Region and by Outage Category for Each Quarter in 2010

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															
NPCC															
RFC															
SERC			1-230 kV												1-230 kV
SPP															
TRE															
WECC			2-230 kV 1-500 kV												2-230 kV 1-500 kV
TOTAL			4-230 kV 1-500 kV												4-230 kV 1-500 kV

[†] 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.[§]



[§] 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

