

Vegetation-Related Transmission Outages Fourth Quarter 2006

February 20, 2007

The Board of Trustees adopted version 1 of standard FAC-003 — *Transmission Vegetation Management Program* on February 7, 2006. Since the effective date of the version 1 standard is April 7, 2006, NERC Compliance modified the 2006 Compliance Enforcement Program by replacing version 0 of this standard with the revised standard. As a result, the vegetation-related transmission outages that occurred in the second, third, and fourth quarters of 2006 are being reported in accordance with standard FAC-003-1.

The revised 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 now 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.

Category 3 — Outages Caused by Vegetation Falling Into Lines from Outside the Right-Of-Way

ReliabilityFirst Corporation

Reported two 230-kV vegetation-related transmission outages from outside the right-of-way.

- The transmission owner reported a 230 kV vegetation-related outage occurred on November 12, 2006, with a duration of three hours and fifty-eight minutes. The transmission line relayed open and locked open after an attempted reclose. An off-ROW tree was pushed into a conductor by a tree from further outside the ROW that fell. The failure of the second tree was due to recent land clearing, excavation, and changing of grade for new development. Other trees in the immediate area that were affected by the same land clearing were inspected. Three trees were identified as similarly being at risk of falling due to the land clearing. These three trees were removed.
- The transmission owner reported a 230 kV vegetation-related outage occurred on October 29, 2006, with a duration of two hours and twenty-nine minutes. High winds were

recorded in the area, up to 41 MPH, with an average wind speed of 20 MPH. A large hickory tree split at its base 30 feet from the edge of the ROW and fell into the 230 kV conductors located on the railroad corridor (on the downhill side of the tree). The 230 kV line is located on a shared railway structure. A foot patrol of the area involved was performed after the event occurred. No new potential issues were identified and no further corrective actions were implemented.

Western Electricity Coordinating Council

Reported one 230-kV vegetation-related transmission outages from outside the right-of-way.

- The transmission owner reported a 230 kV vegetation-related outage occurred on November 13, 2006, with a duration of 7.82 hours. A tree fell from outside the right-of-way into the transmission line. The transmission owner has an annual proactive vegetation management program and has a vegetation consultant analyzing their system. The tree was removed.

In addition to the three total vegetation-related outages reported for 200 kV and higher transmission lines, WECC reported 14 vegetation-related transmission outages caused by vegetation falling into lines from outside the right-of-way for RRC designated critical lines <200 kV.

Table 1 summarizes the number of transmission outages by voltage level and category. Table 2 utilizes the same data as Table 1, but reclassifies the outages based upon the categories identified in FAC-003-1. In addition, Table 2 excludes outages that are no longer reportable under FAC-003-1.

Table 1 — 2006 Vegetation-Related Transmission Outages Reported

Region	First Quarter		Second Quarter			Third Quarter			Fourth Quarter		
	Category 1	Category 2	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3	Category 1	Category 2	Category 3
	ALL (within ROW)	ALL (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)
ERCOT	0	0	0	0	0	0	0	0	0	0	0
FRCC	1-230 kV	0	0	0	0	0	0	0	0	0	0
MRO	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	1-230 kV	0	0	0	0	0	0
RFC	0	0	0	0	0	1-345 kV	0	0	0	0	2-230 kV
SERC	0	1-230 kV	1-230 kV	0	1-230 kV	0	0	2-230 kV	0	0	0
SPP	0	0	1-345 kV	0	0	0	0	0	0	0	0
WECC	0	2<200 kV 9-230 kV 1-500 kV	2-230 kV 1-500 kV	0	0	2-230 kV	0	1-230 kV 4-<200 kV	0	0	1-230 kV 14-<200 kV
Subtotal	1-230 kV	2<200 kV 10-230 kV 1-500 kV	3-230 kV 1-345 kV 1-500 kV	0	2-230 kV	2-230 kV 1-345 kV	0	3-230 kV 4-<200 kV	0	0	3-230 kV 14-<200 kV

Table 2 — First Quarter Adjusted to FAC-003-1*

Region	First Quarter Adjusted			Second Quarter			Third Quarter			Fourth Quarter		
	Category 1 GROW-INS (inside/ outside ROW)	Category 2 FALL-INS (inside ROW)	Category 3 FALL-INS (outside ROW)	Category 1 GROW-INS (inside/ outside ROW)	Category 2 FALL-INS (inside ROW)	Category 3 FALL-INS (outside ROW)	Category 1 GROW-INS (inside/ outside ROW)	Category 2 FALL-INS (inside ROW)	Category 3 FALL-INS (outside ROW)	Category 1 GROW-INS (inside/ outside ROW)	Category 2 FALL-INS (inside ROW)	Category 3 FALL-INS (outside ROW)
ERCOT	0	0	0	0	0	0	0	0	0	0	0	0
FRCC	1-230 kV	0	0	0	0	0	0	0	0	0	0	0
MRO	0	0	0	0	0	0	0	0	0	0	0	0
NPCC	0	0	0	0	0	1-230 kV	0	0	0	0	0	0
RFC	0	0	0	0	0	0	1-345 kV	0	0	0	0	2-230 kV
SERC	0	0		1-230 kV	0	1-230 kV	0	0	2-230 kV	0	0	0
SPP	0	0	0	1-345 kV	0	0	0	0	0	0	0	0
WECC	0	0	2<200 kV	2-230 kV 1-500 kV	0	0	2-230 kV	0	1-230 kV 4-<200 kV	0	0	1-230 kV 14-<200 kV
Subtotal	1-230 kV	0	2-<200 kV	3-230 kV 1-345 kV 1-500 kV	0	2-230 kV	2-230 kV 1-345 kV	0	3-230 kV 4-<200 kV	0	0	3-230 kV 14-<200 kV
TOTAL	Category 1 (Grow-ins inside/outside ROW)			Category 2 (Fall-ins inside ROW)			Category 3 (Fall-ins outside ROW)					
	6-230 kV; 2-345kV; 1-500 kV			0			20-<200 kV; 8-230 kV					

*First Quarter Adjustment — not reportable under FAC-003-1: 1-230 kV outage was due to human activity, 9-230 kV outages were due to natural disasters, and 1-500 kV outage was due to wind shear.