

Electric Power Annual 2010

Released: March 2012

Next Update: November 2012

Table 4.8.C. U.S. Transformer Automatic Outage Counts and Outage Hours by High-Voltage Size and Interconnection, 2010

High-Side Voltage	Eastern Interconnection (FRCC, MRO, NPCC, RFC, SERC, SPP)			TRE	WECC	Total
100-199	NA	NA	NA	NA	NA	NA
200-299	-	-	6	-	6	6
300-399	2	-	12	-	14	14
400-599	6	-	2	-	8	8
600+	1	-	-	-	1	1
Total	9	-	20	-	29	29
100-199	NA	NA	NA	NA	NA	NA
200-299	-	-	4	-	4	4
300-399	13	-	13	-	26	26
400-599	34	-	38	-	72	72
600+	6	-	-	-	6	6
Total	53	-	55	-	108	108
100-199	NA	NA	NA	NA	NA	NA
200-299	-	-	10	-	10	10
300-399	15	-	25	-	40	40
400-599	40	-	40	-	80	80
600+	7	-	-	-	7	7
Total	62	-	75	-	137	137
100-199	NA	NA	NA	NA	NA	NA
200-299	-	-	11.13	-	11.13	11.13
300-399	10,528	-	8,385.61	-	18,913.13	18,913.13
400-599	15,431	-	3,573.81	-	19,004.80	19,004.80
600+	6,165	-	-	-	6,165.15	6,165.15
Total	32,124	-	11,970.56	-	44,094.21	44,094.21
Sustained Outage Hours per Incident[1]	606	-	218	-	408	408

Notes:

[1] Outage duration in hours per outage incident

- NA - Not Available
- An Automatic Outage is an outage which results from the automatic operation of a switching device, causing an Element to change from an In-Service State to a not In-Service State.
 - Momentary Outage is an automatic outage with an outage duration less than one minute.
 - A Sustained Outage is an automatic outage with an outage duration of a minute or greater.
- Detailed information on the Transmission Availability Data System outage definitions is available at:

<http://www.nerc.com/docs/pc/tadswg/Appendix%207%2020101202a%20clean.pdf>

Source: U.S. Energy Information Administration, Form EIA-411, "Coordinated Bulk Power Supply Program Report."