

Table B.2. Major Disturbances and Unusual Occurrences, 2003

Date	NERC Region	Time	Area Affected	Type of Disturbance	Loss (megawatts)	Number of Customers Affected ¹	Restoration Date/Time
January							
1/25/2003	ECAR	2:00 p.m.	Cincinnati, Ohio	Cyber Threat From Internet	NA	NA	1/26/03, 2:00 a.m.
February							
2/27/2003	SERC	11:32 a.m.	Piedmont, North Carolina	Winter Ice Storm	1,000	over 340,000	3/01/03, 8:00 a.m.
March							
None							
April							
4/3/2003	ECAR	7:00 p.m.	Lower Michigan Peninsula	Ice Storm	300	425,000	4/06/03, 5:00 p.m.
4/4/2003	NPCC	3:11 a.m.	New York, Upstate New York	Severe Storm	200-250	160,000	4/05/03, 2:00 p.m.
4/15/2003	ERCOT	11:00 a.m.	Cities of Bryan, College Station and surrounding areas	Relaying Malfunction	212	68,530	4/15/03, 2:06 p.m.
4/28/2003	MAIN	3:41 p.m.	County of Waukesha, Wisconsin, Town of Lisbon, Wisconsin	Vandalism	0	0	4/29/03, 12:00 noon
May							
5/2/2003	SERC	5:00 p.m.	Piedmont, North and South Carolina	Severe Thunderstorms	1,500	139,000	5/04/03, 12:00 noon
5/2/2003	SERC	8:00 p.m.	Central Georgia, Alabama	Severe Thunderstorms	130	102,842 (Georgia) 12,897 (Alabama)	5/03/03, 8:00 a.m.
5/15/2003	ERCOT	2:52 a.m.	North Texas	Interruption of Firm Power	476	192,000	5/15/03, 3:29 a.m.
5/15/2003	MAIN	2:00 p.m.	Upper Michigan Peninsula	Flood	240	2	6/16/03, 2:00 p.m.
June							
6/15/2003	WECC	3:12 p.m.	Idaho	Public Appeal	0	0	6/16/03, 5:00 p.m.
6/30/2003	SPP	1:00 p.m.	Coastal areas of Southwest Louisiana entire New Orleans metropolitan area	Tropical Storm Bill	NA	179,299	6/30/03, 12:00 a.m.
July							
7/1/2003	WECC	3:15 p.m.	Phoenix, Arizona	Breaker Failure	1,000	47,000	7/01/03, 3:50 p.m.

7/2/2003	WECC	1:54 p.m.	Northern California	Unit Tripped	200	1	7/02/03, 3:59 p.m.
7/4/2003	MAIN	6:00 a.m.	Southeast Wisconsin	Severe Thunderstorms	150	52,000	7/04/03, 10:00 a.m.
7/4/2003	ECAR	9:00 a.m.	Lower Michigan Peninsula	Severe Thunderstorms	75-90	131,000	7/06/03, 4:00 p.m.
7/4/2003	ECAR	11:41 p.m.	Southwest Ohio, portions of Indiana	Severe Storms	200	55,142	7/06/03, 9:00 p.m.
7/5/2003	MAIN	3:00 a.m.	Northern Illinois	Severe Storms	80	130,000	7/05/03, 7:00 a.m.
7/7/2003	MAIN	9:00 a.m.	Northern Illinois	Severe Thunderstorms	NA	72,000	7/07/03, 3:00 p.m.
7/8/2003	ECAR	4:00 a.m.	Ohio	Severe Thunderstorms	11,000	134,500	7/11/03, 4:00 p.m.
7/9/2003	SERC	5:14 p.m.	Northern Central and Eastern Virginia	Severe Thunderstorms	120	80,000	7/09/03, 7:09 p.m.
7/15/2003	ERCOT	8:24 a.m.	Texas	Hurricane Claudette	230-300	108,000	7/21/03, 10:30 a.m.
7/21/2003	MAAC	5:15 p.m.	Pennsylvania	Severe Storms	500-1000	185,000	7/24/03, 5:33 a.m.
7/28/2003	WECC	6:55 p.m.	Arizona	Breaker Closed	440	90,000	7/28/03, 8:35 p.m.

Table B.2. Major Disturbances and Unusual Occurrences, 2003
(Continued)

Date	NERC Region	Time	Area	Type of Disturbance	Loss (megawatts)	Number of Customers Affected ¹	Restoration Time
August							
8/14/2003	ECAR	Approximately 3:00 p.m.	Geographic areas for MISO	Unknown *	Approx. 18,500 MW, in MISO area: First Energy 7,500	NA	Approximately 8/17/03, 5:00 p.m.
8/14/2003	ECAR	4:09 p.m.	Southeastern Michigan including all of Detroit	Unknown *	11,000	2,100,000	8/16/03, 7:00 a.m.
8/14/2003	ECAR	4:09 p.m.	Southern Lower Michigan and small areas near Flint, Alma, Saginaw, and Lansing Michigan	Unknown *	1,007	101,000	8/16/03, 1:03 p.m.
8/14/2003	ECAR	4:10 p.m.	Northeast, Ohio	Unknown *	7,000	1,203,000	8/16/03, 8:27 p.m.
8/14/2003	NPCC	4:10 p.m.	Southwestern Connecticut and a small portion of Western Massachusetts and Vermont	Unknown *	2,500	NA	8/16/03, 3:45 a.m. Restoration ended; 8/17/03, 7:00 p.m., incident ended
8/14/2003	NPCC	4:10 p.m.	New York State	Unknown *	22,934	unknown	8/18/03, 12:03 a.m.

8/14/2003 NPCC	4:10 p.m.	New York- Buffalo to Albany; Ontario, Canada to Pennsylvania	Unknown *	NA		840,137	8/14/03, 11:48 p.m.
8/14/2003 MAAC	4:10 p.m.	Northern New Jersey Erie, Pennsylvania area	Unknown *	4,100 MW	NA		Approximately
8/14/2003 NPCC	4:11 p.m.	Entire Con Edison System (five boroughs of NYC and Westchester County)	Unknown *		11,202	3,125,350	8/15/03, 6:00 a.m. 8/15/03, 9:03 p.m.
8/26/2003 MAAC	4:00 p.m.	Maryland: Anne Arundel County, Baltimore County, Calvert County, Carroll County, Howard County, Montgomery County, Prince George's and Baltimore City.	Severe Thunderstorms			625 93,000 at peak 133,000 cumulative	8/29/03, 12:00 noon
8/26/2003 MAAC	4:22 p.m.	Washington, D.C., Montgomery County, Prince Georges County, Maryland	Severe Thunderstorms		1,500	153,000	8/31/03, 6:00 p.m.

September

9/7/2003 MAIN	5:19 a.m.	Upper Michigan Peninsula	Transmission Equipment			310 4 (industrial)	9/07/03, 6:00 p.m.
9/18/2003 SERC	8:20 a.m.	North Eastern North Carolina, Eastern Central, and Northern Virginia	Hurricane Isabel			6,512 1.8 million	9/29/03, 10:42 p.m.
9/18/2003 SERC	11:45 a.m.	Eastern North Carolina	Hurricane Isabel	peak 1655		peak 320,00 9/18/03 7:00 p.m.	9/18/03, 12:00 midnight

9/18/2003 MAAC	12:00 noon	Central Maryland (Baltimore City, Baltimore County, Anne Arundel County, Hartford County, Montgomery County, Calvert County, Prince George's County, Carroll County and Howard County)	Hurricane Isabel	2,000	650,000	9/26/03, 10:50 p.m.
9/18/2003 MAAC	2:00 p.m.	Maryland, West Virginia, Virginia and Pennsylvania	Hurricane Isabel	3,085	237,366	9/24/03, 12:00 midnight
9/18/2003 SERC	3:32 p.m.	Triangle and Tridadd (Greensboro – High Point) Areas North Carolina - Northern Region	Hurricane Isabel	500-700	Under 50,000	9/19/03, 5:00 p.m.

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(Continued)

Date	NERC Region	Time	Area	Type of Disturbance	Loss (megawatts)	Number of Customers Affected ¹	Restoration Time
9/18/2003 MAAC		4:20 p.m.	District of Columbia, Montgomery and Prince George's Counties, Maryland	Hurricane Isabel	NA	Over 530,000 peak on 9/19/03	9/28/03, 6:00 p.m.
9/18/2003 MAAC		9:00 p.m.	All PPL including: Williamsport, Harrisburg, Lancaster, Scranton and Allentown areas	Hurricane Isabel	1,300	425,000	9/21/03, 5:00 p.m.
October							
10/26/2003 WECC		1:44 a.m.	San Diego County, California	Wild Fire	N/A	108,000 (Dist. And Trans. Combined)	11/18/03, 10:54 a.m. (Trans. Only)
November							
11/5/2003 MAAC		3:16 p.m.	Maryland/Virginia border	Tornado	350	1	11/05/03, 3:54 p.m.
11/12/2003 ECAR		5:00 p.m.	Lower Michigan Peninsula	Wind Storm	75-90	245,000	11/16/03, 6:00 p.m.
11/12/2003 MAIN		5:00 p.m.	Northern Illinois	High Winds	Est. 371.1	51,000	11/12/03, 7:00 p.m.

11/12/2003 ECAR	6:00 p.m.	Southeastern Michigan	Storm with High Winds	Est. 75		160,000	11/16/03, 5:00 p.m.
11/13/2003 MAAC	6:00 a.m.	Central Maryland (Baltimore City, Baltimore County, Anne Arundel County, Harford County, Montgomery County, Calvert County, Prince George's County, Carroll County and Howard County)	High Winds		375	110,000	11/16/03, 4:00 p.m.
11/13/2003 NPCC	7:30 a.m.	New York	Storm with High Winds	Approx. 180		50,280	11/14/03, 6:30 a.m.
11/13/2003 MAAC	11:00 a.m.	Washington, D.C., Montgomery County, Prince Georges County, Md	Major Wind Storm	Est. 400		104,195 at 5:23 p.m. 11/13/03	11/14/03, 7:30 a.m.
11/13/2003 SERC	1:40 p.m.	Northern Virginia, Richmond area, Eastern Virginia	Wind Storm		300	67,000	11/13/03, 3:51 p.m.

December

12/1/2003 NPCC	6:16 p.m.	Cape Cod and part of SE Massachusetts	Wild Fire – Transmission Equipment		630	300,000	12/01/03, 8:11 p.m.
12/4/2003 WECC	7:00 a.m.	Eastern portions of King County and Pierce County	High Winds		175	200,000 (Peak)	12/08/03, 7:00 a.m.
12/4/2003 MAIN	10:34 p.m.	Northeast Wisconsin and Central/Western Upper Peninsula of Michigan	Fault on 138 KV line		650	6 (utilities)	12/07/03, 8:30 a.m.
12/4/2003 MAIN	10:15 p.m.	Upper Peninsula of Michigan and Northeastern Wisconsin	Fault on 138 KV line		500	36,000	12/08/03, 8:30 a.m.
12/5/2003 FRCC	4:49 a.m.	State of Florida - Dade County	Transmission Equipment		27	16,500	12/05/03, 6:25 a.m.
12/5/2003 MAIN	7:00 a.m.	Northeast Wisconsin and Central/Western Upper Peninsula of Michigan	Transmission Equipment		14	2	12/05/03, 8:00 p.m.
12/20/2003 WECC	3:51 p.m.	San Francisco, California	Cable Failure		150	120,000	12/21/03, 11:45 p.m.

12/22/2003 WECC	11:15 a.m.	Central California Coast	Earthquake	220	109,750	12/22/03, 11:16 a.m.
12/28/2003 WECC	9:00 p.m.	Northern California	Winter Storm	160	241,000	1/01/04, 11:30 a.m.

¹ = Estimated Values.

* Information as provided by the respondent. The occurrence is, however, associated with the massive blackout of August 14, 2003. For further information, refer to the Interim Report: Causes of the August 14 Blackout in the United States and Canada, November 2003 at <http://www.energy.gov/engine/content.do>.

Note: North American Electric Reliability Council region acronyms are defined in the glossary.

Source: Form EIA-417, "Electric Emergency Incident and Disturbance Report."