

The United Illuminating Company Five Year Outage by Cause Summary 2004 – 2008 - Customer Interruptions

Causes	2008 Totals		2007 Totals		2006 Totals		2005 Totals		2004 Totals	
	Number of Interrupts	Number of Customers Interrupted	Number of Interrupts	Number of Customers Interrupted	Number of Interrupts	Number of Customers Interrupted	Number of Interrupts	Number of Customers Interrupted	Number of Interrupts	Number of Customers Interrupted
Transmission Related										
Power Supply	0	0	0	0	0	0	0	0	0	0
EQP Fail TRANS	0	0	0	0	0	0	0	0	0	0
Distribution Related										
Planned	166	6,222	18	497	34	11,756	17	3,355	16	2,825
Animal/Bird	467	11,243	458	28,924	453	26,830	216	19,259	213	20,607
Customer Caused	26	1,386	19	260	13	2,224	35	11,223	18	5,536
Employee Error	11	7,079	8	28,271	12	4,169	5	6,298	9	8,890
Foreign Object	5	2,563	7	81	4	1,538	4	1,019	7	2,039
Lighting	108	24,413	53	20,885	42	8,801	43	32,413	43	15,397
Other	26	13,463	18	1,438	13	1,252	21	7,079	11	1,496
Overload	22	1,172	28	695	44	678	117	2,173	32	608
Tree Related	356	58,471	276	43,476	342	41,580	349	45,680	251	24,337
Vehicle Accident	82	18,192	61	18,751	58	17,205	62	11,251	66	14,307
EQP Fail OH Sys	252	76,421	208	51,673	241	67,992	237	78,981	236	82,365
EQP Fail DB Sys	21	2,687	15	2,518	19	1,327	19	408	12	2,342
EQP Fail XFMR	74	1,506	74	1,926	76	2,421	93	2,323	102	5,771
EQP Fail UG Sys	19	14,129	13	12,781	11	9,488	17	10,939	22	12,322
EQP Fail SUB	0	0	0	0	2	8,911	0	0	0	0
EQP Fail TRANS	0	0	0	0	0	0	0	0	0	0
Unknown	69	5,277	71	9,497	72	7,592	44	7,674	35	2,402
Major Storm	264	92,871	34	3,468	691	123,531	210	43,988	46	9,558
System Totals	1,968	337,095	1,361	225,141	2,127	337,295	1,489	284,063	1,119	210,802
Average Number of Customers Served	320,770		319,649		318,187		316,993		314,537	

Source: Appendix 1 of the Company's report, "The Reliability and Performance of The United Illuminating Company's Transmission and Distribution System for 2008" dated March 31, 2009, filed in the Department of Public Utility Control Docket 86-12-03.

The United Illuminating Company Five Year Outage by Cause Summary 2004 – 2008 – Customer Minutes Interrupted

Causes	2008 Totals		2007 Totals		2006 Totals		2005 Totals		2004 Totals	
	Number of Interrupts	Customer Minutes Interrupted	Number of Interrupts	Customer Minutes Interrupted	Number of Interrupts	Customer Minutes Interrupted	Number of Interrupts	Customer Minutes Interrupted	Number of Interrupts	Customer Minutes Interrupted
Transmission Related										
Power Supply	0	0	0	0	0	0	0	0	0	0
EQP Fail TRANS	0	0	0	0	0	0	0	0	0	0
Distribution Related										
Planned	166	494,164	18	76,993	34	1,116,404	17	396,947	16	337,934
Animal/Bird	467	821,762	458	2,897,327	453	1,728,437	216	1,403,268	213	1,685,686
Customer Caused	26	91,452	19	23,365	13	309,804	35	836,137	18	474,315
Employee Error	11	753,202	8	488,059	12	323,976	5	649,680	9	512,403
Foreign Object	5	112,390	7	4,298	4	92,034	4	68,293	7	137,948
Lightning	108	3,619,452	53	2,766,678	42	1,044,217	43	3,355,365	43	2,071,747
Other	26	606,275	18	77,152	13	110,957	21	320,023	11	172,525
Overload	22	125,499	28	72,857	44	88,150	117	254,786	32	65,368
Tree Related	356	6,649,393	276	6,132,050	342	4,043,057	349	5,888,447	251	2,756,677
Vehicle Accident	82	2,517,657	61	2,124,131	58	1,958,782	62	1,095,876	66	1,701,190
EQP Fail OH Sys	252	5,428,419	208	4,647,910	241	5,394,226	237	5,864,386	236	8,108,765
EQP Fail DB Sys	21	728,276	15	368,957	19	345,938	19	146,827	12	237,843
EQP Fail XFMR	74	276,944	74	341,144	76	300,577	93	466,581	102	672,283
EQP Fail UG Sys	19	1,061,514	13	888,318	11	563,514	17	448,083	22	970,381
EQP Fail STUB	0	0	0	0	2	190,396	0	0	0	0
Unknown	69	555,443	71	1,082,839	72	854,239	44	956,243	35	299,618
Major Storm	264	22,538,506	34	1,326,960	691	38,008,286	210	9,359,902	46	3,052,623
System Totals	1,968	46,380,348	1,361	23,319,038	2,127	56,472,994	1,489	31,510,844	1,119	23,257,306
Average Number of Customers Served	320,770		319,649		318,187		316,993		314,537	

Source: *Appendix I of the Company's report, "The Reliability and Performance of The United Illuminating Company's Transmission and Distribution System for 2008"* dated March 31, 2009, filed in the Department of Public Utility Control Docket 86-12-03.

Docket No. 346
The United Illuminating Company
Late Filed Exhibit 1

The table below defines the causes of outages in the tables above:

Common Title	Definition
A. Forced Transmission and Power Supply	
Power supply	Outages caused by the operation of the system in conjunction with other companies such as ISO-NE imposed load shedding or loss of an external transmission line supplying the company.
B. Scheduled or Pre-Arranged Outages	
Planned	Intentionally de-energizing facilities serving customers for the purpose of apparatus change out, conversion, maintenance, relocation/extension, permanent repair, or customer request.
C. Major Storm-Related Outages	
Storm	In March 1995, the DPUC approved a new major storm definition, which is based on a statistical analysis of the most recent four calendar years of reliability data. Under the new definition, a major storm will be declared when the number of restoration steps exceeds the 98.5 percentile of all days in the most recent four years. All reliability data associated with interruptions beginning on that qualifying day would be excluded, even if the interruptions extend into subsequent days.
D. Customer-Caused Outages	
Customer owned	Any interruption caused by customer-owned equipment failure or customer operation.
E. All Other Outages: Transmission and Distribution	
Animals/birds	Any interruption caused by animals or birds contacting energized facilities.
Lightning	Any interruption caused by lightning affecting energized facilities.
Overload	Any interruption caused by an electrical overload.
Tree-related	Any interruption caused by vegetation contacting energized facilities, other than customer or employee felled trees.
Vehicle accident	Any interruption caused by a vehicle contacting a structure, guy, or enclosure.
Contact with foreign objects	Any interruption caused by unintentional contact with energized facilities brought about by human error. Examples would be ladders, kites, metallic balloons, customer-felled trees, dig-ins, boats, antennas, cranes, and human contact.
Employee operating error	Any interruption caused by an inadvertent operating error by an employee or contractor working for the Company, including employee felled trees.
Other	Any interruption for which the cause is known but not covered above such as fire, flood, vandalism, or intentional de-energizing to protect crew/public.
Equipment Failure: OH Conductor/Cable System	Any interruption caused by the failure of a component of the OH Conductor/Cable System.
Equipment Failure: UG Cable System	Any interruption caused by the failure of a component of the UG Cable System (excludes the Direct Buried Cable System).
Equipment Failure: Direct Buried Cable System	Any interruption caused by the failure of a component of the Direct Buried Cable System.

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Common Title	Definition
Equipment Failure: Transformers	Any interruption caused by the failure of a distribution transformer.
Equipment Failure: Other	Any interruption caused by the failure of a component of the distribution system not covered above.
Equipment Failure: Transmission	Any interruption caused by the failure of a component of the Company's transmission system.
Equipment Failure: Substation	Any interruption caused by the failure of a component of the substation (bulk and distribution) facilities.
Unknown	Any interruption caused by unknown source. For example, if a substation circuit-breaker opens and after patrolling the line no cause is found and the circuit breaker is successfully reclosed, the interruption cause would be classified unknown.

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