

An Exelon Company

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May 31, 2018

VIA FEDERAL EXPRESS and ELECTRONIC MAIL aida.camacho@bpu.nj.gov board.secretary@bpu.nj.gov

Aida Camacho-Welch Secretary of the Board Board of Public Utilities 44 South Clinton Avenue, 3rd Floor, Suite 314 P.O. Box 350 Trenton, New Jersey 08625-0350

RE: Atlantic City Electric Company's Annual System Performance Report for 2017

Dear Secretary Camacho-Welch:

The undersigned is Assistant General Counsel for Atlantic City Electric Company ("ACE" or the "Company"). Attached in accordance with N.J.A.C. 14:5-8.8 and BPU Docket Nos. ER09080664 and EM14060581 are an original and ten conformed copies of the Company's 2017 Annual System Performance Report (the "Annual Report").

Along with the Annual Report, ACE has also included a document titled "Atlantic City Electric Company Vegetation Management Program." This document is contemplated by, and provided pursuant to, N.J.A.C. 14:5-8.8 (c) and N.J.A.C. 14:5-9.7.

Kindly stamp one copy of this filing letter as "filed," including the time and date thereof, and return it to the undersigned in the enclosed self-addressed, postage prepaid envelope.

Aida Camacho-Welch May 31, 2018 Page 2

Thank you for your cooperation and courtesies. Feel free to contact the undersigned with any questions.

Respactfully submitted,

Philip J. Passanante
An Attorney at Law of the
State of New Jersey

Enclosure

cc: Stacy Peterson, Director, Division of Energy, BPU

James P. Giuliano, Director, Division of Reliability and Security, BPU

Stefanie A. Brand, Esquire, Director, Division of Rate Counsel

Ami Morita, Deputy Rate Counsel, Division of Rate Counsel

Kevin M. McGowan (electronic mail)

Susan Coan (electronic mail)

Roger E. Pedersen (electronic mail)

Bryan L. Clark (electronic mail)

Gregory Brubaker (electronic mail)

William M. Ruggeri (electronic mail)

Paul Weaver (electronic mail)

Matthew Mansfield (electronic mail)

Jennifer Grisham (electronic mail)

Ethan Holmes (electronic mail)



May 31, 2018

VIA FEDERAL EXPRESS and ELECTRONIC MAIL

aida.camacho@bpu.nj.gov board.secretary@bpu.nj.gov

Aida Camacho-Welch Secretary of the Board State of New Jersey Board of Public Utilities 44 South Clinton Avenue, 3rd Floor, Suite 314 P.O. Box 350 Trenton, New Jersey 08625-0350

RE: In the Matter of N.J.A.C. 14:5-8.7 Electric Distribution Service Reliability and Quality Standards
BPU Docket No. EX07070511

Atlantic City Electric Company's Annual System Performance Report for 2017

Dear Secretary Camacho-Welch:

In compliance with requirements of the New Jersey Electric Distribution Service Reliability and Quality Standards, enclosed for filing are an original and ten (10) copies of the Atlantic City Electric Company's Annual System Performance Report ("Report") for the year 2017. A copy of the Report is also being submitted to Rate Counsel.

The report is prepared in accordance with N.J.A.C. 14:5-8.7 of the Electric Distribution Service Reliability and Quality Standards. Required supplemental reporting metrics and ACE's 2017 Reliability Improvement Plan progress report are provided in Appendices 1 and 2 respectively. These requirements are in accordance with the Stipulation Agreements for BPU Docket Nos. ER09080664 and EM14060581.

Aida Camacho-Welch May 31, 2018 Page 2

If you have any questions regarding to the report, please do not hesitate to contact me. I can be reached at (202) 872-3055.

A copy of this cover letter is enclosed. Please arrange to have the copy of this cover letter marked "Filed" and returned in the enclosed envelope. Thank you for your attention to this matter.

Sincerely,

Miguel Ortega

- Aligned of Theyse

Vice President, Technical Services

Enclosure

cc: Stacy Peterson, Director, Division of Energy, BPU

Jim Giuliano, Director, Division of Reliability and Security, BPU

Stefanie A. Brand, Director, Division of Rate Counsel

Miguel Ortega

Kevin McGowan

Philip J. Passanante

Roger E. Pedersen

Bryan Clark

Gregory Brubaker

William M. Ruggeri

Paul Weaver

Matthew Heffner

ANNUAL SYSTEM PERFORMANCE REPORT For Atlantic City Electric Company Year 2017

The report is consistent with previous filings of the Atlantic City Electric Company's Annual System Performance Report and the tab labeling convention is consistent with the recodifications and amendments for N.J.A.C. 14:5-8.8 (Annual System Performance Report), effective July 22, 2015.

Prepared for New Jersey Board of Public Utilities

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CERTIFICATION

Miguel Ortega, an officer of Atlantic City Electric Company ("ACE" or "the Company"), does hereby certify to the Board of Public Utilities ("BPU") that the data and analysis set forth in the attached Annual System Performance Report of the Atlantic City Electric Company is true and correct based upon the collection and analysis of the data by authorized employees and representatives of the Company. I further certify that the necessary maintenance programs and actions, including inspections, data collection and analysis, are being performed and adequately funded by the Company and addressed in the capital and operations and maintenance budgets and plans to help achieve benchmark reliability levels and, at a minimum, to maintain the minimum reliability levels, as those terms are defined in the Electric Service Rules, N.J.A.C. 14:5, for each operating district of the Atlantic City Electric Company. This certification is based upon my review of the data and analysis contained herein and my overall knowledge of the operations and practices of the Atlantic City Electric Company.

Miguel Ortega

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Vice President, Technical Services

B1. B2. Minimum Reliability Level

The minimum reliability levels for the Company's New Jersey Districts are listed below. Calculations of Minimum Reliability Levels are included in Section B6 of this Report. The following are the minimum performance levels for ACE and its four operating areas based on their 2010-2014 performance plus the allowable 1.5 standard deviations. In addition, actual 2017 performances at four operating areas as well as ACE as a whole are shown also.

SAIFI Components

Areas	Minimum Performance Level	2017 Actual Performance	Status
Atlantic Overall	1.82	0.86	Met
Cape May	1.26	0.68	Met
Glassboro	2.36	1.15	Met
Pleasantville	1.88	0.60	Met
Winslow	1.79	1.02	Met

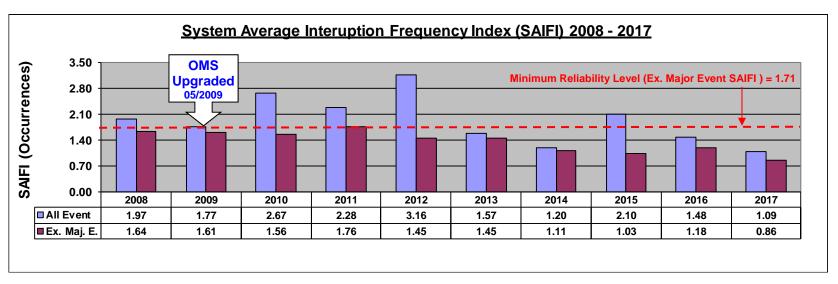
CAIDI Components

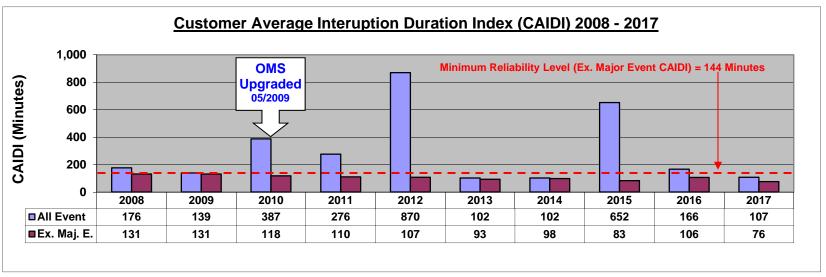
Areas	Minimum Performance Level	2017 Actual Performance	Status
Atlantic Overall	120 minutes	76 minutes	Met
Cape May	135 minutes	83 minutes	Met
Glassboro	156 minutes	70 minutes	Met
Pleasantville	99 minutes	73 minutes	Met
Winslow	116 minutes	83 minutes	Met

B3. – B6. System Performance and '	Ten Y	ears of	Trends	of CAIDI	and SAIFI
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ATLANTIC CITY ELECTRIC - ALL DISTRICTS

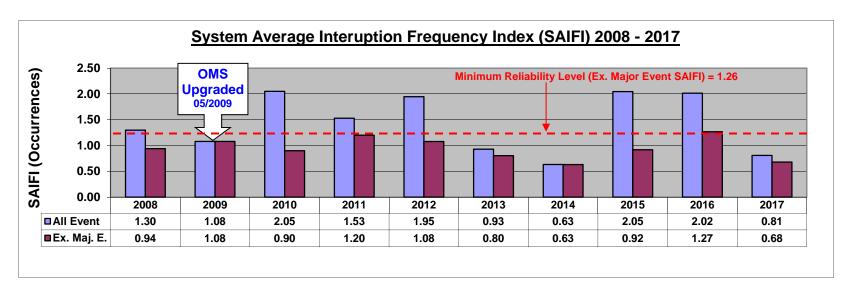
Major Reliability Indices (All Event and Major Event Exclusive)

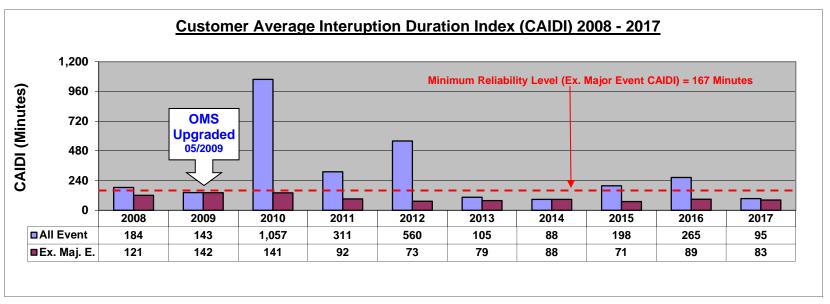




CAPE MAY DISTRICT

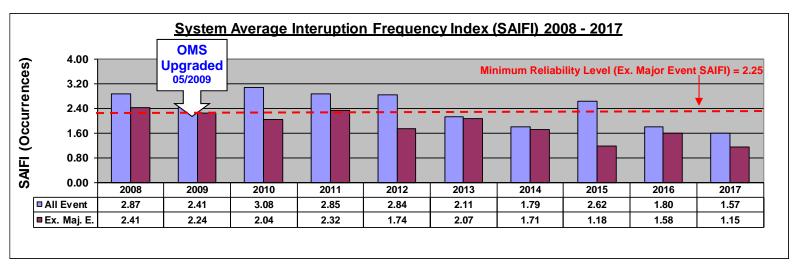
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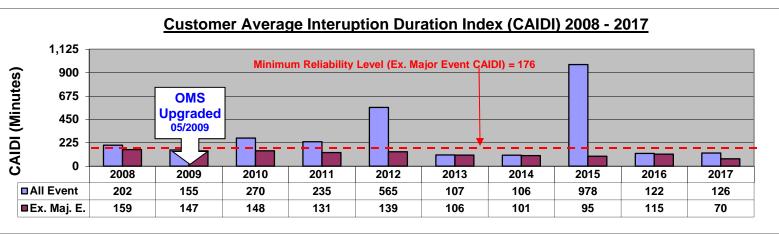




GLASSBORO DISTRICT

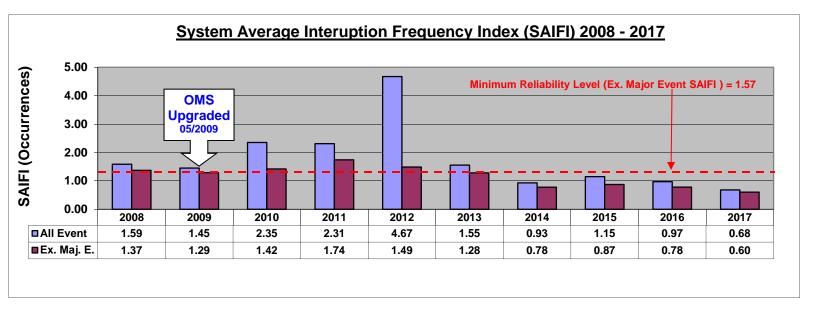
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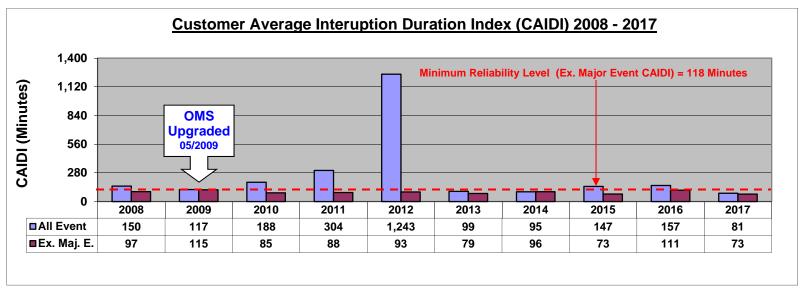




PLEASANTVILLE DISTRICT

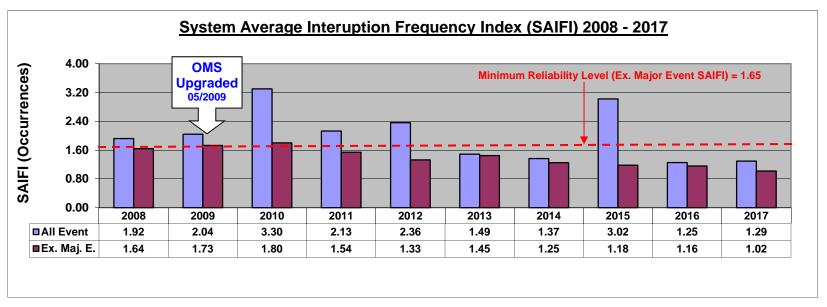
Major Reliability Indices (All Event and Major Event Exclusive)

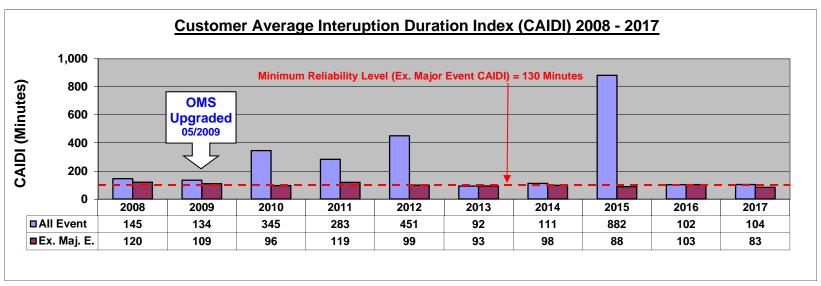




WINSLOW DISTRICT

Major Reliability Indices (All Event and Major Event Exclusive)

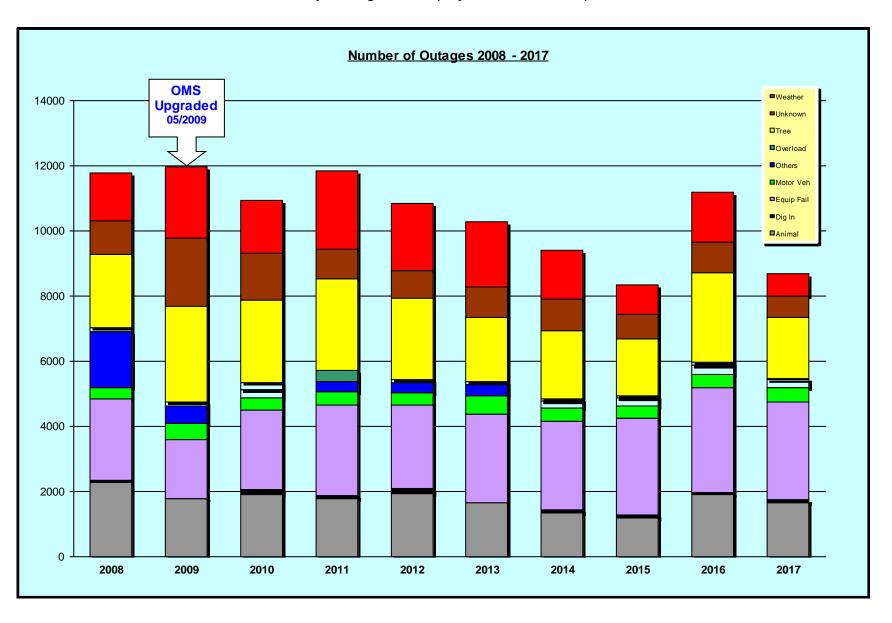




B7. Ten Years of Trends for Major Causes of Interruptions

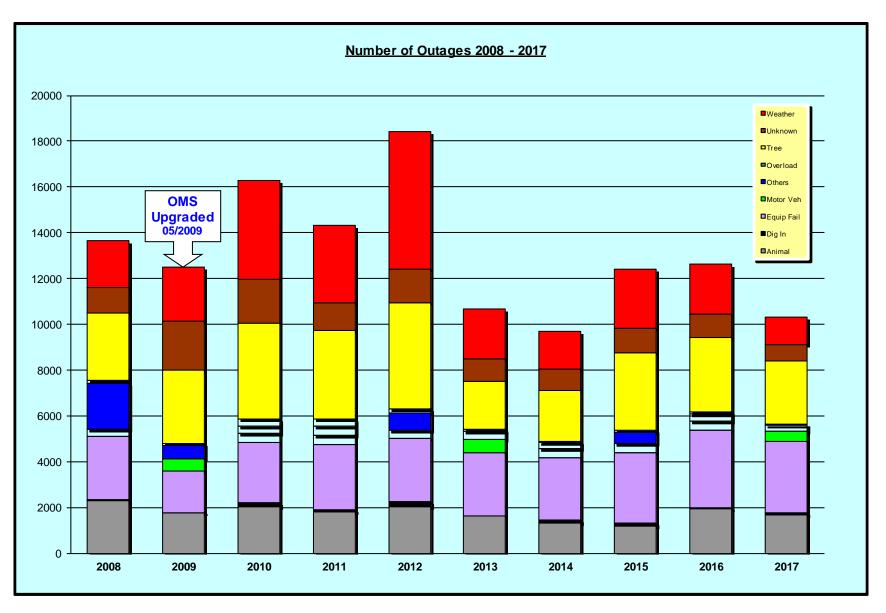
ATLANTIC CITY ELECTRIC - ALL DISTRICTS

Major Outage Causes (Major Events Excluded)



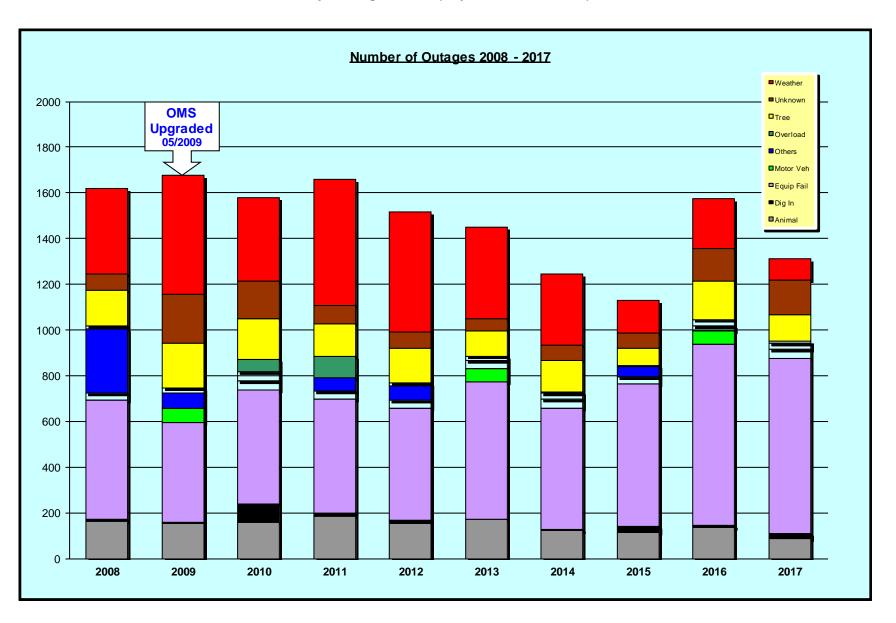
ATLANTIC CITY ELECTRIC - ALL DISTRICTS

Major Outage Causes (Major Events Included)



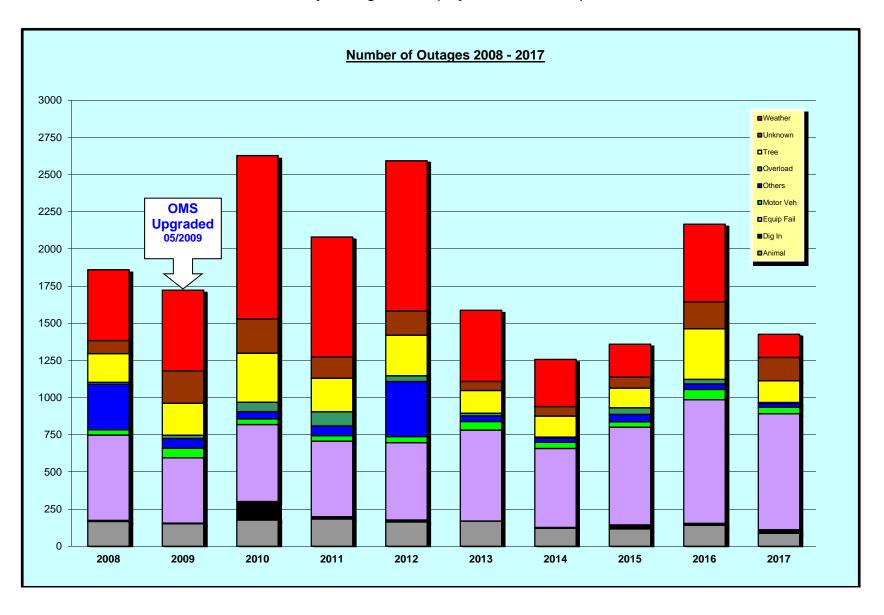
ATLANTIC CITY ELECTRIC - CAPE MAY DISTRICT

Major Outage Causes (Major Events Excluded)



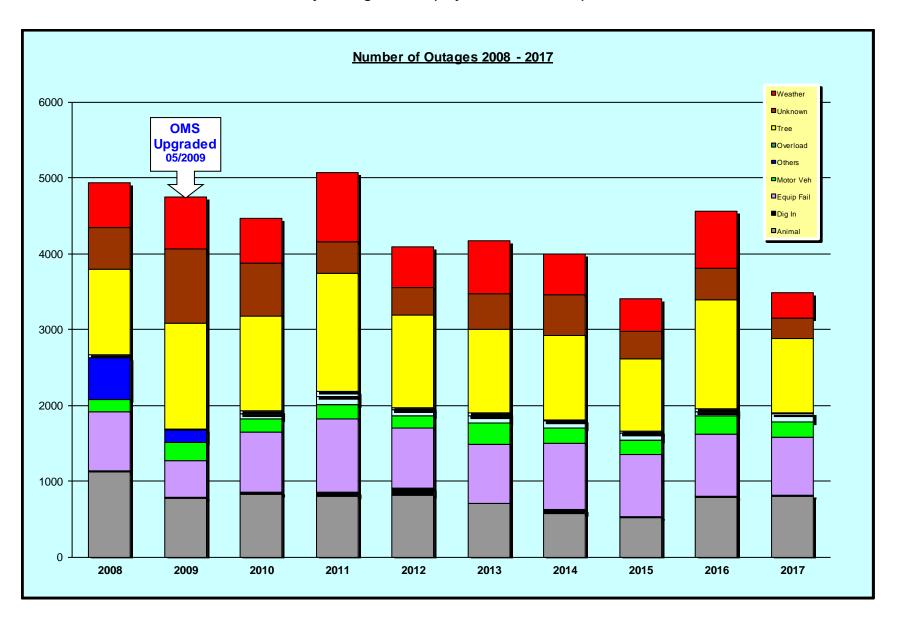
ATLANTIC CITY ELECTRIC - CAPE MAY DISTRICT

Major Outage Causes (Major Events Included)



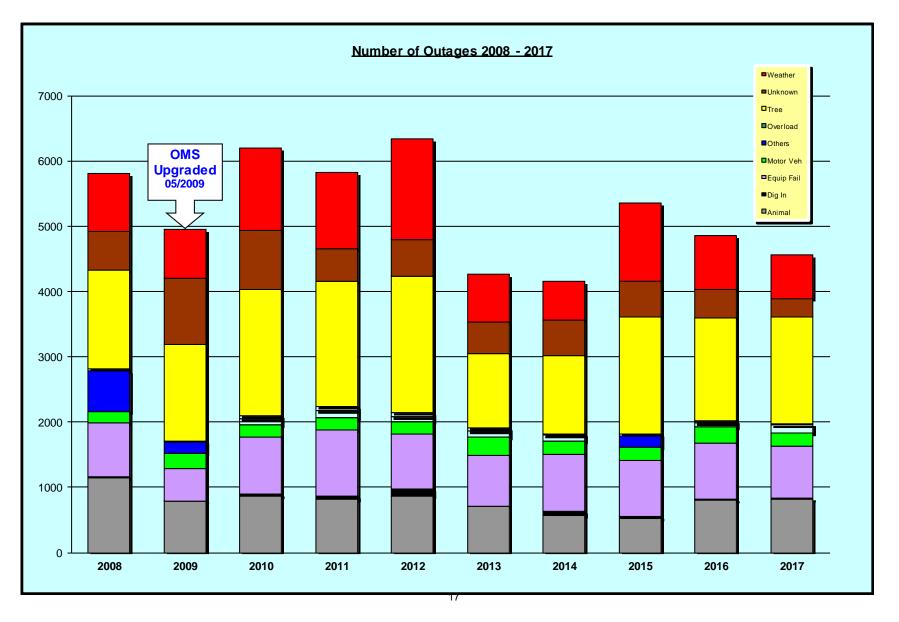
ATLANTIC CITY ELECTRIC - GLASSBORO DISTRICT

Major Outage Causes (Major Events Excluded)



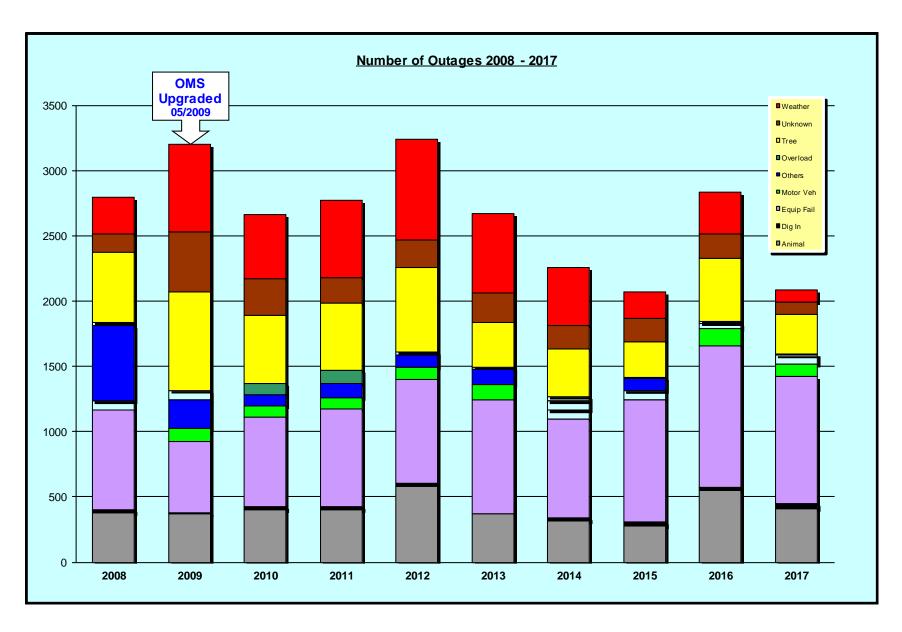
ATLANTIC CITY ELECTRIC - GLASSBORO DISTRICT

Major Outage Causes (Major Events Included)



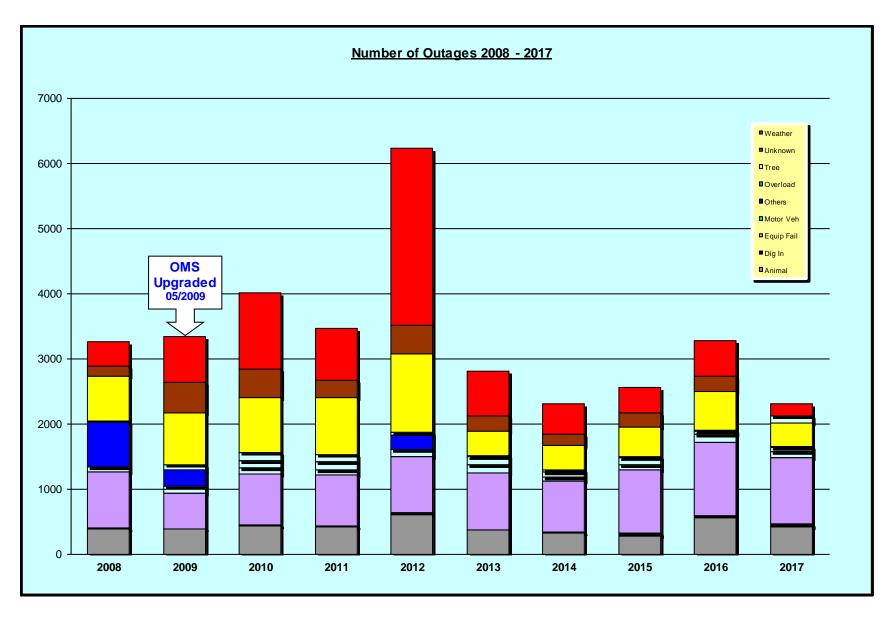
ATLANTIC CITY ELECTRIC - PLEASANTVILLE DISTRICT

Major Outage Causes (Major Events Excluded)



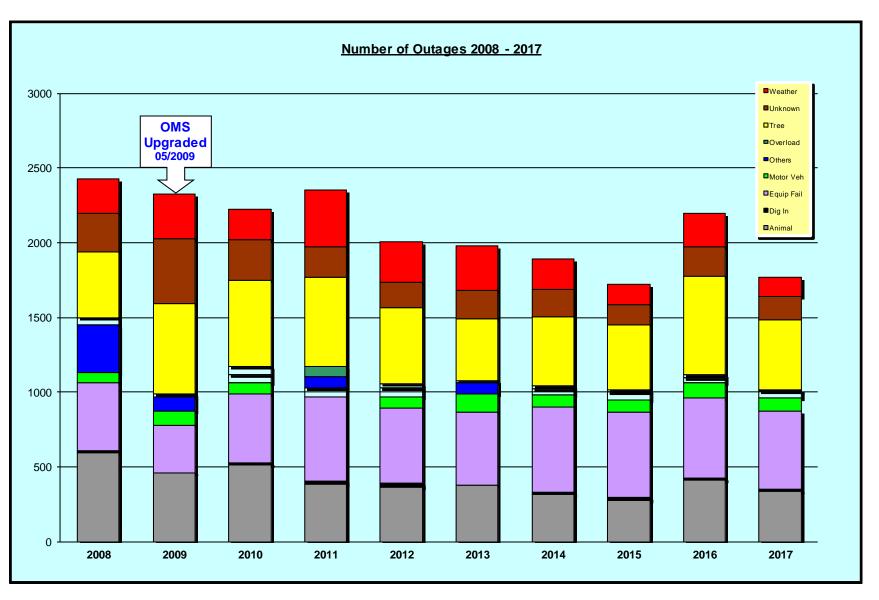
ATLANTIC CITY ELECTRIC - PLEASANTVILLE DISTRICT

Major Outage Causes (Major Events Included)



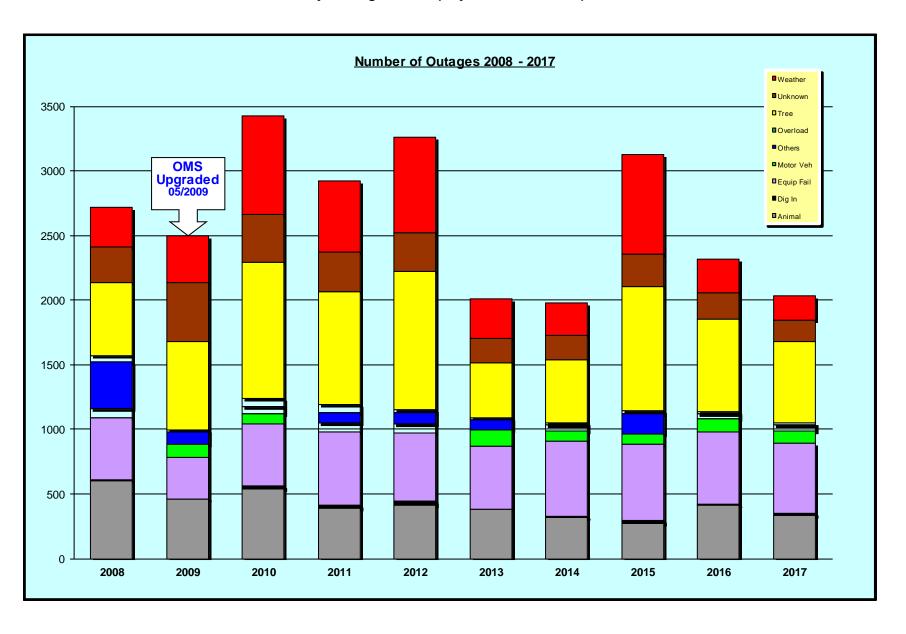
ATLANTIC CITY ELECTRIC - WINSLOW DISTRICT

Major Outage Causes (Major Events Excluded)



ATLANTIC CITY ELECTRIC - WINSLOW DISTRICT

Major Outage Causes (Major Events Included)



New Jersey (Atlantic Region) Major Outage Cause Summary - 2017

Customer Count: 532,881

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1,656	16.0%	3	60,643	10.5%	5	3,715,586	6.0%	5	0.11	61	7
L	Dig In	103	1.0%	8	940	0.2%	9	151,946	0.2%	9	0.00	162	0
L	Equipment Failure	3,127	30.3%	1	135,775	23.5%	2	10,570,125	17.0%	3	0.25	78	20
	Equipment Hit	434	4.2%	6	74,934	12.9%	3	5,725,538	9.2%	4	0.14	76	11
E	Other*	266	2.6%	7	43,139	7.5%	6	2,891,441	4.6%	6	0.08	67	5
V	Overload	50	0.5%	9	4,441	0.8%	8	251,303	0.4%	8	0.01	57	0
E	Tree	2,774	26.9%	2	162,119	28.0%	1	24,178,901	38.9%	1	0.30	149	45
N	Unknown	714	6.9%	5	22,773	3.9%	7	1,913,965	3.1%	7	0.04	84	4
Т	Weather	1,198	11.6%	4	74,013	12.8%	4	12,784,111	20.6%	2	0.14	173	24
s	Sum	10,322	100.0%		578,777	100.0%		62,182,916	100.0%		1.09	107	117
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	1,627	18.8%	3	60,326	13.2%	4	3,697,184	10.7%	5	0.11	61	7
Α	Dig In	101	1.2%	8	924	0.2%	9	150,048	0.4%	9	0.00	162	0
J	Equipment Failure	3,017	34.8%	1	129,658	28.3%	1	9,646,496	27.8%	1	0.24	74	18
	Equipment Hit	424	4.9%	6	73,777	16.1%	3	5,611,700	16.2%	3	0.14	76	11
E	Other*	244	2.8%	7	34,195	7.5%	6	2,294,008	6.6%	6	0.06	67	4
V	Overload	44	0.5%	9	4,423	1.0%	8	242,594	0.7%	8	0.01	55	0
	Tree	1,873	21.6%	2	90,257	19.7%	2	7,641,247	22.0%	2	0.17	85	14
E	Unknown	670	7.7%	4	18,272	4.0%	7	1,291,241	3.7%	7	0.03	71	2
Х	Weather	658	7.6%	5	46,001	10.0%	5	4,079,898	11.8%	4	0.09	89	8
С	Sum	8,658	100.0%		457,833	100.0%		34,654,415	100.0%		0.86	76	65
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	29	1.7%	5	317	0.3%	7	18,403	0.1%	7	0.00	58	0
J	Dig In	2	0.1%	9	16	0.0%	9	1,898	0.0%	9	0.00	119	0
	Equipment Failure	110	6.6%	3	6,117	5.1%	4	923,628	3.4%	3	0.01	151	2
E	Equipment Hit	10	0.6%	7	1,157	1.0%	6	113,838	0.4%	6	0.00	98	0
V	Other*	22	1.3%	6	8,944	7.4%	3	597,433	2.2%	5	0.02	67	1
	Overload	6	0.4%	8	18	0.0%	8	8,709	0.0%	8	0.00	484	0
0	Tree	901	54.1%	1	71,862	59.4%	1	16,537,654	60.1%	1	0.13	230	31
N	Unknown	44	2.6%	4	4,501	3.7%	5	622,724	2.3%	4	0.01	138	1
L	Weather	540	32.5%	2	28,012	23.2%	2	8,704,213	31.6%	2	0.05	311	16
Υ	Sum	1,664	100.0%		120,944	100.0%		27,528,501	100.0%		0.23	228	52

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Cape May District
Major Outage Cause Summary - 2017 **Customer Count: 110,061**

					, ,								
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	88	6.2%	5	9,363	10.5%	5	1,239,459	14.7%	3	0.09	132	11
L	Dig In	23	1.6%	8	109	0.1%	8	21,446	0.3%	8	0.00	197	0
L	Equipment Failure	781	54.8%	1	32,215	36.2%	1	2,292,355	27.2%	2	0.29	71	21
	Equipment Hit	43	3.0%	6	13,402	15.1%	4	947,358	11.2%	5	0.12	71	9
E	Other*	25	1.8%	7	2,813	3.2%	6	207,167	2.5%	6	0.03	74	2
٧	Overload	7	0.5%	9	33	0.0%	9	5,870	0.1%	9	0.00	178	0
E	Tree	146	10.2%	4	13,706	15.4%	3	1,236,769	14.7%	4	0.12	90	11
N	Unknown	157	11.0%	2	2,048	2.3%	7	145,776	1.7%	7	0.02	71	1
Т	Weather	156	10.9%	3	15,218	17.1%	2	2,325,305	27.6%	1	0.14	153	21
S	Sum	1,426	100.0%		88,907	100.0%		8,421,505	100.0%		0.81	95	77

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	86	6.5%	5	9,361	12.5%	3	1,239,272	20.0%	2	0.09	132	11
Α	Dig In	23	1.8%	8	109	0.1%	8	21,446	0.3%	8	0.00	197	0
J	Equipment Failure	765	58.2%	1	30,350	40.6%	1	2,054,459	33.2%	1	0.28	68	19
	Equipment Hit	43	3.3%	6	13,402	17.9%	2	947,358	15.3%	3	0.12	71	9
E	Other*	25	1.9%	7	2,813	3.8%	6	207,167	3.3%	6	0.03	74	2
V	Overload	7	0.5%	9	33	0.0%	9	5,870	0.1%	9	0.00	178	0
	Tree	117	8.9%	3	8,878	11.9%	4	836,672	13.5%	4	0.08	94	8
E	Unknown	154	11.7%	2	1,831	2.4%	7	126,014	2.0%	7	0.02	69	1
Х	Weather	94	7.2%	4	8,035	10.7%	5	747,422	12.1%	5	0.07	93	7
С	Sum	1,314	100.0%		74,812	100.0%		6,185,678	100.0%		0.68	83	56

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	2	1.8%	5	2	0.0%	5	188	0.0%	5	0.00	94	0
J	Dig In	N/A	0.0%	6	N/A	0.0%	6	N/A	0.0%	6	0.00	N/A	N/A
	Equipment Failure	16	14.3%	3	1,865	13.2%	3	237,896	10.6%	3	0.02	128	2
E	Equipment Hit	N/A	0.0%	6	N/A	0.0%	6	N/A	0.0%	6	0.00	N/A	N/A
V	Other*	N/A	0.0%	6	N/A	0.0%	6	N/A	0.0%	6	0.00	N/A	N/A
	Overload	N/A	0.0%	6	N/A	0.0%	6	N/A	0.0%	6	0.00	N/A	N/A
0	Tree	29	25.9%	2	4,828	34.3%	2	400,097	17.9%	2	0.04	83	4
N	Unknown	3	2.7%	4	217	1.5%	4	19,763	0.9%	4	0.00	91.07	0
L	Weather	62	55.4%	1	7,183	51.0%	1	1,577,883	70.6%	1	0.07	219.67	14
Υ	Sum	112	100.0%		14,095	100.0%		2,235,827	100.0%		0.13	158.63	20

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Glassboro District

Customer Count: 157,305 Major Outage Cause Summary – 2017

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	813	17.8%	2	27,338	11.0%	4	1,314,988	4.2%	5	0.17	48	8
L	Dig In	19	0.4%	8	129	0.1%	9	17,233	0.1%	9	0.00	134	0
L	Equipment Failure	794	17.4%	3	43,104	17.3%	2	3,160,460	10.1%	3	0.27	73	20
	Equipment Hit	205	4.5%	6	23,112	9.3%	5	1,889,298	6.0%	4	0.15	82	12
E	Other*	120	2.6%	7	10,350	4.2%	7	911,625	2.9%	7	0.07	88	6
V	Overload	17	0.4%	9	3,362	1.4%	8	178,218	0.6%	8	0.02	53	1
E	Tree	1,640	36.0%	1	96,404	38.7%	1	16,346,484	52.1%	1	0.61	170	104
N	Unknown	288	6.3%	5	14,935	6.0%	6	1,270,518	4.0%	6	0.09	85	8
Т	Weather	663	14.5%	4	30,158	12.1%	3	6,309,189	20.1%	2	0.19	209	40
s	Sum	4,559	100.0%		248,892	100.0%		31,398,012	100.0%		1.58	126	200

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	799	22.9%	2	27,115	14.9%	3	1,302,912	10.2%	5	0.17	48	8
Α	Dig In	18	0.5%	8	121	0.1%	9	15,782	0.1%	9	0.00	130	0
J	Equipment Failure	760	21.8%	3	41,938	23.0%	2	2,681,554	20.9%	2	0.27	64	17
	Equipment Hit	198	5.7%	6	21,994	12.1%	4	1,787,487	14.0%	3	0.14	81	11
E	Other*	107	3.1%	7	9,981	5.5%	7	746,734	5.8%	6	0.06	75	5
٧	Overload	14	0.4%	9	3,347	1.8%	8	170,552	1.3%	8	0.02	51	1
	Tree	983	28.2%	1	48,855	26.8%	1	3,963,019	30.9%	1	0.31	81	25
E	Unknown	264	7.6%	5	10,713	5.9%	6	682,099	5.3%	7	0.07	64	4
Х	Weather	345	9.9%	4	18,184	10.0%	5	1,459,449	11.4%	4	0.12	80	9
С	Sum	3,488	100.0%		182,248	100.0%		12,809,587	100.0%		1.16	70	81

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	14	1.3%	5	223	0.3%	7	12,076	0.1%	7	0.00	54	0
J	Dig In	1	0.1%	9	8	0.0%	9	1,451	0.0%	9	0.00	181	0
	Equipment Failure	34	3.2%	3	1,166	1.7%	4	478,907	2.6%	4	0.01	411	3
Е	Equipment Hit	7	0.7%	7	1,118	1.7%	5	101,811	0.5%	6	0.01	91	1
٧	Other*	13	1.2%	6	369	0.6%	6	164,891	0.9%	5	0.00	447	1
	Overload	3	0.3%	8	15	0.0%	8	7,666	0.0%	8	0.00	511	0
0	Tree	657	61.3%	1	47,549	71.3%	1	12,383,465	66.6%	1	0.30	260	79
N	Unknown	24	2.2%	4	4,222	6.3%	3	588,419	3.2%	3	0.03	139.37	4
L	Weather	318	29.7%	2	11,974	18.0%	2	4,849,740	26.1%	2	0.08	405.02	31
Υ	Sum	1,071	100.0%		66,644	100.0%		18,588,425	100.0%		0.42	278.92	118

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Pleasantville District

Customer Count: 169,916 Major Outage Cause Summary - 2017

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Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Animal	418	18.2%	2	18,888	16.3%	2	886,648	9.4%	5	0.11	47	5
Dig In	45	2.0%	8	527	0.5%	8	84,499	0.9%	8	0.00	160	0
Equipment Failure	1,012	44.0%	1	37,564	32.4%	1	3,095,992	32.9%	1	0.22	82	18
Equipment Hit	94	4.1%	6	18,753	16.2%	3	1,419,314	15.1%	4	0.11	76	8
Other*	70		7	10,096	8.7%	6	818,908	8.7%	6	0.06	81	5
Overload	13		9	215	0.2%	9	18,588	0.2%	9	0.00	86	0
Tree	360	15.7%	3	12,812	11.1%	5	1,419,457	15.1%	3	0.08	111	8
Unknown	100	1.6%	5	2,513	2.2%	7	194,221	2.1%	7	0.01	77	1
Weather	188		4	14,446	12.5%	4	1,466,242	15.6%	2	0.09	101	9
Sum				115,814	100.0%		9,403,869	100.0%		0.68	81	55
	Animal Dig In Equipment Failure Equipment Hit Other* Overload Tree Unknown Weather	Animal 418 Dig In 45 Equipment Failure 1,012 Equipment Hit 94 Other* 70 Overload 13 Tree 360 Unknown 100 Weather 188 Sum 2,300	Animal 418 18.2% Dig In 45 2.0% Equipment Failure 1,012 44.0% Equipment Hit 94 4.1% Other* 70 0 Overload 13 15.7% Unknown 100 0.6% Weather 188	Animal 418 18.2% 2 Dig In 45 2.0% 8 Equipment Failure 1,012 44.0% 1 Equipment Hit 94 4.1% 6 Other* 70 7 Overload 13 9 Tree 360 15.7% 3 Unknown 100 5 Weather 188 4 Sum 2,300 100.0%	Animal 418 18.2% 2 18,888 Dig In 45 2.0% 8 527 Equipment Failure 1,012 44.0% 1 37,564 Equipment Hit 94 4.1% 6 18,753 Other* 70 7 10,096 Overload 13 9 215 Tree 360 15.7% 3 12,812 Unknown 100 5 2,513 Weather 188 4 14,446 Sum 2,300 100.0% 115,814	Cause Events Pct Rank Cust Out Pct Animal 418 18.2% 2 18,888 16.3% Dig In 45 2.0% 8 527 0.5% Equipment Failure 1,012 44.0% 1 37,564 32.4% Equipment Hit 94 4.1% 6 18,753 16.2% Other* 70 7 10,096 8.7% Overload 13 9 215 0.2% Tree 360 5,7% 3 12,812 11.1% Unknown 100 6% 5 2,513 2.2% Weather 188 4 14,446 12.5% Sum 2,300 300.0% 115,814 100.0%	Cause Events Pct Rank Cust Out Pct Rank Animal 418 18.2% 2 18,888 16.3% 2 Dig In 45 2.0% 8 527 0.5% 8 Equipment Failure 1,012 44.0% 1 37,564 32.4% 1 Equipment Hit 94 4.1% 6 18,753 16.2% 3 Other* 70 7 10,096 8.7% 6 Overload 13 9 215 0.2% 9 Tree 360 15.7% 3 12,812 11.1% 5 Unknown 100 5 2,513 2.2% 7 Weather 188 4 14,446 12.5% 4 Sum 2,300 100.0% 115,814 100.0%	Cause Events Pct Rank Cust Out Pct Rank Minutes Animal 418 18.2% 2 18,888 16.3% 2 886,648 Dig In 45 2.0% 8 527 0.5% 8 84,499 Equipment Failure 1,012 44.0% 1 37,564 32.4% 1 3,095,992 Equipment Hit 94 4.1% 6 18,753 16.2% 3 1,419,314 Other* 70 7 10,096 8.7% 6 818,908 Overload 13 9 215 0.2% 9 18,588 Tree 360 15.7% 3 12,812 11.1% 5 1,419,457 Unknown 100 6% 5 2,513 2.2% 7 194,221 Weather 188 4 14,446 12.5% 4 1,466,242 Sum 2,300 100.0% 115,814 100.0%	Cause Events Pct Rank Cust Out Pct Rank Minutes Pct Animal 418 18.2% 2 18,888 16.3% 2 886,648 9.4% Dig In 45 2.0% 8 527 0.5% 8 84,499 0.9% Equipment Failure 1,012 44.0% 1 37,564 32.4% 1 3,095,992 32.9% Equipment Hit 94 4.1% 6 18,753 16.2% 3 1,419,314 15.1% Other* 70 7 10,096 8.7% 6 818,908 8.7% Overload 13 9 215 0.2% 9 18,588 0.2% Tree 360 5.7% 3 12,812 11.1% 5 1,419,457 15.1% Unknown 100 6% 5 2,513 2.2% 7 194,221 2.1% Weather 188 4 14,446 <	Cause Events Pct Rank Cust Out Pct Rank Minutes Pct Rank Animal 418 18.2% 2 18,888 16.3% 2 886,648 9.4% 5 Dig In 45 2.0% 8 527 0.5% 8 84,499 0.9% 8 Equipment Failure 1,012 44.0% 1 37,564 32.4% 1 3,095,992 32.9% 1 Equipment Hit 94 4.1% 6 18,753 16.2% 3 1,419,314 15.1% 4 Other* 70 7 10,096 8.7% 6 818,908 8.7% 6 Overload 13 9 215 0.2% 9 18,588 0.2% 9 Tree 360 15.7% 3 12,812 11.1% 5 1,419,457 15.1% 3 Unknown 100 6% 5 2,513 2.2% 7	Cause Events Pct Rank Cust Out Pct Rank Minutes Pct Rank SAIFI Animal 418 18.2% 2 18,888 16.3% 2 886,648 9.4% 5 0.11 Dig In 45 2.0% 8 527 0.5% 8 84,499 0.9% 8 0.00 Equipment Failure 1,012 44.0% 1 37,564 32.4% 1 3,095,992 32.9% 1 0.22 Equipment Hit 94 4.1% 6 18,753 16.2% 3 1,419,314 15.1% 4 0.11 Other* 70 7 10,096 8.7% 6 818,908 8.7% 6 0.06 Overload 13 9 215 0.2% 9 18,588 0.2% 9 0.00 Tree 360 15.7% 3 12,812 11.1% 5 1,419,457 15.1% 3 0.08	Cause Events Pct Rank Cust Out Pct Rank Minutes Pct Rank SAIFI CAIDI Animal 418 18.2% 2 18,888 16.3% 2 886,648 9.4% 5 0.11 47 Dig In 45 2.0% 8 527 0.5% 8 84,499 0.9% 8 0.00 160 Equipment Failure 1,012 44.0% 1 37,564 32.4% 1 3,095,992 32.9% 1 0.22 82 Equipment Hit 94 4.1% 6 18,753 16.2% 3 1,419,314 15.1% 4 0.11 76 Other* 70 7 10,096 8.7% 6 818,908 8.7% 6 0.06 81 Overload 13 9 215 0.2% 9 18,588 0.2% 9 0.00 86 Tree 360 15.7% 3

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	407	19.5%	2	18,850	18.4%	2	883,016	11.8%	3	0.11	47	5
Α	Dig In	44	2.1%	8	519	0.5%	8	84,052	1.1%	8	0.00	162	0
J	Equipment Failure	971	46.5%	1	34,536	33.7%	1	2,907,744	39.0%	1	0.20	84	17
	Equipment Hit	93	4.5%	6	18,742	18.3%	3	1,414,243	19.0%	2	0.11	75	8
Е	Other*	68		7	10,067	9.8%	4	817,391	11.0%	4	0.06	81	5
٧	Overload	13		9	215	0.2%	9	18,588	0.2%	9	0.00	86	0
	Tree	304	14.6%	3	7,852	7.7%	6	706,106	9.5%	5	0.05	90	4
Е	Unknown	95	1.6%	4	2,481	2.4%	7	189,516	2.5%	7	0.01	76	1
Х	Weather	94		5	9,121	8.9%	5	437,797	5.9%	6	0.05	48	3
С	Sum	2,089	.5% _ 100.0%		102,383	100.0%		7,458,452	100.0%		0.60	73	44

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	11		4	38	0.3%	4	3,632	0.2%	6	0.00	96	0
J	Dig In	1	0.5%	7	8	0.1%	8	448	0.0%	8	0.00	56	0
	Equipment Failure	41	19.4%	3	3,028	22.5%	3	188,249	9.7%	3	0.02	62	1
E	Equipment Hit	1	0.5%	7	11	0.1%	7	5,071	0.3%	4	0.00	461	0
٧	Other*	2		6	29	0.2%	6	1,517	0.1%	7	0.00	52	0
	Overload	N/A	0.0%	9	N/A	0.0%	9	N/A	0.0%	9	0.00	N/A	N/A
0	Tree	56 ⁽	1.9% 26.5%	2	4,960	36.9%	2	713,351	36.7%	2	0.03	144	4
N	Unknown	5		5	32	0.2%	5	4,706	0.2%	5	0.00	147	0
L	Weather	94	44.5%	1	5,325	39.6%	1	1,028,445	52.9%	1	0.03	193.14	6
Υ	Sum	211	4% 100.0%		13,431	100.0%		1,945,418	100.0%		0.08	144.85	11

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Winslow District

Customer Count: 95,599 Major Outage Cause Summary - 2017

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	337	16.5%	3	5,054	4.0%	6	274,491	2.1%	7	0.05	54	3
L	Dig In	16	0.8%	8	175	0.1%	9	28,768	0.2%	9	0.00	164	0
L	Equipment Failure	540	26.5%	2	22,892	18.3%	2	2,021,317	15.6%	3	0.24	88	21
	Equipment Hit	92	4.5%	6	19,667	15.7%	4	1,469,568	11.3%	4	0.21	75	15
Ε	Other*	51	2.5%	7	19,880	15.9%	3	953,742	7.4%	5	0.21	48	10
٧	Overload	13	0.6%	9	831	0.7%	8	48,627	0.4%	8	0.01	59	1
E	Tree	628	30.8%	1	39,197	31.3%	1	5,176,192	39.9%	1	0.41	132	54
N	Unknown	169	8.3%	5	3,277	2.6%	7	303,449	2.3%	6	0.03	93	3
Т	Weather	191	9.4%	4	14,191	11.3%	5	2,683,375	20.7%	2	0.15	189	28
s	Sum	2,037	100.0%		125,164	100.0%		12,959,530	100.0%		1.31	104	136

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	335	19.0%	3	5,000	5.1%	6	271,984	3.3%	7	0.05	54	3
Α	Dig In	16	0.9%	8	175	0.2%	9	28,768	0.4%	9	0.00	164	0
J	Equipment Failure	521	29.5%	1	22,834	23.2%	2	2,002,740	24.4%	2	0.24	88	21
	Equipment Hit	90	5.1%	6	19,639	20.0%	3	1,462,612	17.8%	3	0.21	74	15
E	Other*	44	2.5%	7	11,334	11.5%	4	522,717	6.4%	5	0.12	46	5
٧	Overload	10	0.6%	9	828	0.8%	8	47,584	0.6%	8	0.01	57	0
	Tree	469	26.5%	2	24,672	25.1%	1	2,135,450	26.0%	1	0.26	87	22
E	Unknown	157	8.9%	4	3,247	3.3%	7	293,612	3.6%	6	0.03	90	3
Х	Weather	125	7.1%	5	10,661	10.8%	5	1,435,230	17.5%	4	0.11	135	15
С	Sum	1,767	100.0%		98,390	100.0%		8,200,698	100.0%		1.03	83	86

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	2	0.7%	7	54	0.2%	5	2,507	0.1%	7	0.00	46	0
J	Dig In	N/A	0.0%	9	N/A	0.0%	9	N/A	0.0%	9	0.00	N/A	N/A
	Equipment Failure	19	7.0%	3	58	0.2%	4	18,576	0.4%	4	0.00	320	0
E	Equipment Hit	2	0.7%	7	28	0.1%	7	6,957	0.1%	6	0.00	248	0
V	Other*	7	2.6%	5	8,546	31.9%	2	431,025	9.1%	3	0.09	50	5
	Overload	3	1.1%	6	3	0.0%	8	1,043	0.0%	8	0.00	348	0
0	Tree	159	58.9%	1	14,525	54.3%	1	3,040,742	63.9%	1	0.15	209	32
N	Unknown	12	4.4%	4	30	0.1%	6	9,837	0.2%	5	0.00	328	0
L	Weather	66	24.4%	2	3,530	13.2%	3	1,248,145	26.2%	2	0.04	354	13
Υ	Sum	270	100.0%		26,774	100.0%		4,758,832	100.0%		0.28	178	50

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

New Jersey (Atlantic Region) Major Outage Cause Summary - 2016

Customer Count: 539,432

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	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1,920	15.2%	4	71,490	9.0%	5	4,414,744	3.3%	6	0.13	62	8
L	Dig In	55	0.4%	9	3,029	0.4%	9	253,539	0.2%	9	0.01	84	0
L [Equipment Failure	3,376	26.7%	1	179,711	22.6%	2	18,781,810	14.2%	3	0.33	105	35
	Equipment Hit	172	1.4%	7	33,842	4.3%	7	1,756,299	1.3%	7	0.06	52	3
ΕĹ	Other*	1,037	8.2%	5	50,917	6.4%	6	5,794,934	4.4%	5	0.09	114	11
v [Overload	2,177	17.2%	3	185,231	23.3%	1	62,999,620	47.4%	1	0.34	340	117
E	Tree	554	4.4%	6	93,717	11.8%	4	9,467,189	7.2%	4	0.17	101	18
N	Unknown	105	0.8%	8	3,477	0.4%	8	502,169	0.4%	8	0.01	144	1
т	Weather	3,228	25.6%	2	173,706	21.8%	3	28,098,157	21.3%	2	0.32	162	52
s	Sum	12,624	100%		795,120	100%		132,068,459	100%		1.48	166	246
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
м	Animal	1,884	16.9%	3	69,157	10.9%	5	4,314,691	6.4%	5	0.13	62	8
A	Dig In	54	0.5%	9	3,028	0.5%	8	251,424	0.4%	8	0.01	83	0
ً ر	Equipment Failure	3,234	29.0%	1	134,356	21.1%	2	14,685,203	21.7%	3	0.25	109	27
Ī	Equipment Hit	152	1.4%	7	30,842	4.9%	7	1,487,309	2.2%	7	0.06	48	3
ΕĪ	Other*	934	8.4%	5	46,625	7.3%	6	3,832,828	5.7%	6	0.09	82	7
/ [Overload	1,515	13.6%	4	110,187	17.3%	3	16,945,776	25.1%	2	0.21	154	32
	Tree	531	4.8%	6	87,937	13.8%	4	7,607,416	11.2%	4	0.16	87	14
Ī	Unknown	100	0.9%	8	2,589	0.4%	9	203,695	0.3%	9	0.00	79	0
E [Weather	2,757	24.7%	2	151,130	23.8%	1	18,294,878	27.1%	1	0.28	121	34
С	Sum	11,161	100%		635,311	100%		67,623,218	100%		1.18	106	126
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	36	2.5%	5	2,333	1.5%	7	100,053	0.2%	8	0.00	43	0
J	Dig In	1	0.1%	9	1	0.0%	9	2,115	0.0%	9	0.00	2,115	0
	Equipment Failure	142	9.7%	3	45,355	28.4%	2	4,096,607	6.4%	3	0.08	90	8
Εĺ	Equipment Hit	20	1.4%	7	3,000	1.9%	6	268,990	0.4%	7	0.01	90	1
,	Other*	103	7.0%	4	4,292	2.7%	5	1,962,106	3.0%	4	0.01	457	4
Ī	Overload	662	45.2%	1	75,044	47.0%	1	46,053,844	71.5%	1	0.14	614	86
j	Tree	23	1.6%	6	6,320	4.0%	4	1,859,773	2.9%	5	0.01	294	3
o [Unknown	5	0.3%	8	888	0.6%	8	289,474	0.5%	6	0.00	336	1
νĪ	Weather	471	32.2%	2	22,576	14.1%	3	9,803,279	15.2%	2	0.04	434	18
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^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Cape May District Major Outage Cause Summary - 2016

Customer Count: 109,751

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	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	142	6.6%	5	11,259	5.1%	7	1,040,549	1.8%	6	0.10	92	9
L	Dig In	12	0.6%	9	2,674	1.2%	8	210,338	0.4%	8	0.02	79	2
L	Equipment Failure	832	38.4%	1	64,881	29.3%	1	6,453,259	11.0%	3	0.59	99	59
	Equipment Hit	37	1.7%	7	17,909	8.1%	6	895,709	1.5%	7	0.16	50	8
	Other*	182	8.4%	4	21,754	9.8%	4	2,888,385	4.9%	5	0.20	134	26
Е	Overload	521	24.1%	2	55,022	24.9%	2	36,821,376	62.8%	1	0.50	669	335
٧	Tree	69	3.2%	6	29,495	13.3%	3	3,794,042	6.5%	4	0.27	129	35
E	Unknown	31	1.4%	8	253	0.1%	9	40,727	0.1%	9	0.00	161	0
N	Weather	340	15.7%	3	18,036	8.2%	5	6,469,560	11.0%	2	0.16	359	59
S	Sum	2,166	100%		221,103	100%		58,613,946	100%		2.01	265	534
	Causo	Events	Pot	Pank	Cust Out	Dot	Pank	Minutos	Dot	Pank	SVIEL	CAIDI	SVIDI

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	134	8.5%	5	11,169	8.0%	6	1,031,604	8.3%	6	0.10	92	9
Α	Dig In	12	0.8%	9	2,674	1.9%	8	210,338	1.7%	8	0.02	79	2
J	Equipment Failure	791	50.2%	1	38,832	27.9%	1	3,609,761	29.1%	1	0.35	93	33
	Equipment Hit	21	1.3%	8	14,922	10.7%	5	631,774	5.1%	7	0.14	42	6
	Other*	142	9.0%	4	20,654	14.8%	3	1,652,125	13.3%	4	0.19	80	15
E	Overload	220	14.0%	2	17,958	12.9%	4	2,155,862	17.4%	2	0.16	120	20
V	Tree	58	3.7%	6	23,660	17.0%	2	2,004,226	16.2%	3	0.22	85	18
	Unknown	28	1.8%	7	247	0.2%	9	38,449	0.3%	9	0.00	156	0
E	Weather	169	10.7%	3	9,028	6.5%	7	1,062,674	8.6%	5	0.08	118	10
С	Sum	1,575	100%		139,144	100%		12,396,812	100%		1.27	89	113

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	8	1.4%	7	90	0.1%	7	8,946	0.0%	7	0.00	99	0
J	Dig In	0	0.0%	9	0	0.0%	9	0	0.0%	9	0.00	0	0
	Equipment Failure	41	6.9%	3	26,049	31.8%	2	2,843,498	6.2%	3	0.24	109	26
E	Equipment Hit	16	2.7%	5	2,987	3.6%	5	263,936	0.6%	6	0.03	88	2
	Other*	40	6.8%	4	920	1.1%	6	1,236,260	2.7%	5	0.01	1,344	11
V	Overload	301	50.9%	1	37,064	45.2%	1	34,665,514	75.0%	1	0.34	935	316
	Tree	11	1.9%	6	5,835	7.1%	4	1,789,817	3.9%	4	0.05	307	16
0	Unknown	3	0.5%	8	6	0.0%	8	2,278	0.0%	8	0.00	380	0
N	Weather	171	28.9%	2	9,008	11.0%	3	5,406,885	11.7%	2	0.08	600	49
Υ	Sum	591	100%		81,959	100%		46,217,134	100%		0.75	564	421

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Glassboro District

Customer Count: 160,303

Major Outage Cause Summary - 2016

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	806	16.6%	4	36,357	12.7%	4	1,934,317	5.5%	5	0.23	53	12
L	Dig In	8	0.2%	9	218	0.1%	9	17,311	0.0%	9	0.00	79	0
L	Equipment Failure	858	17.6%	2	48,661	17.0%	3	3,807,874	10.9%	3	0.31	78	24
	Equipment Hit	58	1.2%	7	6,913	2.4%	7	312,208	0.9%	8	0.04	45	2
	Other*	428	8.8%	5	14,939	5.2%	6	1,138,032	3.3%	6	0.09	76	7
E	Overload	839	17.3%	3	68,410	23.8%	2	13,126,307	37.5%	1	0.43	192	82
V	Tree	253	5.2%	6	28,561	10.0%	5	2,261,073	6.5%	4	0.18	79	14
E	Unknown	33	0.7%	8	2,582	0.9%	8	397,743	1.1%	7	0.02	154	2
N	Weather	1,579	32.5%	1	80,235	28.0%	1	12,005,724	34.3%	2	0.50	150	75
s	Sum	4,862	100%		286,876	100%		35,000,589	100%		1.80	122	220
				ı	•	T	1		1		1		
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	791	17.4%	3	34,240	13.6%	4	1,851,649	6.4%	5	0.21	54	12
Α	Dig In	8	0.2%	9	218	0.1%	9	17,311	0.1%	9	0.00	79	0
J	Equipment Failure	815	17.9%	2	35,217	14.0%	3	3,018,541	10.4%	3	0.22	86	19
	Equipment Hit	58	1.3%	7	6,913	2.8%	7	312,208	1.1%	7	0.04	45	2
	Other*	415	9.1%	5	13,870	5.5%	6	1,045,601	3.6%	6	0.09	75	7
E	Overload	744	16.3%	4	56,206	22.4%	2	10,087,508	34.9%	2	0.35	179	63
\ V	Tree	245	5.4%	6	28,164	11.2%	5	2,223,424	7.7%	4	0.18	79	14
	Unknown	31	0.7%	8	1,700	0.7%	8	101,546	0.4%	8	0.01	60	1
E	Weather	1,446	31.8%	1	74,670	29.7%	1	10,265,605	35.5%	1	0.47	137	64
С	Sum	4,553	100%		251,198	100%		28,923,393	100%		1.58	115	182
м	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
A	Animal	15	4.9%	4	2,117	5.9%	4	82,668	1.4%	6	0.01	39	1
Ĵ	Dig In	0	0.0%	8	2,117	0.0%	8	0	0.0%	8	0.00	0	0
١	Equipment Failure	43	13.9%	3	13,444	37.7%	1	789,333	13.0%	3	0.08	59	5
E	Equipment Hit	0	0.0%	8	13,444	0.0%	8	0	0.0%	<u>3</u> 8	0.00	0	0
-	Other*	13	4.2%	5	1,069	3.0%	5	92,431	1.5%	5	0.01	86	1
lv	Overload	95	30.7%	2	12,204	34.2%	2	3,038,800	50.0%	1	0.08	249	19
	Tree	8	2.6%	6	397	1.1%	7	37,649	0.6%	7	0.00	95	0
o	Unknown	2	0.6%	7	882	2.5%	6	296,196	4.9%	4	0.01	336	2
N	Weather	133	43.0%	1	5,565	15.6%	3	1,740,118	28.6%	2	0.03	313	11
Y	Sum	309	100.0%		35,678	100.0%		6,077,196	100.0%		0.22	170	38
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^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Pleasantville District Major Outage Cause Summary - 2016

Customer Count: 173,118

Pct Rank **Cust Out** Pct Rank Pct **SAIFI CAIDI** Cause Minutes Rank SAIDI **Events** 10.0% Α Animal 560 17.1% 3 16,708 5 994,679 3.8% 6 0.10 60 6 L Dig In 23 0.7% 8 88 0.1% 9 16,722 0.1% 9 0.00 190 0 **Equipment Failure** 34.4% 1 43,460 25.9% 2 6,303,405 24.0% 2 0.25 1,128 145 37 Equipment Hit 43 1.3% 7 7,298 4.4% 6 418,982 1.6% 7 0.04 57 2 Other* 224 6.8% 5 5,980 3.6% 7 1,079,402 4.1% 5 0.03 181 6 Ε Overload 559 17.0% 4 48,019 28.6% 11,076,435 42.2% 0.28 231 64 ٧ 6 4 Tree 131 11.3% 1,863,917 7.1% 0.11 98 4.0% 19,011 4 11 Ε Unknown 19 0.6% 9 528 0.3% 8 39,567 0.2% 0.00 75 0 Ν 4,458,273 3 Weather 592 18.1% 2 26,579 15.9% 3 17.0% 0.15 168 26 S 100% 26,251,382 0.97 Sum 3,279 167,671 100% 100% 157 152

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	549	19.4%	2	16,584	12.3%	5	986,357	6.6%	5	0.10	59	6
Α	Dig In	22	0.8%	8	87	0.1%	9	14,607	0.1%	9	0.00	168	0
J	Equipment Failure	1,088	38.4%	1	42,945	31.9%	1	6,081,323	40.7%	1	0.25	142	35
	Equipment Hit	40	1.4%	7	7,286	5.4%	6	413,986	2.8%	7	0.04	57	2
	Other*	183	6.5%	5	4,877	3.6%	7	535,013	3.6%	6	0.03	110	3
E	Overload	323	11.4%	4	23,575	17.5%	2	2,910,006	19.5%	2	0.14	123	17
٧	Tree	129	4.6%	6	18,961	14.1%	4	1,837,830	12.3%	4	0.11	97	11
	Unknown	19	0.7%	9	528	0.4%	8	39,567	0.3%	8	0.00	75	0
E	Weather	482	17.0%	3	19,821	14.7%	3	2,127,509	14.2%	3	0.11	107	12
С	Sum	2,835	100%		134,664	100%		14,946,198	100%		0.78	111	87

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	11	2.5%	5	124	0.4%	5	8,322	0.1%	6	0.00	67	0
J	Dig In	1	0.2%	8	1	0.0%	8	2,115	0.0%	8	0.00	2,115	0
	Equipment Failure	40	9.0%	4	515	1.6%	4	222,081	2.0%	4	0.00	431	1
E	Equipment Hit	3	0.7%	6	12	0.0%	7	4,997	0.0%	7	0.00	416	0
	Other*	41	9.2%	3	1,103	3.3%	3	544,389	4.8%	3	0.01	494	3
٧	Overload	236	53.2%	1	24,444	74.1%	1	8,166,429	72.2%	1	0.14	334	47
	Tree	2	0.5%	7	50	0.2%	6	26,087	0.2%	5	0.00	522	0
0	Unknown	0	0.0%	9	0	0.0%	9	0	0.0%	9	0.00	0	0
N	Weather	110	24.8%	2	6,758	20.5%	2	2,330,764	20.6%	2	0.04	345	13
Υ	Sum	444	100%		33,007	100%		11,305,184	100%		0.19	343	65

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Winslow District
Major Outage Cause Summary - 2016

Customer Count: 96,260

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	412	17.8%	3	7,166	6.0%	6	445,199	3.6%	6	0.08	62	5
L	Dig In	12	0.5%	9	49	0.0%	9	9,168	0.1%	9	0.00	187	0
L	Equipment Failure	558	24.1%	2	22,709	19.0%	2	2,217,272	18.2%	2	0.24	98	23
	Equipment Hit	34	1.5%	7	1,722	1.4%	7	129,399	1.1%	7	0.02	75	1
	Other*	203	8.8%	5	8,424	7.1%	5	689,115	5.6%	5	0.09	82	7
Ε	Overload	258	11.1%	4	13,780	11.5%	4	1,975,501	16.2%	3	0.14	143	21
٧	Tree	101	4.4%	6	16,650	13.9%	3	1,548,156	12.7%	4	0.17	93	16
Е	Unknown	22	0.9%	8	114	0.1%	8	24,132	0.2%	8	0.00	212	0
N	Weather	717	30.9%	1	48,856	40.9%	1	5,164,601	42.3%	1	0.51	106	54
S	Sum	2,317	100%		119,470	100%		12,202,543	100%		1.25	102	128
		1	1	1		ı	ı		ı	ı	1		1
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	410	18.7%	3	7,164	6.5%	6	445,082	3.9%	6	0.08	62	5
Α	Dig In	12	0.5%	9	49	0.0%	9	9,168	0.1%	9	0.00	187	0
J	Equipment Failure	540	24.6%	2	17,362	15.7%	2	1,975,577	17.4%	2	0.18	114	21
	Equipment Hit	33	1.5%	7	1,721	1.6%	7	129,341	1.1%	7	0.02	75	1
	Other*	194	8.8%	5	7,224	6.5%	5	600,090	5.3%	5	0.08	83	6
E	Overload	228	10.4%	4	12,448	11.3%	4	1,792,400	15.8%	3	0.13	144	19
V	Tree	99	4.5%	6	16,612	15.1%	3	1,541,936	13.6%	4	0.17	93	16
	Unknown	22	1.0%	8	114	0.1%	8	24,132	0.2%	8	0.00	212	0
E	Weather	660	30.0%	1	47,611	43.2%	1	4,839,089	42.6%	1	0.50	102	51
С	Sum	2,198	100%		110,305	100%		11,356,815	100%		1.16	103	119
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
A	Animal	2	1.7%	5	2	0.0%	6	117	0.0%	6	0.00	0	0
Ĵ	Dig In	0	0.0%	8	0	0.0%	8	0	0.0%	8	0.00	0	0
	Equipment Failure	18	15.1%	3	5,437	58.3%	1	241,695	28.6%	2	0.06	45	3
	Equipment Hit	1	0.8%	7	1	0.0%	7	58	0.0%	7	0.00	0	0
Е	Other*	9	7.6%	4	1,200	13.1%	4	89,025	10.5%	4	0.01	74	1
V	Overload	30	25.2%	2	1,332	14.5%	2	183,101	21.7%	3	0.01	137	2
	Tree	2	1.7%	5	38	0.4%	5	6,220	0.7%	5	0.00	164	0
0	Unknown	0	0.0%	8	0	0.0%	8	0	0.0%	8	0.00	0	0
N	Weather	57	47.9%	1	1,245	13.6%	3	325,511	38.5%	1	0.01	261	3
Y	Sum	119	100%		9,165	100%		845,727	100%		0.10	92	9

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

New Jersey (Atlantic Region) Major Outage Cause Summary - 2015

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1,189	9.6%	4	55,341	4.9%	7	4,220,728	0.6%	8	0.10	76	8
L	Dig In	116	0.9%	9	1,858	0.2%	9	584,230	0.1%	9	0.00	314	1
L	Equipment Failure	3,077	24.8%	2	187,357	16.6%	3	41,407,549	5.6%	3	0.35	221	77
	Equipment Hit	391	3.2%	7	88,138	7.8%	5	31,624,788	4.3%	4	0.16	359	59
E	Other*	493	4.0%	6	79,372	7.0%	6	16,116,946	2.2%	6	0.15	203	30
٧	Overload	118	1.0%	8	99,221	8.8%	4	14,476,994	2.0%	7	0.18	146	27
Е	Tree	3,347	27.0%	1	246,411	21.8%	2	197,735,018	26.9%	2	0.46	802	368
N	Unknown	1,087	8.8%	5	47,194	4.2%	8	18,675,054	2.5%	5	0.09	396	35
Т	Weather	2,570	20.7%	3	323,140	28.6%	1	410,676,313	55.8%	1	0.60	1,271	765
s	Sum	12,388	100%		1,128,032	100%		735,517,619	100%		2.10	652	1,370

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	1,173	14.1%	3	54,481	9.9%	5	4,139,590	9.0%	5	0.10	76	8
Α	Dig In	106	1.3%	8	1,678	0.3%	8	307,559	0.7%	8	0.00	183	1
J	Equipment Failure	2,941	35.3%	1	175,133	31.7%	1	14,345,421	31.2%	1	0.33	82	27
	Equipment Hit	375	4.5%	6	77,988	14.1%	3	7,045,389	15.3%	3	0.15	90	13
E	Other*	280	3.4%	7	73,551	13.3%	4	2,512,112	5.5%	6	0.14	34	5
٧	Overload	60	0.7%	9	1,280	0.2%	9	137,821	0.3%	9	0.00	108	0
	Tree	1,743	20.9%	2	92,839	16.8%	2	10,143,096	22.1%	2	0.17	109	19
E	Unknown	739	8.9%	5	33,190	6.0%	7	2,144,012	4.7%	7	0.06	65	4
С	Sum	8,320	100%		552,578	100%		45,943,748	100%		1.03	83	86

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	16	0.4%	7	860	0.1%	8	81,138	0.0%	9	0.00	94	0
J	Dig In	10	0.2%	9	180	0.0%	9	276,671	0.0%	8	0.00	1,537	1
	Equipment Failure	136	3.3%	5	12,224	2.1%	5	27,062,127	3.9%	3	0.02	2,214	50
E	Equipment Hit	16	0.4%	7	10,150	1.8%	6	24,579,398	3.6%	4	0.02	2,422	46
٧	Other*	213	5.2%	4	5,821	1.0%	7	13,604,834	2.0%	7	0.01	2,337	25
	Overload	58	1.4%	6	97,941	17.0%	3	14,339,173	2.1%	6	0.18	146	27
0	Tree	1,604	39.4%	2	153,572	26.7%	2	187,591,921	27.2%	2	0.29	1,222	349
N	Unknown	348	8.6%	3	14,004	2.4%	4	16,531,041	2.4%	5	0.03	1,180	31
Υ	Sum	4,068	100%		575,454	100%		689,573,871	100%		1.07	1,198	1,284

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 537,010

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Cape May District Major Outage Cause Summary - 2015

Customer Count: 109,752

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	117	8.6%	4	12,810	5.7%	6	753,960	1.7%	7	0.12	59	7
L	Dig In	27	2.0%	9	464	0.2%	9	119,338	0.3%	9	0.00	257	1
L	Equipment Failure	657	48.3%	1	29,098	13.0%	3	27,085,618	61.0%	1	0.27	931	247
	Equipment Hit	36	2.6%	8	14,543	6.5%	5	1,346,447	3.0%	4	0.13	93	12
E	Other*	50	3.7%	6	27,534	12.3%	4	627,067	1.4%	8	0.25	23	6
V	Overload	45	3.3%	7	88,670	39.5%	1	8,187,445	18.4%	2	0.81	92	75
E	Tree	132	9.7%	3	8,259	3.7%	8	1,233,488	2.8%	5	0.08	149	11
N	Unknown	74	5.4%	5	12,416	5.5%	7	1,010,137	2.3%	6	0.11	81	9
Т	Weather	221	16.3%	2	30,758	13.7%	2	4,068,085	9.2%	3	0.28	132	37
s	Sum	1,359	100%		224,552	100%		44,431,583	100%		2.05	198	405

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	113	10.0%	3	12,061	12.0%	4	691,800	9.7%	4	0.11	57	6
Α	Dig In	26	2.3%	8	463	0.5%	8	119,034	1.7%	8	0.00	257	1
J	Equipment Failure	623	55.2%	1	25,198	25.0%	2	2,375,705	33.4%	1	0.23	94	22
	Equipment Hit	32	2.8%	7	14,252	14.1%	3	1,308,336	18.4%	2	0.13	92	12
E	Other*	46	4.1%	6	27,516	27.3%	1	625,513	8.8%	6	0.25	23	6
V	Overload	4	0.4%	9	19	0.0%	9	3,683	0.1%	9	0.00	194	0
	Tree	78	6.9%	4	1,060	1.1%	7	167,361	2.4%	7	0.01	158	2
E	Unknown	65	5.8%	5	11,011	10.9%	5	685,369	9.6%	5	0.10	62	6
Х	Weather	141	12.5%	2	9,189	9.1%	6	1,132,489	15.9%	3	0.08	123	10
С	Sum	1,128	100%		100,769	100%		7,109,289	100%		0.92	71	65

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	4	1.7%	6	749	0.6%	6	62,160	0.2%	6	0.01	83	1
J	Dig In	1	0.4%	9	1	0.0%	9	304	0.0%	9	0.00	304	0
	Equipment Failure	34	14.7%	4	3,900	3.2%	4	24,709,913	66.2%	1	0.04	6,336	225
E	Equipment Hit	4	1.7%	6	291	0.2%	7	38,111	0.1%	7	0.00	131	0
V	Other*	4	1.7%	6	18	0.0%	8	1,554	0.0%	8	0.00	86	0
	Overload	41	17.7%	3	88,651	71.6%	1	8,183,762	21.9%	2	0.81	92	75
0	Tree	54	23.4%	2	7,199	5.8%	3	1,066,126	2.9%	4	0.07	148	10
N	Unknown	9	3.9%	5	1,405	1.1%	5	324,769	0.9%	5	0.01	231.15	3
L	Weather	80	34.6%	1	21,569	17.4%	2	2,935,596	7.9%	3	0.20	136.10	27
Υ	Sum	231	100%		123,783	100%		37,322,294	100%		1.13	301.51	340

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Glassboro District Major Outage Cause Summary - 2015

Customer Count: 159,291

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	521	9.7%	5	31,509	7.6%	5	2,810,915	0.7%	7	0.20	89	18
L	Dig In	30	0.6%	9	118	0.0%	9	246,395	0.1%	9	0.00	2,088	2
L	Equipment Failure	856	16.0%	3	42,568	10.2%	3	4,779,299	1.2%	5	0.27	112	30
	Equipment Hit	200	3.7%	6	39,320	9.4%	4	27,188,169	6.7%	3	0.25	691	171
Е	Other*	174	3.3%	7	10,664	2.6%	7	2,411,191	0.6%	8	0.07	226	15
٧	Overload	42	0.8%	8	6,106	1.5%	8	4,115,358	1.0%	6	0.04	674	26
E	Tree	1,785	33.3%	1	121,438	29.1%	2	121,720,064	29.8%	2	0.76	1,002	764
N	Unknown	547	10.2%	4	20,559	4.9%	6	12,214,221	3.0%	4	0.13	594	77
Т	Weather	1,198	22.4%	2	144,929	34.7%	1	232,526,032	57.0%	1	0.91	1,604	1,460
s	Sum	5,353	100%		417,211	100%		408,011,646	100%		2.62	978	2,561

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	511	15.0%	3	31,431	16.7%	3	2,795,147	15.6%	3	0.20	89	18
Α	Dig In	24	0.7%	9	49	0.0%	9	6,530	0.0%	9	0.00	133	0
J	Equipment Failure	813	23.9%	2	41,579	22.1%	2	3,180,156	17.7%	2	0.26	76	20
	Equipment Hit	189	5.6%	6	29,502	15.6%	4	2,648,972	14.8%	4	0.19	90	17
E	Other*	92	2.7%	7	9,469	5.0%	7	446,616	2.5%	7	0.06	47	3
V	Overload	34	1.0%	8	978	0.5%	8	90,447	0.5%	8	0.01	92	1
	Tree	953	28.0%	1	46,682	24.8%	1	5,667,828	31.6%	1	0.29	121	36
E	Unknown	360	10.6%	5	12,511	6.6%	6	810,211	4.5%	6	0.08	65	5
Х	Weather	427	12.5%	4	16,351	8.7%	5	2,299,574	12.8%	5	0.10	141	14
С	Sum	3,403	100%		188,552	100%		17,945,481	100%		1.18	95	113

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	10	0.5%	7	78	0.0%	8	15,769	0.0%	9	0.00	202	0
J	Dig In	6	0.3%	9	69	0.0%	9	239,865	0.1%	8	0.00	3,476	2
	Equipment Failure	43	2.2%	5	989	0.4%	7	1,599,143	0.4%	7	0.01	1,617	10
Е	Equipment Hit	11	0.6%	6	9,818	4.3%	3	24,539,197	6.3%	3	0.06	2,499	154
٧	Other*	82	4.2%	4	1,195	0.5%	6	1,964,575	0.5%	6	0.01	1,644	12
	Overload	8	0.4%	8	5,128	2.2%	5	4,024,911	1.0%	5	0.03	785	25
0	Tree	832	42.7%	1	74,756	32.7%	2	116,052,236	29.8%	2	0.47	1,552	729
N	Unknown	187	9.6%	3	8,048	3.5%	4	11,404,011	2.9%	4	0.05	1,417.00	72
L	Weather	771	39.5%	2	128,578	56.2%	1	230,226,458	59.0%	1	0.81	1,790.56	1,445
Υ	Sum	1,950	100.0%		228,659	100.0%		390,066,165	100.0%		1.44	1,705.89	2,449

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Pleasantville District
Major Outage Cause Summary - 2015

Customer Count: 172,666

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	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	277	10.9%	4	5,232	2.6%	7	320,814	1.1%	7	0.03	61	2
L	Dig In	37	1.5%	8	749	0.4%	8	145,002	0.5%	8	0.00	194	1
L	Equipment Failure	977	38.4%	1	66,801	33.7%	1	5,418,213	18.5%	3	0.39	81	31
	Equipment Hit	72	2.8%	7	21,570	10.9%	5	1,654,739	5.7%	4	0.12	77	10
E	Other*	111	4.4%	6	27,855	14.0%	4	903,089	3.1%	5	0.16	32	5
v [Overload	14	0.5%	9	267	0.1%	9	64,790	0.2%	9	0.00	243	0
Е	Tree	465	18.3%	2	36,178	18.2%	2	5,607,200	19.2%	2	0.21	155	32
N	Unknown	215	8.4%	5	6,593	3.3%	6	762,878	2.6%	6	0.04	116	4
т	Weather	379	14.9%	3	33,251	16.8%	3	14,374,229	49.1%	1	0.19	432	83
s	Sum	2,547	100%		198,496	100%		29,250,955	100%		1.15	147	169
		_											
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	275	13.3%	3	5,199	3.4%	6	317,605	2.9%	7	0.03	61	2
Α	Dig In	36	1.7%	8	644	0.4%	8	120,512	1.1%	8	0.00	187	1
J	Equipment Failure	932	45.1%	1	60,845	40.4%	1	5,101,252	46.3%	1	0.35	84	30
	Equipment Hit	71	3.4%	7	21,529	14.3%	3	1,652,648	15.0%	2	0.12	77	10
Е	Other*	91	4.4%	6	27,725	18.4%	2	749,457	6.8%	5	0.16	27	4
٧	Overload	10	0.5%	9	199	0.1%	9	36,283	0.3%	9	0.00	182	0
	Tree	276	13.4%	2	15,565	10.3%	4	1,344,785	12.2%	4	0.09	86	8
Е	Unknown	176	8.5%	5	5,008	3.3%	7	319,284	2.9%	6	0.03	64	2
Х	Weather	200	9.7%	4	14,036	9.3%	5	1,366,765	12.4%	3	0.08	97	8
С	Sum	2,067	100%		150,750	100%		11,008,590	100%		0.87	73	64
м	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	2	0.4%	7	33	0.1%	9	3,209	0.0%	8	0.00	97	0
J	Dig In	1	0.2%	8	105	0.2%	6	24,490	0.1%	7	0.00	233	0
•	Equipment Failure	45	9.4%	3	5,956	12.5%	3	316,962	1.7%	4	0.03	53	2
Е	Equipment Hit	1	0.2%	8	41	0.1%	8	2,091	0.0%	9	0.00	51	0
v	Other*	20	4.2%	5	130	0.3%	5	153,633	0.8%	5	0.00	1,182	1
_	Overload	4	0.8%	6	68	0.1%	7	28,507	0.2%	6	0.00	419	0
0	Tree	189	39.4%	1	20,613	43.2%	1	4,262,415	23.4%	2	0.12	207	25
N	Unknown	39	8.1%	4	1,585	3.3%	4	443,594	2.4%	3	0.01	280	3
L	Weather	179	37.3%	2	19,215	40.2%	2	13,007,464	71.3%	1	0.11	676.94	75
Υ	Sum	480	100%		47,746	100%		18,242,365	100%		0.28	382.07	106

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Winelow District

Cı	ustomer Count:	95,301					_	istrict Summary - 20	015				
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	274	8.8%	4	5,790	2.0%	7	335,039	0.1%	8	0.06	58	4
L	Dig In	22	0.7%	8	527	0.2%	9	73,496	0.0%	9	0.01	139	1
L	Equipment Failure	587	18.8%	3	48,890	17.0%	3	4,124,419	1.6%	5	0.51	84	43
1	Equipment Hit	83	2.7%	7	12,705	4.4%	5	1,435,433	0.6%	7	0.13	113	15
Ε	Other*	158	5.0%	6	13,319	4.6%	4	12,175,599	4.8%	3	0.14	914	128
٧	Overload	17	0.5%	9	4,178	1.5%	8	2,109,400	0.8%	6	0.04	505	22
Ε	Tree	965	30.8%	1	80,536	28.0%	2	69,174,266	27.3%	2	0.85	859	726
N	Unknown	251	8.0%	5	7,626	2.7%	6	4,687,817	1.8%	4	0.08	615	49
Т	Weather	772	24.7%	2	114,202	39.7%	1	159,707,967	62.9%	1	1.20	1,398	1,676
S	Sum	3,129	100%		287,773	100%		253,823,435	100%		3.02	882	2,663
	T	<u> </u>	1			1			1	1		T	T
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	274	15.9%	3	5,790	5.1%	5	335,039	3.4%	6	0.06	58	4
Α	Dig In	20	1.2%	8	522	0.5%	8	61,483	0.6%	8	0.01	118	1
J	Equipment Failure	573	33.3%	1	47,511	42.2%	1	3,688,309	37.3%	1	0.50	78	39

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	274	15.9%	3	5,790	5.1%	5	335,039	3.4%	6	0.06	58	4
Α	Dig In	20	1.2%	8	522	0.5%	8	61,483	0.6%	8	0.01	118	1
J	Equipment Failure	573	33.3%	1	47,511	42.2%	1	3,688,309	37.3%	1	0.50	78	39
	Equipment Hit	83	4.8%	6	12,705	11.3%	3	1,435,433	14.5%	3	0.13	113	15
E	Other*	51	3.0%	7	8,841	7.9%	4	690,527	7.0%	4	0.09	78	7
٧	Overload	12	0.7%	9	84	0.1%	9	7,407	0.1%	9	0.00	88	0
	Tree	436	25.3%	2	29,532	26.2%	2	2,963,122	30.0%	2	0.31	100	31
E	Unknown	138	8.0%	4	4,660	4.1%	6	329,149	3.3%	7	0.05	71	3
Х	Weather	135	7.8%	5	2,862	2.5%	7	369,919	3.7%	5	0.03	129	4
С	Sum	1,722	100%		112,507	100%		9,880,389	100%		1.18	88	104

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	-	0.0%	8	1	0.0%	8	•	0.0%	8	0.00	-	-
J	Dig In	2	0.1%	7	5	0.0%	7	12,013	0.0%	7	0.00	2,403	0
	Equipment Failure	14	1.0%	5	1,379	0.8%	6	436,110	0.2%	6	0.01	316	5
E	Equipment Hit	-	0.0%	8	-	0.0%	8	-	0.0%	8	0.00	-	-
٧	Other*	107	7.6%	4	4,478	2.6%	3	11,485,072	4.7%	3	0.05	2,565	121
	Overload	5	0.4%	6	4,094	2.3%	4	2,101,993	0.9%	5	0.04	513	22
0	Tree	529	37.6%	2	51,004	29.1%	2	66,211,144	27.1%	2	0.54	1,298	695
N	Unknown	113	8.0%	3	2,966	1.7%	5	4,358,668	1.8%	4	0.03	1,470	46
L	Weather	637	45.3%	1	111,340	63.5%	1	159,338,048	65.3%	1	1.17	1,431	1,672
Υ	Sum	1,407	100%		175,266	100%		243,943,047	100%		1.84	1,392	2,560

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 539,432

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1,329	14%	4	47,027	7%	5	3,334,651	5%	5	0.09	71	6
L	Dig In	98	1%	8	969	0%	9	220,754	0%	8	0.00	-	0
L	Equipment Failure	2,749	28%	1	160,790	25%	2	14,142,122	21%	2	0.30	88	26
	Equipment Hit	408	4%	6	98,644	15%	4	9,505,877	14%	4	0.18	96	18
E	Other*	230	2%	7	37,183	6%	6	2,057,233	3%	7	0.07	55	4
V	Overload	71	1%	9	3,045	0%	8	192,690	0%	9	0.01	63	0
E	Tree	2,204	23%	2	169,726	26%	1	21,025,153	32%	1	0.31	124	39
N	Unknown	969	10%	5	31,584	5%	7	2,872,382	4%	6	0.06	91	5
T	Weather	1,622	17%	3	99,729	15%	3	12,916,651	19%	3	0.18	130	24
S	Sum	9,680	100%		648,697	100%		66,267,512	100%		1.20	102	123
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
м	Animal	1,324	14%	4	46,908	8%	5	3,308,474	6%	5	0.09	71	6
Α	Dig In	97	1%	8	743	0%	9	177,588	0%	9	0.00	=	0
J	Equipment Failure	2,718	29%	1	134,585	22%	2	11,827,525	20%	2	0.25	88	22
1 1	Equipment Hit	402	4%	6	98,459	16%	3	9,493,730	16%	4	0.18	96	18
ΙE	Other*	230	2%	7	37,183	6%	6	2,057,233	4%	7	0.07	55	4
V	Overload	69	1%	9	3,043	1%	8	192,476	0%	8	0.01	63	0
1 1	Tree	2,086	22%	2	160,691	27%	1	18,711,308	32%	1	0.30	116	35
E	Unknown	967	10%	5	31,572	5%	7	2,865,242	5%	6	0.06	91	5
х	Weather	1,488	16%	3	85,008	14%	4	9,944,438	17%	3	0.16	117	18
С	Sum	9,381	100%		598,192	100%		58,578,013	100%		1.11	98	109
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	5	2%	5	119	0%	6	26,177	0%	5	0.00	220	0
J	Dig In	1	0%	8	226	0%	4	43,166	1%	4	0.00	191	0
	Equipment Failure	31	10%	3	26,205	52%	1	2,314,597	30%	2	0.05	88	4
E	Equipment Hit	6	2%	4	185	0%	5	12,148	0%	6	0.00	66	0
V	Other*	-	0%	9	-	0%	9	-	0%	9	0.00	-	-
	Overload	2	1%	6	2	0%	8	214	0%	8	0.00	107	0
0	Tree	118	39%	2	9,035	18%	3	2,313,844	30%	3	0.02	256	4
N	Unknown	2	1%	6	12	0%	7	7,140	0%	7	0.00	595	0
L	Weather	134	45%	1	14,721	29%	2	2,972,213	39%	1	0.03	202	6
Υ	Sum	299	100%		50,505	100%		7,689,499	100%		0.09	152	14

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Cape May District Major Outage Cause Summary - 2014

Customer Count: 109,751

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	122	10%	4	8,641	12%	4	726,673	12%	5	0.08	84	7
L	Dig In	5	0%	8	97	0%	8	6,028	0%	9	0.00	-	0
L	Equipment Failure	531	42%	1	18,504	27%	1	1,461,968	24%	1	0.17	79	13
	Equipment Hit	42	3%	6	8,593	12%	5	1,075,305	18%	2	0.08	125	10
E	Other*	29	2%	7	3,237	5%	7	159,877	3%	7	0.03	49	1
V	Overload	5	0%	8	89	0%	9	8,834	0%	8	0.00	99	0
E	Tree	142	11%	3	12,679	18%	2	894,646	15%	4	0.12	71	8
N	Unknown	64	5%	5	5,843	8%	6	710,677	12%	6	0.05	122	6
Т	Weather	317	25%	2	11,764	17%	3	1,068,111	17%	3	0.11	91	10
S	Sum	1,257	100%		69,447	100%		6,112,120	100%		0.63	88	56
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	122	10%	4	8,641	12%	4	726,673	12%	5	0.08	84	7
Α	Dig In	5	0%	8	97	0%	8	6,028	0%	9	0.00	-	0
J	Equipment Failure	528	42%	1	18,496	27%	1	1,459,260	24%	1	0.17	79	13
	Equipment Hit	41	3%	6	8,529	12%	5	1,069,161	18%	2	0.08	125	10
E	Other*	29	2%	7	3,237	5%	7	159,877	3%	7	0.03	49	1
٧	Overload	5	0%	8	89	0%	9	8,834	0%	8	0.00	99	0
	Tree	138	11%	3	12,669	18%	2	893,915	15%	4	0.12	71	8
E	Unknown	64	5%	5	5,843	8%	6	710,677	12%	6	0.05	122	6
Х	Weather	312	25%	2	11,623	17%	3	1,048,210	17%	3	0.11	90	10
С	Sum	1,244	100%		69,224	100%		6,082,636	100%		0.63	88	55

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	-	0%	5	-	0%	5	-	0%	5	0.00	-	-
J	Dig In	=	0%	5	=	0%	5	-	0%	5	0.00	-	-
	Equipment Failure	3	23%	3	8	4%	4	2,708	9%	3	0.00	339	0
E	Equipment Hit	1	8%	4	64	29%	2	6,144	21%	2	0.00	96	0
٧	Other*	-	0%	5	=	0%	5	-	0%	5	0.00	-	-
	Overload	-	0%	5	=	0%	5	-	0%	5	0.00	-	-
0	Tree	4	31%	2	10	4%	3	731	2%	4	0.00	73	0
N	Unknown	=	0%	5	=	0%	5	-	0%	5	0.00	-	-
L	Weather	5	38%	1	141	63%	1	19,901	67%	1	0.00	141	0
Υ	Sum	13	100%		223	100%		29,484	100%		0.00	132	0

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Glassboro District Major Outage Cause Summary - 2014

Customer Count: 160,303

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	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	574	14%	4	18,883	7%	5	1,199,750	4%	5	0.12	64	7
L	Dig In	55	1%	8	630	0%	9	162,455	1%	8	0.00	-	1
L	Equipment Failure	871	21%	2	54,504	19%	2	5,240,051	17%	3	0.34	96	33
	Equipment Hit	207	5%	6	52,758	18%	3	4,359,172	14%	4	0.33	83	27
Е	Other*	90	2%	7	12,195	4%	6	609,313	2%	7	0.08	50	4
٧	Overload	21	1%	9	2,784	1%	8	151,458	1%	9	0.02	54	1
Е	Tree	1,198	29%	1	87,429	30%	1	11,706,844	39%	1	0.55	134	73
N	Unknown	541	13%	5	11,328	4%	7	935,163	3%	6	0.07	83	6
Т	Weather	592	14%	3	46,424	16%	4	5,912,586	20%	2	0.29	127	37
S	Sum	4,149	100%		286,935	100%		30,276,790	100%		1.79	106	189
			1	1		1	1		1				
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	571	14%	3	18,869	7%	5	1,197,813	4%	5	0.12	63	7
Α	Dig In	54	1%	8	404	0%	9	119,289	0%	9	0.00	-	1
J	Equipment Failure	865	22%	2	54,463	20%	2	5,226,038	19%	2	0.34	96	33
	Equipment Hit	206	5%	6	52,734	19%	3	4,356,994	16%	4	0.33	83	27
E	Other*	90	2%	7	12,195	4%	6	609,313	2%	7	0.08	50	4
٧	Overload	20	1%	9	2,783	1%	8	151,373	1%	8	0.02	54	1
	Tree	1,116	28%	1	82,196	30%	1	10,340,988	37%	1	0.51	126	65
E	Unknown	540	14%	4	11,322	4%	7	931,275	3%	6	0.07	82	6
Х	Weather	533	13%	5	39,099	14%	4	4,838,156	17%	3	0.24	124	30
С	Sum	3,995	100%		274,065	100%		27,771,238	100%		1.71	101	173
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
A	Animal	3	2%	4	14	0%	6	1,937	0%	7	0.00	138	0
J	Dig In	1	1%	5	226	2%	3	43,166	2%	3	0.00	191	0
	Equipment Failure	6	4%	3	41	0%	4	14,013	1%	4	0.00	342	0
Е	Equipment Hit	1	1%	5	24	0%	5	2,178	0%	6	0.00	91	0
v	Other*	-	0%	9	-	0%	9		0%	9	0.00	-	-
	Overload	1	1%	5	1	0%	8	85	0%	8	0.00	85	0
0	Tree	82	53%	1	5,233	41%	2	1,365,856	55%	1	0.03	261	9
N	Unknown	1	1%	5	6	0%	7	3,888	0%	5	0.00	648	0
		1		_						_	0.05		_
L	Weather	59	38%	2	7,325	57%	1	1,074,429	43%	2	0.05	147	7

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Pleasantville District
Major Outage Cause Summary - 2014

Customer Count: 173,118 Cause **Events** Rank **Cust Out** Pct Rank Minutes Pct Rank SAIFI CAIDI Pct SAIDI 14% 7,314 5% 627,538 4% 0.04 Animal 316

L	Dig In	25	1%	9	147	0%	8	32,060	0%	8	0.00	-	0
L	Equipment Failure	770	33%	1	66,518	41%	1	5,426,338	36%	1	0.38	82	31
	Equipment Hit	76	3%	6	22,465	14%	2	3,021,461	20%	2	0.13	134	17
E	Other*	70	3%	7	17,066	11%	4	1,043,730	7%	5	0.10	61	6
٧	Overload	27	1%	8	63	0%	9	14,184	0%	9	0.00	225	0
E	Tree	373	16%	3	20,907	13%	3	2,328,518	15%	3	0.12	111	13
N	Unknown	181	8%	5	9,465	6%	6	779,355	5%	6	0.05	82	5
Т	Weather	461	20%	2	16,969	11%	5	1,983,388	13%	4	0.10	117	11
S	Sum	2,299	100%		160,914	100%		15,256,574	100%		0.93	95	88

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	315	14%	4	7,309	5%	7	626,598	5%	7	0.04	86	4
Α	Dig In	25	1%	9	147	0%	8	32,060	0%	8	0.00	-	0
J	Equipment Failure	752	33%	1	40,385	30%	1	3,150,938	24%	1	0.23	78	18
	Equipment Hit	76	3%	6	22,465	17%	2	3,021,461	23%	2	0.13	134	17
E	Other*	70	3%	7	17,066	13%	4	1,043,730	8%	5	0.10	61	6
٧	Overload	26	1%	8	62	0%	9	14,055	0%	9	0.00	227	0
	Tree	367	16%	3	20,866	16%	3	2,318,337	18%	3	0.12	111	13
E	Unknown	181	8%	5	9,465	7%	6	779,355	6%	6	0.05	82	5
Х	Weather	441	20%	2	16,771	12%	5	1,950,381	15%	4	0.10	116	11
С	Sum	2,253	100%		134,536	100%		12,936,916	100%		0.78	96	75

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1	2%	4	5	0%	4	940	0%	4	0.00	188	0
J	Dig In	-	0%	6	•	0%	6	-	0%	6	0.00	-	-
	Equipment Failure	18	39%	2	26,133	99%	1	2,275,401	98%	1	0.15	87	13
E	Equipment Hit	-	0%	6	ı	0%	6	-	0%	6	0.00	-	-
V	Other*	-	0%	6	ı	0%	6	-	0%	6	0.00	-	-
	Overload	1	2%	4	1	0%	5	129	0%	5	0.00	129	0
0	Tree	6	13%	3	41	0%	3	10,181	0%	3	0.00	248	0
N	Unknown	-	0%	6	•	0%	6	-	0%	6	0.00	-	-
L	Weather	20	43%	1	198	1%	2	33,007	1%	2	0.00	167	0
Υ	Sum	46	100%		26,378	100%		2,319,658	100%		0.15	88	13

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Winslow District Major Outage Cause Summary - 2014

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	317	16%	3	12,189	9%	5	780,690	5%	5	0.13	64	8
L	Dig In	13	1%	9	95	0%	9	20,210	0%	8	0.00	-	0
L	Equipment Failure	577	29%	1	21,264	16%	3	2,013,764	14%	3	0.22	95	21
	Equipment Hit	83	4%	6	14,828	11%	4	1,049,940	7%	4	0.15	71	11
E	Other*	41	2%	7	4,685	4%	7	244,313	2%	7	0.05	52	3
V	Overload	18	1%	8	109	0%	8	18,215	0%	9	0.00	167	0
E	Tree	491	25%	2	48,711	37%	1	6,095,145	42%	1	0.51	125	63
N	Unknown	183	9%	5	4,948	4%	6	447,186	3%	6	0.05	90	5
Т	Weather	252	13%	4	24,572	19%	2	3,952,566	27%	2	0.26	161	41
S	Sum	1,975	100%		131,401	100%		14,622,029	100%		1.37	111	152

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	316	17%	3	12,089	10%	5	757,390	6%	5	0.13	63	8
Α	Dig In	13	1%	9	95	0%	9	20,210	0%	8	0.00	-	0
J	Equipment Failure	573	30%	1	21,241	18%	2	1,991,289	17%	3	0.22	94	21
	Equipment Hit	79	4%	6	14,731	12%	4	1,046,114	9%	4	0.15	71	11
E	Other*	41	2%	7	4,685	4%	7	244,313	2%	7	0.05	52	3
٧	Overload	18	1%	8	109	0%	8	18,215	0%	9	0.00	167	0
	Tree	465	25%	2	44,960	37%	1	5,158,068	44%	1	0.47	115	54
E	Unknown	182	10%	5	4,942	4%	6	443,934	4%	6	0.05	90	5
Х	Weather	202	11%	4	17,515	15%	3	2,107,690	18%	2	0.18	120	22
С	Sum	1,889	100%		120,367	100%		11,787,223	100%		1.25	98	122

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1	1%	5	100	1%	3	23,300	1%	3	0.00	233	0
J	Dig In	i	0%	7	=	0%	7	-	0%	7	0.00	-	-
	Equipment Failure	4	5%	3	23	0%	5	22,475	1%	4	0.00	977	0
E	Equipment Hit	4	5%	3	97	1%	4	3,826	0%	5	0.00	39	0
V	Other*	ı	0%	7	-	0%	7	ı	0%	7	0.00	-	-
	Overload	ı	0%	7	-	0%	7	-	0%	7	0.00	-	-
0	Tree	26	30%	2	3,751	34%	2	937,077	33%	2	0.04	250	10
N	Unknown	1	1%	5	6	0%	6	3,252	0%	6	0.00	542	0
L	Weather	50	58%	1	7,057	64%	1	1,844,876	65%	1	0.07	261	19
Υ	Sum	86	100%		11,034	100%		2,834,806	100%		0.11	257	29

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 96,260

Rank **Cust Out** Rank **SAIFI CAIDI** Cause **Events** Pct Pct Minutes Pct Rank SAIDI Α Animal 1,628 15% 4 65,432 8% 7 4,994,110 6% 7 0.12 76 9 Dig In 0% 9 0% 9 0.00 0% L **Equipment Failure** 2,761 26% 1 187,368 22% 1 15,920,687 3 0.35 85 30 18% Equipment Hit 576 5% 6 120,680 14% 4 11,170,416 13% 4 0.23 93 21 Ε Other* 339 3% 7 76,036 9% 6,417,992 7% 0.14 84 12 ٧ Overload 89 1% 8 10,058 1% 8 502,656 1% 8 0.02 50 1 Ε Tree 2,093 20% 3 155,295 18% 2 21% 2 0.29 117 34 18,209,996 Ν Unknown 9% 5 92,605 5 9,707,121 11% 5 105 18 981 11% 0.17 Т Weather 2,202 21% 2 139,269 16% 3 19,415,989 22% 0.26 139 36 1 s Sum 10,669 100% 846,743 100% 86,338,968 100% 1.57 102 161

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	1,627	16%	4	65,428	8%	6	4,993,978	7%	6	0.12	76	9
Α	Dig In	=	0%	9	-	0%	9	-	0%	9	0.00	-	-
J	Equipment Failure	2,735	27%	1	182,444	23%	1	15,755,918	22%	2	0.34	86	30
	Equipment Hit	574	6%	6	120,678	16%	3	11,170,249	15%	4	0.23	93	21
E	Other*	328	3%	7	64,412	8%	7	2,926,658	4%	7	0.12	45	5
٧	Overload	89	1%	8	10,058	1%	8	502,656	1%	8	0.02	50	1
	Tree	1,965	19%	3	145,409	19%	2	16,383,560	23%	1	0.27	113	31
E	Unknown	949	9%	5	71,420	9%	5	5,211,749	7%	5	0.13	73	10
Х	Weather	1,995	19%	2	117,001	15%	4	15,303,306	21%	3	0.22	131	29
С	Sum	10,262	100%		776,850	100%		72,248,074	100%		1.45	93	134

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1	0%	7	4	0%	6	132	0%	7	0.00	33	0
J	Dig In	Ī	0%	8	•	0%	8	-	0%	8	0.00	=	=
	Equipment Failure	26	6%	4	4,924	7%	5	164,769	1%	5	0.01	33	0
E	Equipment Hit	2	0%	6	2	0%	7	167	0%	6	0.00	84	0
٧	Other*	11	3%	5	11,624	17%	3	3,491,334	25%	3	0.02	300	7
	Overload	-	0%	8	-	0%	8	-	0%	8	0.00	-	-
0	Tree	128	31%	2	9,886	14%	4	1,826,436	13%	4	0.02	185	3
N	Unknown	32	8%	3	21,185	30%	2	4,495,373	32%	1	0.04	212	8
L	Weather	207	51%	1	22,268	32%	1	4,112,683	29%	2	0.04	185	8
Υ	Sum	407	100%		69,893	100%		14,090,894	100%		0.13	202	26

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 537,622

Cape May District Major Outage Cause Summary - 2013

Customer Count: 110,880 Major Outage Cause Summary - 20

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	170	11%	3	4,778	5%	7	217,705	2%	7	0.04	46	2
L	Dig In	-	0%	9	•	0%	9	-	0%	9	0.00	=	-
L	Equipment Failure	611	39%	1	42,186	41%	1	3,138,516	29%	2	0.38	74	29
	Equipment Hit	58	4%	6	11,657	11%	4	761,463	7%	5	0.11	65	7
E	Other*	38	2%	7	6,672	6%	6	264,974	2%	6	0.06	40	2
٧	Overload	18	1%	8	1,001	1%	8	95,385	1%	8	0.01	95	1
Ε	Tree	153	10%	4	9,505	9%	5	1,741,696	16%	3	0.09	183	16
N	Unknown	61	4%	5	13,216	13%	3	1,118,739	10%	4	0.12	85	10
Т	Weather	478	30%	2	13,970	14%	2	3,504,678	32%	1	0.13	251	32
S	Sum	1,587	100%		102,985	100%		10,843,156	100%		0.93	105	98

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	170	12%	3	4,778	5%	6	217,705	3%	7	0.04	46	2
Α	Dig In	ı	0%	9	=	0%	9	=	0%	9	0.00	=	=
J	Equipment Failure	601	41%	1	40,161	45%	1	3,073,314	44%	1	0.37	77	28
	Equipment Hit	58	4%	5	11,657	13%	3	761,463	11%	4	0.11	65	7
E	Other*	37	3%	7	6,671	8%	5	264,925	4%	6	0.06	40	2
٧	Overload	18	1%	8	1,001	1%	8	95,385	1%	8	0.01	95	1
	Tree	112	8%	4	4,576	5%	7	549,830	8%	5	0.04	120	5
E	Unknown	55	4%	6	13,208	15%	2	1,112,930	16%	2	0.12	84	10
Х	Weather	398	27%	2	6,891	8%	4	886,821	13%	3	0.06	129	8
С	Sum	1,449	100%		88,943	100%		6,962,373	100%		0.80	78	63

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	-	0%	6	-	0%	6	-	0%	6	0.00	=	-
J	Dig In	ı	0%	6	=	0%	6	Ī	0%	6	0.00	=	-
	Equipment Failure	10	7%	3	2,025	14%	3	65,202	2%	3	0.02	32	1
E	Equipment Hit	ı	0%	6	=	0%	6	Ī	0%	6	0.00	=	=
V	Other*	1	1%	5	1	0%	5	49	0%	5	0.00	49	0
	Overload	ı	0%	6	=	0%	6	Ī	0%	6	0.00	=	=
0	Tree	41	30%	2	4,929	35%	2	1,191,866	31%	2	0.04	242	11
N	Unknown	6	4%	4	8	0%	4	5,809	0%	4	0.00	726	0
L	Weather	80	58%	1	7,079	50%	1	2,617,857	67%	1	0.06	370	24
Υ	Sum	138	100%		14,042	100%		3,880,783	100%		0.13	276	35

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Glassboro District

Customer Count: 158,237 Major Outage Cause Summary - 2013

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	706	17%	4	24,299	7%	7	1,654,578	5%	6	0.15	68	11
L	Dig In	Ī	0%	9	ı	0%	9	ı	0%	9	0.00	•	=
L	Equipment Failure	781	18%	2	58,361	18%	2	6,587,280	18%	3	0.37	113	42
	Equipment Hit	281	7%	6	46,987	14%	4	4,626,987	13%	4	0.30	98	29
E	Other*	97	2%	7	27,962	8%	6	1,034,650	3%	7	0.18	37	7
٧	Overload	40	1%	8	8,437	3%	8	353,019	1%	8	0.05	42	2
Е	Tree	1,143	27%	1	84,897	25%	1	11,142,692	31%	1	0.54	131	71
N	Unknown	488	11%	5	33,020	10%	5	2,704,188	8%	5	0.21	82	17
Т	Weather	722	17%	3	49,062	15%	3	7,670,610	21%	2	0.31	156	49
S	Sum	4,258	100%		333,025	100%		35,774,003	100%		2.10	107	226

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	705	17%	3	24,295	7%	7	1,654,446	5%	6	0.15	68	11
Α	Dig In	ı	0%	9	•	0%	9	•	0%	9	0.00	=	-
J	Equipment Failure	775	19%	2	58,309	18%	2	6,577,386	19%	3	0.37	113	42
	Equipment Hit	281	7%	6	46,987	14%	4	4,626,987	13%	4	0.30	98	29
E	Other*	96	2%	7	27,961	9%	6	1,034,568	3%	7	0.18	37	7
٧	Overload	40	1%	8	8,437	3%	8	353,019	1%	8	0.05	42	2
	Tree	1,097	26%	1	81,012	25%	1	10,720,731	31%	1	0.52	132	68
E	Unknown	480	12%	5	32,455	10%	5	2,441,657	7%	5	0.21	75	16
Х	Weather	692	17%	4	48,591	15%	3	7,445,454	21%	2	0.31	153	47
С	Sum	4,166	100%		328,047	100%		34,854,248	100%		2.07	106	220

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1	1%	5	4	0%	5	132	0%	5	0.00	33	0
J	Dig In	ı	0%	7	•	0%	7	•	0%	8	0.00	=	=
	Equipment Failure	6	7%	4	52	1%	4	9,894	1%	4	0.00	190	0
E	Equipment Hit	ı	0%	7	•	0%	7	0	0%	7	0.00	=	0
V	Other*	1	1%	5	1	0%	6	82	0%	6	0.00	82	0
	Overload	-	0%	7	-	0%	7	=	0%	8	0.00	=	=
0	Tree	46	50%	1	3,885	78%	1	421,960	46%	1	0.02	109	3
N	Unknown	8	9%	3	565	11%	2	262,531	29%	2	0.00	465	2
L	Weather	30	33%	2	471	9%	3	225,156	24%	3	0.00	478	1
Υ	Sum	92	100%		4,978	100%		919,755	100%		0.03	185	6

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Pleasantville District Major Outage Cause Summary - 2013

Customer Count: 172,389

Weather

Sum

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	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	372	13%	3	12,920	5%	7	575,688	2%	7	0.08	45	3
L	Dig In	=	0%	9	•	0%	9	-	0%	9	0.00	-	-
L	Equipment Failure	876	31%	1	66,413	25%	1	4,481,274	17%	3	0.39	67	26
	Equipment Hit	118	4%	7	39,170	15%	3	3,810,838	14%	5	0.23	97	22
Ε	Other*	125	4%	6	30,063	11%	5	4,204,008	16%	4	0.18	140	25
٧	Overload	16	1%	8	290	0%	8	18,314	0%	8	0.00	63	0
Ε	Tree	370	13%	4	24,680	9%	6	2,219,806	8%	6	0.14	90	13
N	Unknown	242	9%	5	38,992	15%	4	5,433,290	20%	2	0.23	139	32
Т	Weather	692	25%	2	55,252	21%	2	5,767,409	22%	1	0.32	104	34
S	Sum	2,811	100%		267,780	100%		26,510,626	100%		1.55	99	154
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	372	14%	3	12,920	6%	7	575,688	3%	7	0.08	45	3
Α	Dig In	-	0%	9	-	0%	9	-	0%	9	0.00	-	-
J	Equipment Failure	871	33%	1	66,408	30%	1	4,480,481	26%	2	0.39	67	26
	Equipment Hit	118	4%	6	39,170	18%	3	3,810,838	22%	3	0.23	97	22
Ε	Other*	118	4%	6	18,446	8%	5	713,338	4%	6	0.11	39	4
٧	Overload	16	1%	8	290	0%	8	18,314	0%	8	0.00	63	0
	Tree	342	13%	4	24,196	11%	4	2,105,733	12%	4	0.14	87	12
Ε	Unknown	224	8%	5	18,380	8%	6	1,206,257	7%	5	0.11	66	7
X	Weather	606	23%	2	40,941	19%	2	4,553,318	26%	1	0.24	111	27
С	Sum	2,667	100%		220,751	100%		17,463,967	100%		1.28	79	101
М	Cause	Fuente	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
_		Events			Cust Out			winutes				CAIDI	SAIDI
A	Animal	-	0%	6	-	0%	6	-	0%	6	0.00	-	-
J	Dig In	-	0%	6	-	0%	6	- 700	0%	6	0.00	-	-
_	Equipment Failure	5	3%	5	5	0%	5	793	0%	5	0.00	159	0
E	Equipment Hit	7	0%	6	11 617	0%	6	2 400 660	0%	6	0.00	- 200	- 20
V	Other*	/	5%	4	11,617	25%	3	3,490,669	39%	2	0.07	300	20
	Overload Tree	28	0%	6	484	0% 1%	6	-	0% 1%	6	0.00		- 1
0			19%				4	114,073		4		236	•
N	Unknown	18	13%	3	20,612	44%	1	4,227,033	47%	1	0.12	205	25

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

14,311

47,029

86

144

60%

100%

30%

100%

13%

100%

3

1,214,091

9,046,659

0.08

0.27

192

85

52

Winslow District Major Outage Cause Summary - 2013

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	380	19%	3	23,435	16%	2	2,546,139	19%	2	0.24	109	27
L	Dig In	-	0%	9	-	0%	9	-	0%	9	0.00	-	-
L	Equipment Failure	493	24%	1	20,408	14%	5	1,713,618	13%	5	0.21	84	18
	Equipment Hit	119	6%	6	22,866	16%	3	1,971,128	15%	4	0.24	86	21
E	Other*	79	4%	7	11,339	8%	6	914,360	7%	6	0.12	81	10
V	Overload	15	1%	8	330	0%	8	35,938	0%	8	0.00	109	0
E	Tree	427	21%	2	36,213	25%	1	3,105,803	24%	1	0.38	86	32
N	Unknown	190	9%	5	7,377	5%	7	450,904	3%	7	0.08	61	5
Т	Weather	310	15%	4	20,985	15%	4	2,473,293	19%	3	0.22	118	26
S	Sum	2,013	100%		142,953	100%		13,211,183	100%		1.49	92	137

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	380	19%	3	23,435	17%	2	2,546,139	20%	2	0.24	109	27
Α	Dig In	-	0%	9	=	0%	9	=	0%	9	0.00	-	-
J	Equipment Failure	488	25%	1	17,566	13%	5	1,624,738	13%	5	0.18	92	17
	Equipment Hit	117	6%	6	22,864	16%	3	1,970,961	15%	4	0.24	86	21
E	Other*	77	4%	7	11,334	8%	6	913,826	7%	6	0.12	81	10
٧	Overload	15	1%	8	330	0%	8	35,938	0%	8	0.00	109	0
	Tree	414	21%	2	35,625	26%	1	3,007,266	23%	1	0.37	84	31
E	Unknown	190	10%	5	7,377	5%	7	450,904	3%	7	0.08	61	5
Х	Weather	299	15%	4	20,578	15%	4	2,417,713	19%	3	0.22	117	25
С	Sum	1,980	100%		139,109	100%		12,967,486	100%		1.45	93	135

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	•	0%	6	-	0%	6	•	0%	6	0.00	-	-
J	Dig In	ı	0%	6	=	0%	6	-	0%	6	0.00	-	-
	Equipment Failure	5	15%	3	2,842	74%	1	88,880	36%	2	0.03	31	1
E	Equipment Hit	2	6%	4	2	0%	5	167	0%	5	0.00	84	0
٧	Other*	2	6%	4	5	0%	4	534	0%	4	0.00	107	0
	Overload	-	0%	6	-	0%	6	-	0%	6	0.00	-	-
0	Tree	13	39%	1	588	15%	2	98,537	40%	1	0.01	168	1
N	Unknown	ı	0%	6	=	0%	6	-	0%	6	0.00	-	-
L [Weather	11	33%	2	407	11%	3	55,579	23%	3	0.00	137	1
Υ	Sum	33	100%		3,844	100%		243,697	100%		0.04	63	3

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 96,116

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	2,046	11%	4	69,899	4%	7	12,141,173	1%	7	0.13	174	23
L	Dig In	183	1%	8	6,989	0%	9	20,548,080	1%	6	0.01	2,940	39
L	Equipment Failure	2,760	15%	3	180,489	11%	3	48,170,441	3%	4	0.34	267	90
	Equipment Hit	390	2%	7	92,412	5%	6	8,314,919	1%	8	0.17	90	16
E	Other*	755	4%	6	119,443	7%	4	60,683,300	4%	3	0.22	508	114
V	Overload	173	1%	9	11,987	1%	8	3,561,051	0%	9	0.02	297	7
E	Tree	4,638	25%	2	401,738	24%	2	220,799,114	15%	2	0.75	550	414
N	Unknown	1,466	8%	5	109,025	6%	5	44,793,164	3%	5	0.20	411	84
Т	Weather	6,004	33%	1	691,641	41%	1	1,046,282,512	71%	1	1.30	1,513	1,961
S	Sum	18,415	100%		1,683,623	100%		1,465,293,755	100%		3.16	870	2,747

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	1,910	18%	4	65,183	8%	6	4,179,520	5%	7	0.12	64	8
Α	Dig In	157	1%	8	2,185	0%	9	360,050	0%	9	0.00	165	1
J	Equipment Failure	2,577	24%	1	152,661	20%	2	14,605,884	18%	3	0.29	96	27
	Equipment Hit	368	3%	6	88,610	11%	4	7,184,927	9%	4	0.17	81	13
E	Other*	301	3%	7	76,846	10%	5	5,113,572	6%	5	0.14	67	10
٧	Overload	96	1%	9	6,263	1%	8	716,175	1%	8	0.01	114	1
	Tree	2,526	23%	2	193,533	25%	1	22,018,185	27%	2	0.36	114	41
E	Unknown	819	8%	5	51,849	7%	7	4,987,327	6%	6	0.10	96	9
Х	Weather	2,089	19%	3	136,199	18%	3	23,760,710	29%	1	0.26	174	45
С	Sum	10,843	100%		773,329	100%		82,926,350	100%		1.45	107	155

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	136	2%	6	4,716	1%	8	7,961,654	1%	7	0.01	1,688	15
J	Dig In	26	0%	8	4,804	1%	7	20,188,030	1%	6	0.01	4,202	38
	Equipment Failure	183	2%	5	27,828	3%	5	33,564,557	2%	5	0.05	1,206	63
E	Equipment Hit	22	0%	9	3,802	0%	9	1,129,991	0%	9	0.01	297	2
٧	Other*	454	6%	4	42,597	5%	4	55,569,728	4%	3	0.08	1,305	104
	Overload	77	1%	7	5,724	1%	6	2,844,876	0%	8	0.01	497	5
0	Tree	2,112	28%	2	208,205	23%	2	198,780,929	14%	2	0.39	955	373
N	Unknown	647	9%	3	57,176	6%	3	39,805,837	3%	4	0.11	696	75
L	Weather	3,915	52%	1	555,442	61%	1	1,022,521,802	74%	1	1.04	1,841	1,917
Υ	Sum	7,572	100%		910,294	100%		1,382,367,405	100%		1.71	1,519	2,591

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 533,496

Cape May District

Customer Count: 109,832	
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Cı	ıstomer Count: 1	09,832			Major C	Outage	e Caus	se Summary -	2012				
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	164	6%	5	2,579	1%	7	167,853	0%	8	0.02	65	2
L	Dig In	13	1%	9	46	0%	9	8,645	0%	9	0.00	188	0
L	Equipment Failure	520	20%	2	53,332	25%	2	21,283,034	18%	2	0.49	399	194
	Equipment Hit	41	2%	7	12,941	6%	5	1,465,625	1%	6	0.12	113	13
E	Other*	370	14%	3	28,454	13%	4	8,403,292	7%	4	0.26	295	77
V	Overload	39	2%	8	1,389	1%	8	322,282	0%	7	0.01	232	3
E	Tree	273	11%	4	29,447	14%	3	12,494,922	10%	3	0.27	424	114
N	Unknown	163	6%	6	11,959	6%	6	3,399,483	3%	5	0.11	284	31
Т	Weather	1,010	39%	1	73,540	34%	1	72,025,986	60%	1	0.67	979	656
S	Sum	2,593	100%		213,687	100%		119,571,123	100%		1.95	560	1,089
		T	1	1		1	1			1			
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	154	10%	3	2,515	2%	7	160,619	2%	7	0.02	64	1
Α	Dig In	12	1%	9	45	0%	9	8,563	0%	9	0.00	190	0
J	Equipment Failure	491	32%	2	43,950	37%	1	3,471,601	40%	1	0.40	79	32
	Equipment Hit	36	2%	7	10,535	9%	5	694,489	8%	5	0.10	66	6
E	Other*	63	4%	6	23,279	20%	2	839,019	10%	4	0.21	36	8

	Cause	Events	PCt	Rank	Cust Out	PCt	Rank	winutes	PCt	Rank	SAIFI	CAIDI	SAIDI
M	Animal	154	10%	3	2,515	2%	7	160,619	2%	7	0.02	64	1
Α	Dig In	12	1%	9	45	0%	9	8,563	0%	9	0.00	190	0
J	Equipment Failure	491	32%	2	43,950	37%	1	3,471,601	40%	1	0.40	79	32
	Equipment Hit	36	2%	7	10,535	9%	5	694,489	8%	5	0.10	66	6
Е	Other*	63	4%	6	23,279	20%	2	839,019	10%	4	0.21	36	8
٧	Overload	13	1%	8	445	0%	8	88,978	1%	8	0.00	200	1
	Tree	153	10%	4	15,434	13%	4	1,327,271	15%	3	0.14	86	12
E	Unknown	71	5%	5	5,503	5%	6	370,670	4%	6	0.05	67	3
Х	Weather	525	35%	1	16,763	14%	3	1,705,592	20%	2	0.15	102	16
С	Sum	1,518	100%		118,469	100%		8,666,802	100%		1.08	73	79

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	10	1%	7	64	0%	8	7,234	0%	8	0.00	113	0
J	Dig In	1	0%	9	1	0%	9	82	0%	9	0.00	82	0
	Equipment Failure	29	3%	5	9,382	10%	3	17,811,432	16%	2	0.09	1,898	162
E	Equipment Hit	5	0%	8	2,406	3%	6	771,136	1%	6	0.02	321	7
V	Other*	307	29%	2	5,175	5%	5	7,564,274	7%	4	0.05	1,462	69
	Overload	26	2%	6	944	1%	7	233,303	0%	7	0.01	247	2
0	Tree	120	11%	3	14,013	15%	2	11,167,651	10%	3	0.13	797	102
N	Unknown	92	9%	4	6,456	7%	4	3,028,813	3%	5	0.06	469	28
L	Weather	485	45%	1	56,777	60%	1	70,320,394	63%	1	0.52	1,239	640
Υ	Sum	1,075	100%		95,218	100%		110,904,320	100%		0.87	1,165	1,010

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Glassboro District Major Outage Cause Summary - 2012

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	871	14%	3	34,058	8%	5	2,452,642	1%	7	0.22	72	16
L	Dig In	110	2%	7	3,044	1%	9	1,079,842	0%	9	0.02	355	7
L	Equipment Failure	839	13%	4	41,362	9%	3	10,984,682	4%	4	0.26	266	70
	Equipment Hit	179	3%	6	36,858	8%	4	3,077,539	1%	5	0.23	83	20
E	Other*	89	1%	8	17,328	4%	7	1,206,388	0%	8	0.11	70	8
٧	Overload	50	1%	9	9,368	2%	8	2,772,598	1%	6	0.06	296	18
E	Tree	2,095	33%	1	150,167	34%	1	80,424,097	32%	2	0.96	536	512
N	Unknown	567	9%	5	31,350	7%	6	12,386,822	5%	3	0.20	395	79
Т	Weather	1,542	24%	2	122,457	27%	2	137,749,390	55%	1	0.78	1,125	877
S	Sum	6,342	100%		445,992	100%		252,134,001	100%		2.84	565	1,604

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	815	20%	2	32,812	12%	5	2,240,260	6%	5	0.21	68	14
Α	Dig In	91	2%	7	1,251	0%	9	164,921	0%	9	0.01	132	1
J	Equipment Failure	789	19%	3	34,120	12%	4	3,736,710	10%	3	0.22	110	24
	Equipment Hit	170	4%	6	36,550	13%	3	3,000,950	8%	4	0.23	82	19
E	Other*	76	2%	8	16,823	6%	7	1,114,954	3%	7	0.11	66	7
V	Overload	32	1%	9	5,297	2%	8	552,669	1%	8	0.03	104	4
	Tree	1,219	30%	1	90,999	33%	1	12,331,424	32%	2	0.58	136	78
E	Unknown	363	9%	5	19,401	7%	6	2,027,376	5%	6	0.12	104	13
Х	Weather	527	13%	4	36,776	13%	2	12,806,471	34%	1	0.23	348	81
С	Sum	4,082	100%		274,029	100%		37,975,735	100%		1.74	139	242

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	56	2%	4	1,246	1%	7	212,382	0%	7	0.01	170	1
J	Dig In	19	1%	6	1,793	1%	6	914,922	0%	6	0.01	510	6
	Equipment Failure	50	2%	5	7,242	4%	4	7,247,972	3%	4	0.05	1,001	46
E	Equipment Hit	9	0%	9	308	0%	9	76,589	0%	9	0.00	249	0
V	Other*	13	1%	8	505	0%	8	91,434	0%	8	0.00	181	1
	Overload	18	1%	7	4,071	2%	5	2,219,929	1%	5	0.03	545	14
0	Tree	876	39%	2	59,168	34%	2	68,092,673	32%	2	0.38	1,151	433
N	Unknown	204	9%	3	11,949	7%	3	10,359,446	5%	3	0.08	867	66
L	Weather	1,015	45%	1	85,681	50%	1	124,942,919	58%	1	0.55	1,458	795
Υ	Sum	2,260	100%		171,963	100%		214,158,266	100%		1.09	1,245	1,363

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 157,142

Pleasantville District Major Outage Cause Summary - 2012

Customer Count: 170,834

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	598	10%	4	25,400	3%	6	8,595,159	1%	7	0.15	338	50
L	Dig In	29	0%	9	3,263	0%	8	19,297,962	2%	5	0.02	5,914	113
L	Equipment Failure	873	14%	3	52,365	7%	5	11,563,998	1%	6	0.31	221	68
	Equipment Hit	98	2%	7	20,901	3%	7	1,617,235	0%	8	0.12	77	9
E	Other*	215	3%	6	60,664	8%	3	44,319,121	4%	3	0.36	731	259
٧	Overload	54	1%	8	688	0%	9	411,703	0%	9	0.00	598	2
E	Tree	1,204	19%	2	150,601	19%	2	103,169,553	10%	2	0.88	685	604
N	Unknown	440	7%	5	54,540	7%	4	24,763,012	2%	4	0.32	454	145
Т	Weather	2,710	44%	1	429,565	54%	1	778,037,513	78%	1	2.51	1,811	4,554
S	Sum	6,221	100%		797,987	100%		991,775,256	100%		4.67	1,243	5,805

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	578	18%	4	23,429	9%	5	1,357,028	6%	7	0.14	58	8
Α	Dig In	27	1%	8	278	0%	8	76,863	0%	8	0.00	276	0
J	Equipment Failure	792	24%	1	45,031	18%	3	4,001,219	17%	3	0.26	89	23
	Equipment Hit	92	3%	7	20,064	8%	7	1,399,235	6%	6	0.12	70	8
E	Other*	98	3%	6	25,750	10%	4	2,362,848	10%	4	0.15	92	14
٧	Overload	26	1%	9	227	0%	9	32,706	0%	9	0.00	144	0
	Tree	645	20%	3	53,891	21%	2	4,999,566	21%	2	0.32	93	29
E	Unknown	211	7%	5	22,779	9%	6	2,171,919	9%	5	0.13	95	13
Х	Weather	769	24%	2	62,331	25%	1	7,310,608	31%	1	0.36	117	43
С	Sum	3,238	100%		253,780	100%		23,711,992	100%		1.49	93	139

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	20	1%	7	1,971	0%	7	7,238,131	1%	7	0.01	3,672	42
J	Dig In	2	0%	9	2,985	1%	6	19,221,100	2%	5	0.02	6,439	113
	Equipment Failure	81	3%	5	7,334	1%	5	7,562,778	1%	6	0.04	1,031	44
E	Equipment Hit	6	0%	8	837	0%	8	218,000	0%	9	0.00	260	1
٧	Other*	117	4%	4	34,914	6%	3	41,956,273	4%	3	0.20	1,202	246
	Overload	28	1%	6	461	0%	9	378,997	0%	8	0.00	822	2
0	Tree	559	19%	2	96,710	18%	2	98,169,987	10%	2	0.57	1,015	575
N	Unknown	229	8%	3	31,761	6%	4	22,591,093	2%	4	0.19	711	132
L	Weather	1,941	65%	1	367,234	67%	1	770,726,904	80%	1	2.15	2,099	4,512
Υ	Sum	2,983	100%		544,207	100%		968,063,264	100%		3.19	1,779	5,667

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Winslow District

Customer Coul	nt: 9	95,688
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Cu	stomer Count: 9	5,688			Major Ou	itage C	Cause	Summary - 2	012				
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	413	13%	4	7,862	3%	7	925,519	1%	7	0.08	118	10
L	Dig In	31	1%	8	636	0%	8	161,630	0%	8	0.01	254	2
L	Equipment Failure	528	16%	3	33,430	15%	3	4,338,727	4%	4	0.35	130	45
Ī	Equipment Hit	72	2%	7	21,712	10%	4	2,154,519	2%	6	0.23	99	23
Е	Other*	81	2%	6	12,997	6%	5	6,754,498	7%	3	0.14	520	71
V	Overload	30	1%	9	542	0%	9	54,469	0%	9	0.01	100	1
E	Tree	1,066	33%	1	71,523	32%	1	24,710,542	24%	2	0.75	345	258
N	Unknown	296	9%	5	11,176	5%	6	4,243,847	4%	5	0.12	380	44
Т	Weather	742	23%	2	66,079	29%	2	58,469,624	57%	1	0.69	885	611
S	Sum	3,259	100%		225,957	100%		101,813,376	100%		2.36	451	1,064
		•	1			_	1		1	ı			
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	363	18%	3	6,427	5%	6	421,613	3%	6	0.07	66	4
Α	Dig In	27	1%	8	611	0%	8	109,703	1%	8	0.01	180	1
J	Equipment Failure	505	25%	2	29,560	23%	2	3,396,353	27%	1	0.31	115	35
	Equipment Hit	70	3%	6	21,461	17%	3	2,090,253	17%	3	0.22	97	22
E	Other*	64	3%	7	10,994	9%	5	796,752	6%	5	0.11	72	8
٧	Overload	25	1%	9	294	0%	9	41,822	0%	9	0.00	142	0
	Tree	509	25%	1	33,209	26%	1	3.359.924	27%	2	0.35	101	35

J	Equipment Failure	505	25%	2	29,560	23%	2	3,396,353	27%	1	0.31	115	35
	Equipment Hit	70	3%	6	21,461	17%	3	2,090,253	17%	3	0.22	97	22
E	Other*	64	3%	7	10,994	9%	5	796,752	6%	5	0.11	72	8
٧	Overload	25	1%	9	294	0%	9	41,822	0%	9	0.00	142	0
	Tree	509	25%	1	33,209	26%	1	3,359,924	27%	2	0.35	101	35
E	Unknown	174	9%	5	4,166	3%	7	417,362	3%	7	0.04	100	4
Х	Weather	268	13%	4	20,329	16%	4	1,938,038	15%	4	0.21	95	20
С	Sum	2,005	100%		127,051	100%		12,571,821	100%		1.33	99	131
				,		7	•			7			
M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	50	4%	4	1,435	1%	6	503,906	1%	6	0.01	351	5
			00/	,	0.5	00/		E4 007	00/		000	0.077	-

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	50	4%	4	1,435	1%	6	503,906	1%	6	0.01	351	5
J	Dig In	4	0%	8	25	0%	9	51,927	0%	8	0.00	2,077	1
	Equipment Failure	23	2%	5	3,870	4%	4	942,374	1%	5	0.04	244	10
Е	Equipment Hit	2	0%	9	251	0%	7	64,266	0%	7	0.00	256	1
٧	Other*	17	1%	6	2,003	2%	5	5,957,747	7%	3	0.02	2,974	62
	Overload	5	0%	7	248	0%	8	12,647	0%	9	0.00	51	0
0	Tree	557	44%	1	38,314	39%	2	21,350,619	24%	2	0.40	557	223
N	Unknown	122	10%	3	7,010	7%	3	3,826,485	4%	4	0.07	546	40
L	Weather	474	38%	2	45,750	46%	1	56,531,585	63%	1	0.48	1,236	591
Υ	Sum	1,254	100%		98,906	100%		89,241,555	100%		1.03	902	933

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1,800	13%	4	66,897	5%	7	15,583,767	5%	5	0.13	233	29
L	Dig In	100	1%	9	2,352	0%	9	325,273	0%	9	0.00	138	1
L	Equipment Failure	2,865	20%	3	241,030	20%	3	25,672,125	8%	3	0.45	107	48
	Equipment Hit	391	3%	6	98,622	8%	5	7,937,864	2%	6	0.18	80	15
E	Other*	370	3%	7	100,360	8%	4	7,412,267	2%	7	0.19	74	14
٧	Overload	330	2%	8	29,017	2%	8	3,509,275	1%	8	0.05	121	7
E	Tree	3,895	27%	1	316,032	26%	1	117,974,947	35%	2	0.59	373	221
N	Unknown	1,203	8%	5	71,964	6%	6	23,066,250	7%	4	0.13	321	43
T	Weather	3,346	23%	2	290,880	24%	2	134,729,260	40%	1	0.54	463	252
S	Sum	14,300	100%		1,217,154	100%		336,211,029	100%		2.28	276	629

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	1,770	15%	4	58,785	6%	6	4,419,738	4%	7	0.11	75	8
Α	Dig In	100	1%	9	2,352	0%	9	325,273	0%	9	0.00	138	1
J	Equipment Failure	2,784	24%	2	230,320	24%	1	20,178,745	19%	3	0.43	88	38
	Equipment Hit	387	3%	6	97,366	10%	5	7,859,929	8%	4	0.18	81	15
E	Other*	334	3%	7	97,441	10%	4	7,148,911	7%	5	0.18	73	13
٧	Overload	323	3%	8	28,996	3%	8	3,497,755	3%	8	0.05	121	7
	Tree	2,820	24%	1	203,396	22%	2	29,206,343	28%	1	0.38	144	55
E	Unknown	897	8%	5	49,823	5%	7	4,506,924	4%	6	0.09	90	8
Х	Weather	2,428	`	3	173,697	18%	3	26,564,795	26%	2	0.33	153	50
С	Sum	11,843	100%		942,176	100%		103,708,411	100%		1.76	110	194

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	30	1%	6	8,112	3%	5	11,164,030	5%	4	0.02	1,376	21
] J	Dig In	-	0%	9	•	0%	9	i.	0%	9	0.00	=	=
	Equipment Failure	81	3%	4	10,710	4%	4	5,493,381	2%	5	0.02	513	10
E	Equipment Hit	4	0%	8	1,256	0%	7	77,935	0%	7	0.00	62	0
V	Other*	36	1%	5	2,919	1%	6	263,356	0%	6	0.01	90	0
	Overload	7	0%	7	21	0%	8	11,521	0%	8	0.00	549	0
0	Tree	1,075	44%	1	112,636	41%	2	88,768,605	38%	2	0.21	788	166
N	Unknown	306	12%	3	22,141	8%	3	18,559,326	8%	3	0.04	838	35
L	Weather	918	37%	2	117,183	43%	1	108,164,466	47%	1	0.22	923	202
Υ	Sum	2,457	100%		274,978	100%		232,502,618	100%		0.51	846	435

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 534,335

Cape May District

Customer	Count:	109,535
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Cu	stomer Count: 1	09,535			Major	Outag	ge Cau	use Summary	/ - 20 1	1			
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	184	9%	4	13,496	8%	4	1,003,960	2%	5	0.12	74	9
L	Dig In	15	1%	9	690	0%	9	75,886	0%	9	0.01	110	1
L	Equipment Failure	508	24%	2	37,929	23%	2	3,001,335	6%	4	0.35	79	27
	Equipment Hit	37	2%	8	12,499	7%	6	869,239	2%	6	0.11	70	8
Е	Other*	65	3%	7	11,480	7%	7	701,493	1%	8	0.10	61	6
٧	Overload	96	5%	6	7,632	5%	8	833,517	2%	7	0.07	109	8
Е	Tree	226	11%	3	12,991	8%	5	7,965,572	15%	3	0.12	613	73
N	Unknown	143	7%	5	13,796	8%	3	10,288,051	20%	2	0.13	746	94
Т	Weather	806	39%	1	57,481	34%	1	27,561,902	53%	1	0.52	479	252
S	Sum	2,080	100%		167,994	100%		52,300,955	100%		1.53	311	477
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
м	Animal	183	11%	3	13,495	10%	3	1,002,476	8%	3	0.12	74	9
Α	Dig In	15	1%	9	690	1%	9	75,886	1%	9	0.01	110	1
J	Equipment Failure	499	30%	2	37,884	29%	1	2,963,707	24%	2	0.35	78	27
	Equipment Hit	37	2%	8	12,499	9%	4	869,239	7%	4	0.11	70	8
E	Other*	55	3%	7	11,376	9%	5	592,036	5%	6	0.10	52	5
٧	Overload	96	6%	5	7,632	6%	6	833,517	7%	5	0.07	109	8
ſ	Tree	142	9%	4	6,647	5%	7	581,846	5%	7	0.06	88	5
Е	Unknown	81	5%	6	5,506	4%	8	516,586	4%	8	0.05	94	5
Х	Weather	551	`	1	36,088	27%	2	4,662,766	39%	1	0.33	129	43

' L					,		_	.,,		-	0.00		
С	Sum	1,659	100%		131,817	100%		12,098,058	100%		1.20	92	110
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1	0%	6	1	0%	6	1,484	0%	6	0.00	1,484	0
J	Dig In	-	0%	7	-	0%	7	=	0%	7	0.00	-	-
	Equipment Failure	9	2%	5	45	0%	5	37,628	0%	5	0.00	836	0
E	Equipment Hit	-	0%	7	-	0%	7	=	0%	7	0.00	-	-
٧	Other*	10	2%	4	104	0%	4	109,458	0%	4	0.00	1,052	1
	Overload	=	0%	7	•	0%	7	•	0%	7	0.00		-
0	Tree	84	20%	2	6,344	18%	3	7,383,726	18%	3	0.06	1,164	67
N	Unknown	62	15%	3	8,290	23%	2	9,771,465	24%	2	0.08	1,179	89
L	Weather	255	61%	1	21,393	59%	1	22,899,136	57%	1	0.20	1,070	209
Υ	Sum	421	100%		36.177	100%		40.202.898	100%		0.33	1.111	367

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Glassboro District Major Outage Cause Summary - 2011

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	816	14%	4	31,086	7%	5	7,024,857	7%	4	0.20	226	45
L	Dig In	46	1%	9	899	0%	9	129,441	0%	9	0.01	144	1
L	Equipment Failure	1,009	17%	3	72,746	16%	3	10,858,747	10%	3	0.46	149	69
	Equipment Hit	198	3%	6	44,759	10%	4	3,676,515	3%	6	0.28	82	23
E	Other*	107	2%	7	28,156	6%	6	3,129,722	3%	7	0.18	111	20
٧	Overload	65	1%	8	5,935	1%	8	695,700	1%	8	0.04	117	4
E	Tree	1,912	33%	1	134,467	30%	1	42,533,637	40%	1	0.85	316	270
N	Unknown	493	8%	5	25,602	6%	7	4,147,684	4%	5	0.16	162	26
Т	Weather	1,184	20%	2	105,244	23%	2	33,456,243	32%	2	0.67	318	212
S	Sum	5,830	100%		448,894	100%		105,652,544	100%		2.85	235	671

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	802	16%	4	25,984	7%	5	2,102,559	4%	7	0.16	81	13
Α	Dig In	46	1%	9	899	0%	9	129,441	0%	9	0.01	144	1
J	Equipment Failure	967	19%	2	65,423	18%	3	6,656,505	14%	3	0.42	102	42
	Equipment Hit	198	4%	6	44,759	12%	4	3,676,515	8%	4	0.28	82	23
E	Other*	101	2%	7	25,807	7%	6	3,086,204	6%	5	0.16	120	20
V	Overload	65	1%	8	5,935	2%	8	695,700	1%	8	0.04	117	4
	Tree	1,556	31%	1	96,444	26%	1	15,614,506	33%	1	0.61	162	99
E	Unknown	418	8%	5	23,033	6%	7	2,234,330	5%	6	0.15	97	14
Х	Weather	909	18%	3	76,820	21%	2	13,571,723	28%	2	0.49	177	86
С	Sum	5,062	100%		365,104	100%		47,767,483	100%		2.32	131	303

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	14	2%	5	5,102	6%	4	4,922,298	9%	3	0.03	965	31
J	Dig In	•	0%	7	•	0%	7	-	0%	7	0.00	=	=
	Equipment Failure	42	5%	4	7,323	9%	3	4,202,241	7%	4	0.05	574	27
E	Equipment Hit	•	0%	7	•	0%	7	-	0%	7	0.00	=	=
V	Other*	6	1%	6	2,349	3%	6	43,518	0%	6	0.01	19	0
	Overload	•	0%	7	•	0%	7	-	0%	7	0.00	=	=
0	Tree	356	46%	1	38,023	45%	1	26,919,131	47%	1	0.24	708	171
N	Unknown	75	10%	3	2,569	3%	5	1,913,354	3%	5	0.02	745	12
L	Weather	275	36%	2	28,424	34%	2	19,884,519	34%	2	0.18	700	126
Υ	Sum	768	100%		83,790	100%		57,885,061	100%		0.53	691	367

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 157,521

Pleasantville District

Customer Count: 172,083 Major Outage Cause Summary - 2011

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	412	12%	4	13,616	3%	8	6,921,093	6%	4	0.08	508	40
L	Dig In	18	1%	9	140	0%	9	12,395	0%	9	0.00	89	0
L	Equipment Failure	775	22%	3	96,645	24%	1	8,291,150	7%	3	0.56	86	48
	Equipment Hit	91	3%	8	20,978	5%	5	1,290,920	1%	8	0.12	62	8
E	Other*	120	3%	6	51,046	13%	4	2,738,464	2%	6	0.30	54	16
٧	Overload	103	3%	7	14,376	4%	7	1,799,167	1%	7	0.08	125	10
Е	Tree	886	26%	1	93,251	23%	2	43,121,508	36%	2	0.54	462	251
N	Unknown	260	7%	5	19,745	5%	6	3,877,367	3%	5	0.11	196	23
Т	Weather	802	23%	2	88,012	22%	3	52,991,092	44%	1	0.51	602	308
S	Sum	3,467	100%		397,809	100%		121,043,156	100%		2.31	304	703

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	403	15%	4	10,723	4%	8	696,368	3%	8	0.06	65	4
Α	Dig In	18	1%	9	140	0%	9	12,395	0%	9	0.00	89	0
J	Equipment Failure	754	27%	1	95,530	32%	1	7,667,983	29%	1	0.56	80	45
	Equipment Hit	87	3%	8	19,722	7%	5	1,212,985	5%	6	0.11	62	7
E	Other*	104	4%	6	50,606	17%	2	2,647,989	10%	4	0.29	52	15
٧	Overload	100	4%	7	14,373	5%	7	1,796,660	7%	5	0.08	125	10
	Tree	518	19%	3	46,764	16%	3	5,425,219	21%	3	0.27	116	32
E	Unknown	195	7%	5	15,578	5%	6	966,308	4%	7	0.09	62	6
Х	Weather	594	`	2	45,553	15%	4	5,980,514	23%	2	0.26	131	35
С	Sum	2,773	100%		298,989	100%		26,406,422	100%		1.74	88	153

М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	9	1%	6	2,893	3%	4	6,224,725	7%	3	0.02	2,152	36
J	Dig In	-	0%	9	=	0%	9	=	0%	9	0.00	=	-
	Equipment Failure	21	3%	4	1,115	1%	6	623,167	1%	5	0.01	559	4
E	Equipment Hit	4	1%	7	1,256	1%	5	77,935	0%	7	0.01	62	0
٧	Other*	16	2%	5	440	0%	7	90,475	0%	6	0.00	206	1
	Overload	3	0%	8	3	0%	8	2,507	0%	8	0.00	836	0
0	Tree	368	53%	1	46,487	47%	1	37,696,288	40%	2	0.27	811	219
N	Unknown	65	9%	3	4,167	4%	3	2,911,060	3%	4	0.02	699	17
L	Weather	208	30%	2	42,459	43%	2	47,010,578	50%	1	0.25	1,107	273
Υ	Sum	694	100%		98,820	100%		94,636,734	100%		0.57	958	550

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Winslow District
Major Outage Cause Summary - 2011

Customer Count: 95,196

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	388	13%	4	8,699	4%	7	633,858	1%	7	0.09	73	7
L	Dig In	21	1%	9	623	0%	9	107,551	0%	9	0.01	173	1
L	Equipment Failure	573	20%	2	33,710	17%	3	3,520,894	6%	4	0.35	104	37
	Equipment Hit	65	2%	8	20,386	10%	4	2,101,190	4%	5	0.21	103	22
E	Other*	78	3%	6	9,678	5%	6	842,588	1%	6	0.10	87	9
٧	Overload	66	2%	7	1,074	1%	8	180,891	0%	8	0.01	168	2
E	Tree	871	30%	1	75,323	37%	1	24,354,231	43%	1	0.79	323	256
N	Unknown	307	11%	5	12,821	6%	5	4,753,148	8%	3	0.13	371	50
Т	Weather	554	19%	3	40,143	20%	2	20,720,023	36%	2	0.42	516	218
S	Sum	2,923	100%		202,457	100%		57,214,374	100%		2.13	283	601

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	382	16%	3	8,583	6%	6	618,335	4%	7	0.09	72	6
Α	Dig In	21	1%	9	623	0%	9	107,551	1%	9	0.01	173	1
J	Equipment Failure	564	24%	2	31,483	22%	2	2,890,549	17%	2	0.33	92	30
	Equipment Hit	65	3%	7	20,386	14%	3	2,101,190	12%	4	0.21	103	22
E	Other*	74	3%	6	9,652	7%	5	822,683	5%	5	0.10	85	9
V	Overload	62	3%	8	1,056	1%	8	171,877	1%	8	0.01	163	2
	Tree	604	26%	1	53,541	37%	1	7,584,772	43%	1	0.56	142	80
E	Unknown	203	9%	5	5,706	4%	7	789,701	5%	6	0.06	138	8
Х	Weather	374	16%	4	15,236	10%	4	2,349,791	13%	3	0.16	154	25
С	Sum	2,349	100%		146,266	100%		17,436,449	100%		1.54	119	183

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	6	1%	5	116	0%	5	15,523	0%	6	0.00	134	0
J	Dig In	-	0%	8	Ī	0%	8	-	0%	8	0.00	-	•
	Equipment Failure	9	2%	4	2,227	4%	4	630,344	2%	4	0.02	283	7
E	Equipment Hit	-	0%	8	-	0%	8	-	0%	8	0.00	-	•
٧	Other*	4	1%	6	26	0%	6	19,905	0%	5	0.00	766	0
	Overload	4	1%	6	18	0%	7	9,014	0%	7	0.00	501	0
0	Tree	267	47%	1	21,782	39%	2	16,769,459	42%	2	0.23	770	176
N	Unknown	104	18%	3	7,115	13%	3	3,963,447	10%	3	0.07	557	42
L	Weather	180	31%	2	24,907	44%	1	18,370,232	46%	1	0.26	738	193
Υ	Sum	574	100%		56,191	100%		39,777,925	100%		0.59	708	418

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 535,428

Cu	istomer Count: 5	35,428		IVIa	ijor Outage	Cause	Sumr	nary - 2010					
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	2,016	12%	4	105,052	7%	6	11,664,976	2%	7	0.20	111	22
L	Dig In	200	1%	9	19,594	1%	9	17,223,164	3%	5	0.04	879	32
L	Equipment Failure	2,638	16%	3	184,859	13%	3	26,633,678	5%	4	0.35	144	50
	Equipment Hit	394	2%	6	119,228	8%	5	12,767,393	2%	6	0.22	107	24
E	Other*	308	2%	8	39,674	3%	7	4,100,846	1%	9	0.07	103	8
٧	Overload	312	2%	7	35,941	3%	8	5,391,484	1%	8	0.07	150	10
Е	Tree	4,155	26%	2	371,867	26%	2	104,189,120	19%	2	0.69	280	195
N	Unknown	1,948	12%	5	131,807	9%	4	40,746,764	7%	3	0.25	309	76
Т	Weather	4,291	26%	1	424,127	30%	1	331,092,375	60%	1	0.79	781	618
S	Sum	16,262	100%		1,432,149	100%		553,809,800	100%		2.67	387	1,034
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	1,898	17%	3	101,467	12%	5	8,856,790	9%	6	0.19	87	17
Α	Dig In	147	1%	9	4,405	1%	9	733,194	1%	9	0.01	166	1
J	Equipment Failure	2,430	22%	2	147,760	18%	2	18,893,216	19%	2	0.28	128	35
Г	Emiliana and I lit	277	20/	_	110 100	4.40/	2	40 500 700	400/	4	0.00	407	0.4

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	1,898	17%	3	101,467	12%	5	8,856,790	9%	6	0.19	87	17
Α	Dig In	147	1%	9	4,405	1%	9	733,194	1%	9	0.01	166	1
J	Equipment Failure	2,430	22%	2	147,760	18%	2	18,893,216	19%	2	0.28	128	35
	Equipment Hit	377	3%	6	118,109	14%	3	12,599,760	13%	4	0.22	107	24
Ε	Other*	245	2%	7	34,711	4%	7	2,141,266	2%	8	0.06	62	4
٧	Overload	238	2%	8	28,530	3%	8	3,475,576	4%	7	0.05	122	6
	Tree	2,534	23%	1	196,314	23%	1	26,502,360	27%	1	0.37	135	49
E	Unknown	1,415	13%	5	91,424	11%	6	9,059,647	9%	5	0.17	99	17
Х	Weather	1,647	`	4	114,380	14%	4	16,625,389	17%	3	0.21	145	31
С	Sum	10,931	100%		837,100	100%		98,887,198	100%		1.56	118	185

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	118	2%	5	3,585	1%	8	2,808,185	1%	6	0.01	783	5
J	Dig In	53	1%	8	15,189	3%	5	16,489,970	4%	4	0.03	1,086	31
	Equipment Failure	208	4%	4	37,099	6%	4	7,740,463	2%	5	0.07	209	14
E	Equipment Hit	17	0%	9	1,119	0%	9	167,633	0%	9	0.00	150	0
٧	Other*	63	1%	7	4,963	1%	7	1,959,579	0%	7	0.01	395	4
	Overload	74	1%	6	7,411	1%	6	1,915,909	0%	8	0.01	259	4
0	Tree	1,621	30%	2	175,553	30%	2	77,686,760	17%	2	0.33	443	145
N	Unknown	533	10%	3	40,383	7%	3	31,687,117	7%	3	0.08	785	59
L	Weather	2,644	50%	1	309,747	52%	1	314,466,986	69%	1	0.58	1,015	587
Υ	Sum	5,331	100%		595,049	100%		454,922,602	100%		1.11	765	850

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Cape May District Major Outage Cause Summary - 2010

Rank

Pct

Minutes

184,473,379

224,234,063

82%

100%

0.87

1.15

1,936

1,771

1,682

2,044

Pct

SAIFI

CAIDI

SAIDI

Rank

Customer Count: 109,698

Cause

L

Υ

Weather

Sum

	Oddoc	LVCIILO	1 00	Italiit	Oust Out	1 01	Italiit	Militates	1 01	Italik		CIDI	OAIDI
Α	Animal	177	7%	5	15,141	7%	4	1,592,971	1%	7	0.14	105	15
L	Dig In	124	5%	6	18,278	8%	3	16,151,023	7%	2	0.17	884	147
L	Equipment Failure	518	20%	2	29,778	13%	2	8,089,566	3%	4	0.27	272	74
	Equipment Hit	38	1%	9	14,361	6%	5	4,414,262	2%	6	0.13	307	40
Ε	Other*	49	2%	8	7,132	3%	8	681,615	0%	9	0.07	96	6
٧	Overload	63	2%	7	5,214	2%	9	926,447	0%	8	0.05	178	8
Е	Tree	330	13%	3	14,334	6%	6	6,333,349	3%	5	0.13	442	58
N	Unknown	230	9%	4	12,514	6%	7	13,950,333	6%	3	0.11	1,115	127
Т	Weather	1,099	42%	1	108,551	48%	1	185,993,970	78%	1	0.99	1,713	1,696
S	Sum	2,628	100%		225,303	100%		238,133,536	100%		2.05	1,057	2,171
		1	1	1		1	1		1	1	1		1
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	158	10%	5	14,953	15%	2	1,531,601	11%	3	0.14	102	14
Α	Dig In	82	5%	6	3,806	4%	9	604,545	4%	8	0.03	159	6
J	Equipment Failure	499	32%	1	24,704	25%	1	2,956,265	21%	2	0.23	120	27
	Equipment Hit	38	2%	9	14,361	15%	3	4,414,262	32%	1	0.13	307	40
Ε	Other*	42	3%	8	7,114	7%	6	618,993	4%	7	0.06	87	6
٧	Overload	51	3%	7	5,031	5%	8	820,334	6%	6	0.05	163	7
	Tree	181	11%	3	9,730	10%	5	912,748	7%	5	0.09	94	8
Е	Unknown	161	10%	4	5,733	6%	7	520,134	4%	9	0.05	91	5
Х	Weather	367	`	2	13,243	13%	4	1,520,591	11%	4	0.12	115	14
С	Sum	1,579	100%		98,675	100%		13,899,473	100%		0.90	141	127
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
A	Animal	19	2%	5	188	0%	6	61,370	0%	8	0.00	326	1
ı.	Dig In	42	4%	4	14,472	11%	2	15,546,478	7%	2	0.00	1,074	142
ľ	Equipment Failure	19	2%	5	5,074	4%	4	5,133,301	2%	5	0.05	1,012	47
Е	Equipment Hit	-	0%	9	-	0%	9	-	0%	9	0.00	-	-
v	Other*	7	1%	8	18	0%	8	62,622	0%	7	0.00	3,479	1
	Overload	12	1%	7	183	0%	7	106,113	0%	6	0.00	580	1
0	Tree	149	14%	2	4,604	4%	5	5,420,601	2%	4	0.04	1,177	49
N	Unknown	69	7%	3	6,781	5%	3	13,430,199	6%	3	0.06	1,981	122
						1			1				

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

70%

100%

Pct

Events

732

1,049

Rank

Cust Out

75%

100%

95,308

126,628

Glassboro District ajor Outage Cause Summary - 2010

Cı	ıstomer Count: 1	57,810		Ma	jor Outage (Cause	Sumn	nary - 2010					
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	870	14%	4	40,855	8%	6	5,409,667	4%	5	0.26	132	34
L	Dig In	33	1%	9	444	0%	9	164,679	0%	9	0.00	371	1
L	Equipment Failure	864	14%	5	60,021	12%	3	8,861,209	7%	4	0.38	148	56
	Equipment Hit	184	3%	6	46,533	10%	5	4,593,540	4%	6	0.29	99	29
Ε	Other*	95	2%	7	9,981	2%	7	2,024,684	2%	7	0.06	203	13
٧	Overload	56	1%	8	4,996	1%	8	385,099	0%	8	0.03	77	2
Ε	Tree	1,926	31%	1	149,158	31%	1	53,115,339	41%	1	0.95	356	337
N	Unknown	911	15%	3	59,542	12%	4	12,810,090	10%	3	0.38	215	81
Т	Weather	1,264	20%	2	114,332	24%	2	43,566,779	33%	2	0.72	381	276
S	Sum	6,203	100%		485,862	100%		130,931,084	100%		3.08	269	830
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	827	19%	2	38,736	12%	6	3,361,341	7%	6	0.25	87	21
Α	Dig In	26	1%	9	402	0%	9	98,903	0%	9	0.00	246	1
J	Equipment Failure	789	18%	3	42,021	13%	5	7,617,954	16%	3	0.27	181	48
	Equipment Hit	174	4%	6	45,450	14%	3	4,436,925	9%	5	0.29	98	28

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	827	19%	2	38,736	12%	6	3,361,341	7%	6	0.25	87	21
Α	Dig In	26	1%	9	402	0%	9	98,903	0%	9	0.00	246	1
J	Equipment Failure	789	18%	3	42,021	13%	5	7,617,954	16%	3	0.27	181	48
	Equipment Hit	174	4%	6	45,450	14%	3	4,436,925	9%	5	0.29	98	28
E	Other*	68	2%	7	7,515	2%	7	470,047	1%	7	0.05	63	3
٧	Overload	44	1%	8	4,763	1%	8	314,288	1%	8	0.03	66	2
	Tree	1,251	28%	1	85,254	26%	1	17,216,283	36%	1	0.54	202	109
E	Unknown	699	16%	4	43,438	14%	4	4,970,889	10%	4	0.28	114	31
Х	Weather	587	13%	5	54,140	17%	2	9,258,244	19%	2	0.34	171	59
С	Sum	4,465	100%		321,719	100%		47,744,874	100%		2.04	148	303

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	43	2%	5	2,119	1%	6	2,048,327	2%	4	0.01	967	13
J	Dig In	7	0%	9	42	0%	9	65,776	0%	9	0.00	1,566	0
	Equipment Failure	75	4%	4	18,000	11%	3	1,243,254	1%	6	0.11	69	8
E	Equipment Hit	10	1%	8	1,083	1%	7	156,615	0%	7	0.01	145	1
٧	Other*	27	2%	6	2,466	2%	5	1,554,636	2%	5	0.02	630	10
	Overload	12	1%	7	233	0%	8	70,811	0%	8	0.00	304	0
0	Tree	675	39%	2	63,904	39%	1	35,899,056	43%	1	0.40	562	227
N	Unknown	212	12%	3	16,104	10%	4	7,839,200	9%	3	0.10	487	50
L	Weather	677	39%	1	60,192	37%	2	34,308,535	41%	2	0.38	570	217
Υ	Sum	1,738	100%		164,143	100%		83,186,210	100%		1.04	507	527

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Pleasantville District or Outage Cause Summary - 2010

Customer Count: 172,381 Majo	r Outage
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	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	429	11%	5	14,037	3%	8	1,430,180	2%	7	0.08	102	8
L	Dig In	22	1%	9	93	0%	9	12,734	0%	9	0.00	137	0
L	Equipment Failure	776	19%	3	74,840	18%	3	7,147,256	9%	4	0.43	96	41
	Equipment Hit	96	2%	8	39,282	10%	4	2,495,784	3%	6	0.23	64	14
E	Other*	103	3%	7	15,680	4%	7	856,307	1%	8	0.09	55	5
٧	Overload	134	3%	6	19,484	5%	6	3,500,747	5%	5	0.11	180	20
E	Tree	846	21%	2	86,678	21%	2	14,265,853	19%	2	0.50	165	83
N	Unknown	432	11%	4	38,961	10%	5	7,915,248	10%	3	0.23	203	46
Т	Weather	1,167	29%	1	116,608	29%	1	38,500,404	51%	1	0.68	330	223
S	Sum	4,005	100%		405,663	100%		76,124,513	100%		2.35	188	442
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Cause Animal	Events 403	Pct 15%	Rank 4	Cust Out 13,571	Pct 6%	Rank 7	Minutes 1,161,037	Pct 6%	Rank 7	SAIFI 0.08	CAIDI 86	SAIDI 7
M A						-	Rank 7 9			Rank 7 9			
	Animal	403	15%	4	13,571	6%	7	1,161,037	6%	7	0.08	86	7
A	Animal Dig In	403 20	15% 1%	4	13,571 90	6% 0%	7	1,161,037 12,446	6% 0%	7	0.08	86 138	7 0
A	Animal Dig In Equipment Failure	403 20 684	15% 1% 26%	4 9 1	13,571 90 60,968	6% 0% 25%	7 9 1	1,161,037 12,446 6,018,983	6% 0% 29%	7 9 1	0.08 0.00 0.35	86 138 99	7 0 35
J	Animal Dig In Equipment Failure Equipment Hit	403 20 684 91	15% 1% 26% 3%	4 9 1 6	13,571 90 60,968 39,257	6% 0% 25% 16%	7 9 1 3	1,161,037 12,446 6,018,983 2,486,206	6% 0% 29% 12%	7 9 1 4	0.08 0.00 0.35 0.23	86 138 99 63	7 0 35 14
A J E	Animal Dig In Equipment Failure Equipment Hit Other*	403 20 684 91 82	15% 1% 26% 3% 3%	4 9 1 6	13,571 90 60,968 39,257 14,259	6% 0% 25% 16% 6%	7 9 1 3 6	1,161,037 12,446 6,018,983 2,486,206 726,425	6% 0% 29% 12% 4%	7 9 1 4 8	0.08 0.00 0.35 0.23 0.08	86 138 99 63 51	7 0 35 14 4
A J E	Animal Dig In Equipment Failure Equipment Hit Other* Overload	403 20 684 91 82 89	15% 1% 26% 3% 3% 3%	4 9 1 6 8 7	13,571 90 60,968 39,257 14,259 12,497	6% 0% 25% 16% 6% 5%	7 9 1 3 6	1,161,037 12,446 6,018,983 2,486,206 726,425 1,765,971	6% 0% 29% 12% 4% 9%	7 9 1 4 8 6	0.08 0.00 0.35 0.23 0.08 0.07	86 138 99 63 51	7 0 35 14 4
J E V	Animal Dig In Equipment Failure Equipment Hit Other* Overload Tree	403 20 684 91 82 89 522	15% 1% 26% 3% 3% 3% 3% 20%	4 9 1 6 8 7 2	13,571 90 60,968 39,257 14,259 12,497 49,049	6% 0% 25% 16% 6% 5% 20%	7 9 1 3 6 8	1,161,037 12,446 6,018,983 2,486,206 726,425 1,765,971 3,563,706	6% 0% 29% 12% 4% 9% 17%	7 9 1 4 8 6	0.08 0.00 0.35 0.23 0.08 0.07 0.28	86 138 99 63 51 141	7 0 35 14 4 10 21
A J E V	Animal Dig In Equipment Failure Equipment Hit Other* Overload Tree Unknown	403 20 684 91 82 89 522 283	15% 1% 26% 3% 3% 3% 3% 20%	4 9 1 6 8 7 2 5	13,571 90 60,968 39,257 14,259 12,497 49,049 27,357	6% 0% 25% 16% 6% 5% 20% 11%	7 9 1 3 6 8 2 5	1,161,037 12,446 6,018,983 2,486,206 726,425 1,765,971 3,563,706 2,262,349	6% 0% 29% 12% 4% 9% 17% 11%	7 9 1 4 8 6 2 5	0.08 0.00 0.35 0.23 0.08 0.07 0.28	86 138 99 63 51 141 73 83	7 0 35 14 4 10 21

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	26	2%	6	466	0%	7	269,143	0%	6	0.00	578	2
J	Dig In	2	0%	9	3	0%	9	288	0%	9	0.00	96	0
	Equipment Failure	92	7%	4	13,872	9%	3	1,128,274	2%	5	80.0	81	7
E	Equipment Hit	5	0%	8	25	0%	8	9,578	0%	8	0.00	383	0
٧	Other*	21	2%	7	1,421	1%	6	129,882	0%	7	0.01	91	1
	Overload	45	3%	5	6,987	4%	5	1,734,777	3%	4	0.04	248	10
0	Tree	324	24%	2	37,629	23%	2	10,702,147	19%	2	0.22	284	62
N	Unknown	149	11%	3	11,604	7%	4	5,652,899	10%	3	0.07	487	33
L	Weather	679	51%	1	89,042	55%	1	35,824,270	65%	1	0.52	402	208
Υ	Sum	1,343	100%		161,049	100%		55,451,257	100%		0.93	344	322

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Winslow District

Cı	ıstomer Count: 9	5,539			Major O	utage	Cause	Summary -	2010				
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	540	16%	3	35,019	11%	3	3,232,157	3%	4	0.37	92	34
L	Dig In	21	1%	9	779	0%	9	894,728	1%	7	0.01	1,149	9
L	Equipment Failure	480	14%	4	20,220	6%	5	2,535,647	2%	5	0.21	125	27
	Equipment Hit	76	2%	6	19,052	6%	6	1,263,807	1%	6	0.20	66	13
E	Other*	61	2%	7	6,881	2%	7	538,241	0%	9	0.07	78	6
٧	Overload	59	2%	8	6,247	2%	8	579,192	1%	8	0.07	93	6
E	Tree	1,053	31%	1	121,697	39%	1	30,474,579	28%	2	1.27	250	319
N	Unknown	375	11%	5	20,790	7%	4	6,071,093	6%	3	0.22	292	64
Т	Weather	761	22%	2	84,636	27%	2	63,031,223	58%	1	0.89	745	660
S	Sum	3,426	100%		315,321	100%		108,620,666	100%		3.30	344	1,137
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	510	23%	2	34,207	20%	2	2,802,811	17%	3	0.36	82	29
Α	Dig In	19	1%	9	107	0%	9	17,299	0%	9	0.00	162	0
				_			_						

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	510	23%	2	34,207	20%	2	2,802,811	17%	3	0.36	82	29
Α	Dig In	19	1%	9	107	0%	9	17,299	0%	9	0.00	162	0
J	Equipment Failure	458	21%	3	20,067	12%	3	2,300,013	14%	4	0.21	115	24
	Equipment Hit	74	3%	6	19,041	11%	5	1,262,367	8%	6	0.20	66	13
Ε	Other*	53	2%	8	5,823	3%	8	325,802	2%	8	0.06	56	3
٧	Overload	54	2%	7	6,239	4%	7	574,984	3%	7	0.07	92	6
	Tree	580	26%	1	52,281	30%	1	4,809,623	29%	1	0.55	92	50
E	Unknown	272	12%	4	14,896	9%	6	1,306,274	8%	5	0.16	88	14
Х	Weather	205	9%	5	19,431	11%	4	3,170,421	19%	2	0.20	163	33
С	Sum	2,225	100%		172,092	100%		16,569,595	100%		1.80	96	173

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	30	2%	4	812	1%	5	429,346	0%	5	0.01	529	4
J	Dig In	2	0%	8	672	0%	6	877,428	1%	4	0.01	1,306	9
	Equipment Failure	22	2%	5	153	0%	7	235,634	0%	6	0.00	1,540	2
E	Equipment Hit	2	0%	8	11	0%	8	1,440	0%	9	0.00	131	0
٧	Other*	8	1%	6	1,058	1%	4	212,439	0%	7	0.01	201	2
	Overload	5	0%	7	8	0%	9	4,208	0%	8	0.00	526	0
0	Tree	473	39%	2	69,416	48%	1	25,664,956	28%	2	0.73	370	269
N	Unknown	103	9%	3	5,894	4%	3	4,764,818	5%	3	0.06	808	50
L	Weather	556	46%	1	65,205	46%	2	59,860,802	65%	1	0.68	918	627
Υ	Sum	1,201	100%		143,229	100%		92,051,071	100%		1.50	643	963

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1,768	14%	5	97,864	10%	5	8,527,082	7%	6	0.18	87	16
L	Dig In	13	0%	9	2,956	0%	9	316,068	0%	9	0.01	107	1
L	Equipment Failure	1,816	15%	4	124,094	13%	3	13,190,384	10%	4	0.23	106	25
	Equipment Hit	506	4%	7	90,950	10%	6	10,424,493	8%	5	0.17	115	20
E	Other*	577	5%	6	78,327	8%	7	6,075,129	5%	7	0.15	78	11
٧	Overload	126	1%	8	8,116	1%	8	602,351	0%	8	0.02	74	1
E	Tree	3,191	26%	1	243,594	26%	1	38,366,599	29%	1	0.46	158	72
N	Unknown	2,138	17%	3	107,510	11%	4	15,634,402	12%	3	0.20	145	29
Т	Weather	2,368	19%	2	182,362	19%	2	37,465,404	29%	2	0.34	205	70
S	Sum	12,503	100%		935,773	100%		130,601,911	100%		1.75	140	245

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	1,759	15%	5	97,805	11%	5	8,511,077	8%	6	0.18	87	16
Α	Dig In	13	0%	9	2,956	0%	9	316,068	0%	9	0.01	107	1
J	Equipment Failure	1,792	15%	4	122,646	14%	3	12,287,359	11%	4	0.23	100	23
	Equipment Hit	505	4%	7	90,946	11%	6	10,420,629	9%	5	0.17	115	20
E	Other*	542	5%	6	44,645	5%	7	4,085,116	4%	7	0.08	92	8
٧	Overload	122	1%	8	8,059	1%	8	585,181	1%	8	0.02	73	1
	Tree	2,951	25%	1	220,305	26%	1	31,020,903	28%	1	0.41	141	58
E	Unknown	2,089	17%	3	102,747	12%	4	13,847,113	12%	3	0.19	135	26
Х	Weather	2,175	`	2	161,643	19%	2	30,549,325	27%	2	0.30	189	57
С	Sum	11,948	100%		851,752	100%		111,622,770	100%		1.59	131	210

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	9	2%	6	59	0%	6	16,005	0%	7	0.00	271	0
J	Dig In	•	0%	9	•	0%	9	•	0%	9	0.00	=	-
	Equipment Failure	24	4%	5	1,448	2%	5	903,025	5%	5	0.00	624	2
E	Equipment Hit	1	0%	8	4	0%	8	3,864	0%	8	0.00	966	0
V	Other*	35	6%	4	33,682	40%	1	1,990,013	10%	3	0.06	59	4
	Overload	4	1%	7	57	0%	7	17,170	0%	6	0.00	301	0
0	Tree	240	43%	1	23,289	28%	2	7,345,696	39%	1	0.04	315	14
N	Unknown	49	9%	3	4,763	6%	4	1,787,290	9%	4	0.01	375	3
L	Weather	193	35%	2	20,719	25%	3	6,916,079	36%	2	0.04	334	13
Υ	Sum	555	100%		84,021	100%		18,979,141	100%		0.16	226	36

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 534,051

Cape May District
ajor Outage Cause Summary - 2009

Cι	stomer Count: 1	09,462			Major O	utage	Cause	e Summary -	2009				
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	152	9%	5	5,453	5%	7	439,614	3%	7	0.05	81	4
L	Dig In	4	0%	9	1,973	2%	8	219,981	1%	8	0.02	111	2
L	Equipment Failure	439	25%	2	25,471	22%	2	2,869,443	17%	2	0.23	113	26
	Equipment Hit	65	4%	6	5,719	5%	6	1,065,622	6%	5	0.05	186	10
Ε	Other*	65	4%	6	6,915	6%	4	485,892	3%	6	0.06	70	4
٧	Overload	22	1%	8	168	0%	9	24,713	0%	9	0.00	147	0
Ε	Tree	215	12%	4	6,855	6%	5	1,370,537	8%	4	0.06	200	13
N	Unknown	218	13%	3	19,003	16%	3	2,323,933	14%	3	0.17	122	21
Т	Weather	542	31%	1	45,026	39%	1	7,826,162	47%	1	0.41	174	71
S	Sum	1,722	100%		116,583	100%		16,625,898	100%		1.07	143	152
	Causa	Fuente	Pct	Donle	Court Cout	Det	Doub	Minutes	Det	Danis	CAIEL	CAIDI	CAIDI
	Cause	Events		Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	152	9%	5	5,453	5%	7	439,614	3%	7	0.05	81	4
Α	Dig In	4	0%	9	1,973	2%	8	219,981	1%	8	0.02	111	2
J	Equipment Failure	438	26%	2	25,470	22%	2	2,869,258	17%	2	0.23	113	26
	Equipment Hit	65	4%	6	5,719	5%	6	1,065,622	6%	5	0.05	186	10
Е	Other*	64	4%	7	6,910	6%	4	481,972	3%	6	0.06	70	4
	0	00	40/	•	400	00/)	04.740	00/	_	0.00	4.47	0

A	Dig In	4	0%	9	1,973	2%	8	219,981	1%	8	0.02	111	2
J	Equipment Failure	438	26%	2	25,470	22%	2	2,869,258	17%	2	0.23	113	26
	Equipment Hit	65	4%	6	5,719	5%	6	1,065,622	6%	5	0.05	186	10
E	Other*	64	4%	7	6,910	6%	4	481,972	3%	6	0.06	70	4
٧	Overload	22	1%	8	168	0%	9	24,713	0%	9	0.00	147	0
	Tree	195	12%	4	6,522	6%	5	1,262,469	8%	4	0.06	194	12
E	Unknown	216	13%	3	18,987	16%	3	2,313,317	14%	3	0.17	122	21
Х	Weather	519	`	1	44,715	39%	1	7,745,554	47%	1	0.41	173	71
С	Sum	1,675	100%		115,917	100%		16,422,501	100%		1.06	142	150
	T -	I			1 -	_		T				1	
M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
l A	Animal	_	0%	6	_	0%	6	_	0%	6	0.00	_	_

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	ı	0%	6	Ī	0%	6	=	0%	6	0.00	-	=
J	Dig In	Ū	0%	6	Ī	0%	6	=	0%	6	0.00	-	=
	Equipment Failure	1	2%	4	1	0%	5	185	0%	5	0.00	185	0
E	Equipment Hit	Ū	0%	6	Ī	0%	6	=	0%	6	0.00	-	=
V	Other*	1	2%	4	5	1%	4	3,920	2%	4	0.00	784	0
	Overload	Ū	0%	6	Ī	0%	6	=	0%	6	0.00	-	=
0	Tree	20	43%	2	333	50%	1	108,068	53%	1	0.00	325	1
N	Unknown	2	4%	3	16	2%	3	10,616	5%	3	0.00	664	0
L	Weather	23	49%	1	311	47%	2	80,608	40%	2	0.00	259	1
Υ	Sum	47	100%		666	100%		203,397	100%		0.01	305	2

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Glassboro District
Major Outage Cause Summary - 2009

Customer Count: 158,716

Other*

Overload

Tree

Unknown

Weather

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C	istomer Count: 1	36,716			wajor Ou	tage C	ause	Summary - 200	09				
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	781	16%	3	58,288	15%	2	5,646,032	10%	5	0.37	97	36
L	Dig In	2	0%	9	887	0%	9	84,049	0%	9	0.01	95	1
L	Equipment Failure	498	10%	5	35,270	9%	6	3,859,742	7%	6	0.22	109	24
	Equipment Hit	242	5%	6	49,435	13%	4	5,699,714	10%	4	0.31	115	36
Ε	Other*	163	3%	7	26,506	7%	7	1,395,302	2%	7	0.17	53	9
٧	Overload	14	0%	8	1,984	1%	8	156,334	0%	8	0.01	79	1
Ε	Tree	1,495	30%	1	109,389	29%	1	20,571,774	35%	1	0.69	188	130
Ν	Unknown	999	20%	2	39,963	11%	5	6,812,722	12%	3	0.25	170	43
Т	Weather	759	15%	4	56,755	15%	3	14,763,787	25%	2	0.36	260	93
S	Sum	4,953	100%		378,477	100%		58,989,457	100%		2.38	156	372
			T	T		1			1	1	1		
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	777	16%	3	58,284	17%	2	5,644,881	11%	5	0.37	97	36
Α	Dig In	2	0%	9	887	0%	9	84,049	0%	9	0.01	95	1
J	Equipment Failure	494	10%	5	34,856	10%	6	3,354,304	6%	6	0.22	96	21
	Equipment Hit	241	5%	6	49,431	14%	4	5,695,850	11%	4	0.31	115	36
Е	Other*	157	3%	7	16,421	5%	7	1,202,376	2%	7	0.10	73	8
٧	Overload	13	0%	8	1,963	1%	8	152,701	0%	8	0.01	78	1
	Tree	1,397	29%	1	101,798	29%	1	17,624,689	34%	1	0.64	173	111
Ε	Unknown	980	21%	2	38,357	11%	5	5,904,323	11%	3	0.24	154	37
X	Weather	690	15%	4	49,983	14%	3	12,425,832	24%	2	0.31	249	78
С	Sum	4,751	100%		351,980	100%		52,089,004	100%		2.22	148	328
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	4	2%	5	4	0%	7	1,151	0%	8	0.00	288	0
J	Dig In	-	0%	9	-	0%	9	-	0%	9	0.00	-	-
	Equipment Failure	4	2%	5	414	2%	5	505,438	7%	4	0.00	1,221	3
Е	Equipment Hit	1	0%	7	4	0%	7	3,864	0%	6	0.00	966	0
		1	1			1		•	1				

Sum	202	100%		26,497	100%		6,900,453	
* Other Category Include:	s: Load Shed, \$	Salt, Fire,	Schedule	d, Customer Equipi	ment, Var	ndalism ar	nd Others; etc.	

10,085

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1,606

6,772

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3

192,926

2,947,086

2,337,956

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173

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6

Pleasantville District Major Outage Cause Summary - 2009

Customer Count: 171,763

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	376	11%	5	16,044	6%	7	1,236,687	4%	7	0.09	77	7
L	Dig In	2	0%	9	2	0%	9	429	0%	9	0.00	215	0
L	Equipment Failure	559	17%	3	42,205	17%	3	4,366,228	15%	3	0.25	103	25
	Equipment Hit	102	3%	7	21,200	9%	6	1,775,654	6%	6	0.12	84	10
E	Other*	251	8%	6	33,590	14%	4	3,022,855	10%	5	0.20	90	18
٧	Overload	71	2%	8	1,804	1%	8	214,166	1%	8	0.01	119	1
E	Tree	798	24%	1	55,032	22%	1	7,608,647	26%	1	0.32	138	44
N	Unknown	469	14%	4	32,435	13%	5	4,081,050	14%	4	0.19	126	24
Т	Weather	704	21%	2	45,959	19%	2	6,752,768	23%	2	0.27	147	39
S	Sum	3,332	100%		248,271	100%		29,058,484	100%		1.45	117	169

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	374	12%	5	16,001	7%	6	1,227,773	5%	7	0.09	77	7
Α	Dig In	2	0%	9	2	0%	9	429	0%	9	0.00	215	0
J	Equipment Failure	544	17%	3	41,247	19%	3	4,027,273	16%	3	0.24	98	23
	Equipment Hit	102	3%	7	21,200	10%	5	1,775,654	7%	5	0.12	84	10
E	Other*	224	7%	6	12,674	6%	7	1,275,180	5%	6	0.07	101	7
٧	Overload	68	2%	8	1,768	1%	8	200,629	1%	8	0.01	113	1
	Tree	755	24%	1	53,020	24%	1	7,010,717	28%	1	0.31	132	41
E	Unknown	459	14%	4	31,606	14%	4	3,878,270	15%	4	0.18	123	23
Х	Weather	670	`	2	43,158	20%	2	6,008,019	24%	2	0.25	139	35
С	Sum	3,198	100%		220,676	100%		25,403,944	100%		1.28	115	148

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	2	1%	7	43	0%	6	8,914	0%	7	0.00	207	0
J [Dig In	ı	0%	8	=	0%	8	-	0%	8	0.00	=	-
	Equipment Failure	15	11%	4	958	3%	4	338,955	9%	4	0.01	354	2
E	Equipment Hit	ı	0%	8	=	0%	8	-	0%	8	0.00	=	-
٧	Other*	27	20%	3	20,916	76%	1	1,747,675	48%	1	0.12	84	10
	Overload	3	2%	6	36	0%	7	13,537	0%	6	0.00	376	0
0	Tree	43	32%	1	2,012	7%	3	597,930	16%	3	0.01	297	3
N	Unknown	10	7%	5	829	3%	5	202,780	6%	5	0.00	245	1
L	Weather	34	25%	2	2,801	10%	2	744,749	20%	2	0.02	266	4
Υ	Sum	134	100%		27,595	100%		3,654,540	100%		0.16	132	21

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Winslow District

Customer Count: 04 110

Cu	stomer Count: 94	4,110			Major Outa	age Ca	use S	ummary - 200	9				
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	459	18%	2	18,079	9%	4	1,204,749	5%	6	0.19	67	13
L	Dig In	5	0%	9	94	0%	9	11,609	0%	9	0.00	124	0
L	Equipment Failure	320	13%	5	21,148	11%	3	2,094,971	8%	4	0.22	99	22
	Equipment Hit	97	4%	7	14,596	8%	6	1,883,501	7%	5	0.16	129	20
Е	Other*	98	4%	6	11,316	6%	7	1,171,078	5%	7	0.12	103	12
٧	Overload	19	1%	8	4,160	2%	8	207,139	1%	8	0.04	50	2
E	Tree	683	27%	1	72,318	38%	1	8,815,640	34%	1	0.77	122	94
N	Unknown	452	18%	3	16,109	8%	5	2,416,697	9%	3	0.17	150	26
Т	Weather	363	15%	4	34,622	18%	2	8,122,687	31%	2	0.37	235	86
S	Sum	2,496	100%		192,442	100%		25,928,072	100%		2.04	135	276
		T = .	T = .			T = .	I		1 5 /		0.4151	0.4101	0.4151
_	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	456	20%	2	18,067	11%	4	1,198,809	7%	6	0.19	66	13
Α	Dig In	5	0%	9	94	0%	9	11,609	0%	9	0.00	124	0
J	Equipment Failure	316	14%	4	21,073	13%	3	2,036,524	12%	3	0.22	97	22
	Equipment Hit	97	4%	6	14,596	9%	5	1,883,501	11%	4	0.16	129	20
E	Other*	97	4%	6	8,640	5%	7	1,125,586	6%	7	0.09	130	12
٧	Overload	19	1%	8	4,160	3%	8	207,139	1%	8	0.04	50	2
	_												

											-	-	-
M	Animal	456	20%	2	18,067	11%	4	1,198,809	7%	6	0.19	66	13
Α	Dig In	5	0%	9	94	0%	9	11,609	0%	9	0.00	124	0
J	Equipment Failure	316	14%	4	21,073	13%	3	2,036,524	12%	3	0.22	97	22
	Equipment Hit	97	4%	6	14,596	9%	5	1,883,501	11%	4	0.16	129	20
Ε	Other*	97	4%	6	8,640	5%	7	1,125,586	6%	7	0.09	130	12
٧	Overload	19	1%	8	4,160	3%	8	207,139	1%	8	0.04	50	2
	Tree	604	26%	1	58,965	36%	1	5,123,028	29%	1	0.63	87	54
Ε	Unknown	434	19%	3	13,797	8%	6	1,751,203	10%	5	0.15	127	19
Х	Weather	296	13%	5	23,787	15%	2	4,369,920	25%	2	0.25	184	46
С	Sum	2,324	100%		163,179	100%		17,707,320	100%		1.73	109	188

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	3	2%	5	12	0%	6	5,940	0%	6	0.00	495	0
J	Dig In	-	0%	7	•	0%	7	•	0%	7	0.00	=	-
	Equipment Failure	4	2%	4	75	0%	5	58,447	1%	4	0.00	779	1
E	Equipment Hit	-	0%	7	•	0%	7		0%	7	0.00	=	=
٧	Other*	1	1%	6	2,676	9%	3	45,492	1%	5	0.03	17	0
	Overload	-	0%	7	•	0%	7	•	0%	7	0.00	=	-
0	Tree	79	46%	1	13,353	46%	1	3,692,612	45%	2	0.14	277	39
N	Unknown	18	10%	3	2,312	8%	4	665,494	8%	3	0.02	288	7
L	Weather	67	39%	2	10,835	37%	2	3,752,766	46%	1	0.12	346	40
Υ	Sum	172	100%		29,263	100%		8,220,752	100%		0.31	281	87

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Customer Count: 530,599

	stomer Count. 5.	30,000			joi Outage (Juuoo	-	.a.,					
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	2,296	17%	3	102,924	10%	5	8,903,411	5%	6	0.19	87	17
L	Dig In	58	0%	9	1,257	0%	9	191,501	0%	9	0.00	152	0
L	Equipment Failure	2,730	20%	2	164,832	16%	3	24,291,769	13%	3	0.31	147	46
	Equipment Hit	347	3%	7	90,646	9%	6	11,359,243	6%	5	0.17	125	21
E	Other*	1,974	14%	5	145,013	14%	4	18,662,346	10%	4	0.27	129	35
٧	Overload	125	1%	8	4,792	0%	8	793,664	0%	8	0.01	166	1
E	Tree	2,967	22%	1	274,723	26%	1	60,883,540	33%	1	0.52	222	115
N	Unknown	1,093	8%	6	60,305	6%	7	8,244,046	4%	7	0.11	137	16
Т	Weather	2,053	15%	4	198,423	19%	2	50,306,991	27%	2	0.37	254	95
s	Sum	13,643	100%		1,042,915	100%		183,636,511	100%		1.97	176	346
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	2,259	19%	3	102,136	12%	5	8,735,677	8%	6	0.19	86	16
Α	Dig In	56	0%	9	1,255	0%	9	190,437	0%	9	0.00	152	0
J	Equipment Failure	2,519	21%	1	147,344	17%	2	18,961,214	17%	3	0.28	129	36
	Equipment Hit	341	3%	7	89,462	10%	6	11,175,835	10%	5	0.17	125	21
E	Other*	1,721	15%	4	132,991	15%	4	14,515,627	13%	4	0.25	109	27
٧	Overload	119	1%	8	4,709	1%	8	751,590	1%	8	0.01	160	1
	Tree	2,264	19%	2	197,288	23%	1	29,393,986	26%	1	0.37	149	55
E	Unknown	1,016	9%	6	53,660	6%	7	5,177,104	5%	7	0.10	96	10
Х	Weather	1,483	`	5	138,725	16%	3	24,732,657	22%	2	0.26	178	47
С	Sum	11,778	100%		867,570	100%		113,634,127	100%		1.64	131	214
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
A	Animal	37	2%	6	788	0%	7	167,734	0%	7	0.00	213	0
IJ	Dig In	2	0%	9	2	0%	9	1,064	0%	9	0.00	532	0
	Equipment Failure	211	11%	4	17,488	10%	3	5,330,555	8%	3	0.03	305	10
E	Equipment Hit	6	0%	7	1,184	1%	6	183,408	0%	6	0.00	155	0
V	Other*	253	14%	3	12,022	7%	4	4,146,719	6%	4	0.02	345	8
	Overload	6	0%	7	83	0%	8	42,074	0%	8	0.00	507	0
0	Tree	703	38%	1	77,435	44%	1	31,489,554	45%	1	0.15	407	59
N	Unknown	77	4%	5	6,645	4%	5	3,066,942	4%	5	0.01	462	6
L [Weather	570	31%	2	59,698	34%	2	25,574,334	37%	2	0.11	428	48
Υ	Sum	1,865	100%		175,345	100%		70,002,384	100%		0.33	399	132

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Cape May District Major Outage Cause Summary - 2008

Customer Count: 108,584

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	167	9%	5	10,780	8%	5	861,336	3%	6	0.10	80	8
L	Dig In	7	0%	9	35	0%	9	7,412	0%	9	0.00	212	0
L	Equipment Failure	574	31%	1	33,902	24%	2	4,893,459	19%	2	0.31	144	45
	Equipment Hit	35	2%	7	7,091	5%	7	1,005,500	4%	5	0.07	142	9
E	Other*	307	17%	3	16,444	12%	3	2,528,927	10%	4	0.15	154	23
٧	Overload	13	1%	8	159	0%	8	32,193	0%	8	0.00	202	0
E	Tree	193	10%	4	15,872	11%	4	4,342,022	17%	3	0.15	274	40
N	Unknown	88	5%	6	7,309	5%	6	593,796	2%	7	0.07	81	5
Т	Weather	476	26%	2	49,472	35%	1	11,692,356	45%	1	0.46	236	108
S	Sum	1,860	100%		141,064	100%		25,957,001	100%		1.30	184	239

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	164	10%	4	10,721	10%	5	785,773	6%	6	0.10	73	7
Α	Dig In	6	0%	9	34	0%	9	6,546	0%	9	0.00	193	0
J	Equipment Failure	521	32%	1	26,109	26%	1	3,392,239	27%	1	0.24	130	31
	Equipment Hit	35	2%	7	7,091	7%	6	1,005,500	8%	5	0.07	142	9
E	Other*	279	17%	3	12,822	13%	4	1,759,381	14%	4	0.12	137	16
٧	Overload	11	1%	8	155	0%	8	27,980	0%	8	0.00	181	0
	Tree	157	10%	5	13,904	14%	3	2,138,181	17%	3	0.13	154	20
E	Unknown	74	5%	6	6,474	6%	7	408,049	3%	7	0.06	63	4
X	Weather	373	`	2	25,075	24%	2	2,895,061	23%	2	0.23	115	27
С	Sum	1,620	100%		102,385	100%		12,418,710	100%		0.94	121	114

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	3	1%	6	59	0%	6	75,563	1%	6	0.00	1,281	1
J	Dig In	1	0%	8	1	0%	8	866	0%	8	0.00	866	0
	Equipment Failure	53	22%	2	7,793	20%	2	1,501,220	11%	3	0.07	193	14
E	Equipment Hit	-	0%	9	=	0%	9	•	0%	9	0.00	=	=
٧	Other*	28	12%	4	3,622	9%	3	769,546	6%	4	0.03	212	7
	Overload	2	1%	7	4	0%	7	4,213	0%	7	0.00	1,053	0
0	Tree	36	15%	3	1,968	5%	4	2,203,841	16%	2	0.02	1,120	20
N	Unknown	14	6%	5	835	2%	5	185,747	1%	5	0.01	222	2
L	Weather	103	43%	1	24,397	63%	1	8,797,295	65%	1	0.22	361	81
Υ	Sum	240	100%		38,679	100%		13,538,291	100%		0.36	350	125

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Glassboro District
Major Outage Cause Summary - 2008

Customer Count: 156,924

Customer Count. 130,924 Iwajor Outage Cause Summary - 2006													
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	1,148	20%	2	46,088	10%	5	4,822,807	5%	7	0.29	105	31
L	Dig In	16	0%	9	375	0%	9	57,330	0%	9	0.00	153	0
L	Equipment Failure	823	14%	4	59,390	13%	3	9,092,224	10%	3	0.38	153	58
	Equipment Hit	170	3%	7	44,816	10%	6	6,428,582	7%	4	0.29	143	41
E	Other*	619	11%	5	53,271	12%	4	6,126,653	7%	5	0.34	115	39
٧	Overload	40	1%	8	1,836	0%	8	164,748	0%	8	0.01	90	1
Е	Tree	1,516	26%	1	151,693	34%	1	38,578,664	43%	1	0.97	254	246
N	Unknown	581	10%	6	27,792	6%	7	5,320,563	6%	6	0.18	191	34
Т	Weather	892	15%	3	64,965	14%	2	20,138,625	22%	2	0.41	310	128
S	Sum	5,805	100%		450,226	100%		90,730,196	100%		2.87	202	578
									_	_			
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	1,125	23%	2	45,701	12%	5	4,780,723	8%	6	0.29	105	30
Α	Dig In	15	0%	9	374	0%	9	57,132	0%	9	0.00	153	0
J	Equipment Failure	773	16%	3	54,283	14%	2	7,328,568	12%	3	0.35	135	47

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	1,125	23%	2	45,701	12%	5	4,780,723	8%	6	0.29	105	30
Α	Dig In	15	0%	9	374	0%	9	57,132	0%	9	0.00	153	0
J	Equipment Failure	773	16%	3	54,283	14%	2	7,328,568	12%	3	0.35	135	47
	Equipment Hit	167	3%	7	44,604	12%	6	6,395,131	11%	4	0.28	143	41
E	Other*	548	11%	5	52,397	14%	3	5,752,985	10%	5	0.33	110	37
٧	Overload	39	1%	8	1,835	0%	8	164,049	0%	8	0.01	89	1
	Tree	1,131	23%	1	105,745	28%	1	19,563,911	33%	1	0.67	185	125
E	Unknown	540	11%	6	22,396	6%	7	2,621,009	4%	7	0.14	117	17
Х	Weather	599	12%	4	50,332	13%	4	13,431,030	22%	2	0.32	267	86
С	Sum	4,937	100%		377,667	100%		60,094,538	100%		2.41	159	383

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	23	3%	6	387	1%	6	42,084	0%	6	0.00	109	0
J	Dig In	1	0%	8	1	0%	8	198	0%	9	0.00	198	0
	Equipment Failure	50	6%	4	5,107	7%	4	1,763,656	6%	4	0.03	345	11
E	Equipment Hit	3	0%	7	212	0%	7	33,451	0%	7	0.00	158	0
٧	Other*	71	8%	3	874	1%	5	373,668	1%	5	0.01	428	2
	Overload	1	0%	8	1	0%	8	699	0%	8	0.00	699	0
0	Tree	385	44%	1	45,948	63%	1	19,014,753	62%	1	0.29	414	121
N	Unknown	41	5%	5	5,396	7%	3	2,699,554	9%	3	0.03	500	17
L	Weather	293	34%	2	14,633	20%	2	6,707,595	22%	2	0.09	458	43
Υ	Sum	868	100%		72,559	100%		30,635,658	100%		0.46	422	195

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Pleasantville District

Cι	istomer Count: 1	se Su	mmary - 2008										
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	381	12%	4	25,222	9%	5	1,695,659	4%	5	0.15	67	10
L	Dig In	25	1%	8	677	0%	8	90,679	0%	9	0.00	134	1
L	Equipment Failure	853	26%	1	55,590	20%	1	7,862,070	19%	3	0.32	141	46
	Equipment Hit	72	2%	7	25,109	9%	6	1,658,836	4%	6	0.15	66	10
Е	Other*	690	21%	2	54,540	20%	2	7,336,959	18%	4	0.32	135	43
٧	Overload	24	1%	9	467	0%	9	104,371	0%	8	0.00	223	1
Е	Tree	686	21%	3	54,139	20%	3	9,932,766	24%	2	0.32	183	58
N	Unknown	150	5%	6	12,400	5%	7	1,009,369	2%	7	0.07	81	6
Т	Weather	378	12%	5	43,926	16%	4	11,208,867	27%	1	0.26	255	65
s	Sum	3,259	100%		272,070	100%		40,899,576	100%		1.59	150	238
		T	1	1	T	1	1		1	1	ī		
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
М	Animal	375	13%	4	24,949	11%	5	1,651,147	7%	5	0.15	66	10
Α	Dig In	25	1%	8	677	0%	8	90,679	0%	8	0.00	134	1
J	Equipment Failure	766	27%	1	51,485	22%	1	5,879,501	26%	1	0.30	114	34
	Equipment Hit	71	3%	7	24,934	11%	6	1,568,011	7%	6	0.15	63	9
_ [Oth*	574	040/	_	40.000	040/	_	5 000 044	000/	_	0.00	405	0.4

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	375	13%	4	24,949	11%	5	1,651,147	7%	5	0.15	66	10
Α	Dig In	25	1%	8	677	0%	8	90,679	0%	8	0.00	134	1
J	Equipment Failure	766	27%	1	51,485	22%	1	5,879,501	26%	1	0.30	114	34
	Equipment Hit	71	3%	7	24,934	11%	6	1,568,011	7%	6	0.15	63	9
E	Other*	574	21%	2	49,896	21%	2	5,236,811	23%	2	0.29	105	31
V	Overload	21	1%	9	389	0%	9	67,209	0%	9	0.00	173	0
	Tree	540	19%	3	39,571	17%	3	3,530,440	16%	4	0.23	89	21
E	Unknown	139	5%	6	12,098	5%	7	849,518	4%	7	0.07	70	5
Х	Weather	284	`	5	30,234	13%	4	3,812,682	17%	3	0.18	126	22
С	Sum	2,795	100%		234,233	100%		22,685,998	100%		1.37	97	132

M	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	6	1%	6	273	1%	6	44,512	0%	7	0.00	163	0
J	Dig In	-	0%	9	=	0%	9	•	0%	9	0.00	=	=
	Equipment Failure	87	19%	4	4,105	11%	4	1,982,569	11%	4	0.02	483	12
E	Equipment Hit	1	0%	8	175	0%	7	90,825	0%	6	0.00	519	1
٧	Other*	116	25%	2	4,644	12%	3	2,100,148	12%	3	0.03	452	12
	Overload	3	1%	7	78	0%	8	37,162	0%	8	0.00	476	0
0	Tree	146	31%	1	14,568	39%	1	6,402,326	35%	2	0.08	439	37
N	Unknown	11	2%	5	302	1%	5	159,851	1%	5	0.00	529	1
L	Weather	94	20%	3	13,692	36%	2	7,396,185	41%	1	0.08	540	43
Υ	Sum	464	100%		37,837	100%		18,213,578	100%		0.22	481	106

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

Winslow District Major Outage Cause Summary - 2008

Customer Count: 93,502

	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	600	22%	1	20,834	12%	3	1,523,609	6%	6	0.22	73	16
L	Dig In	10	0%	9	170	0%	9	36,080	0%	9	0.00	212	0
L	Equipment Failure	480	18%	3	15,950	9%	5	2,444,016	9%	4	0.17	153	26
	Equipment Hit	70	3%	7	13,630	8%	6	2,266,325	9%	5	0.15	166	24
E	Other*	358	13%	4	20,758	12%	4	2,669,807	10%	3	0.22	129	29
V	Overload	48	2%	8	2,330	1%	8	492,352	2%	8	0.02	211	5
E	Tree	572	21%	2	53,019	30%	1	8,030,088	31%	1	0.57	151	86
N	Unknown	274	10%	6	12,804	7%	7	1,320,318	5%	7	0.14	103	14
Т	Weather	307	11%	5	40,060	22%	2	7,267,143	28%	2	0.43	181	78
S	Sum	2,719	100%		179,555	100%		26,049,738	100%		1.92	145	279
		I = .			9 (9 (<u> </u>		-		0.4151	04101	O A I D I
	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
M	Animal	595	25%	1	20,765	14%	3	1,518,034	8%	6	0.22	73	16
A	Dig In	10	0%	9	170	0%	9	36,080	0%	9	0.00	212	0
J	Equipment Failure	459	19%	2	15,467	10%	5	2,360,906	13%	3	0.17	153	25
1 _ 1	Equipment Hit	68	3%	7	12,833	8%	6	2,207,193	12%	4	0.14	172	24
E	Other*	320	13%	4	17,876	12%	4	1,766,450	10%	5	0.19	99	19
٧	Overload	48	2%	8	2,330	2%	8	492,352	3%	8	0.02	211	5
_	Tree	436	18%	3	38,068	25%	1	4,161,454	23%	2	0.41	109	45
E	Unknown	263	11%	5	12,692	8%	7	1,298,528	7%	7	0.14	102	14
Х	Weather	227	9%	6	33,084	22%	2	4,593,884	25%	1	0.35	139	49
С	Sum	2,426	100%		153,285	100%		18,434,881	100%		1.64	120	197
М	Cause	Events	Pct	Rank	Cust Out	Pct	Rank	Minutes	Pct	Rank	SAIFI	CAIDI	SAIDI
Α	Animal	5	2%	6	69	0%	7	5,575	0%	7	0.00	81	0
J	Dig In	-	0%	8	=	0%	8	=	0%	8	0.00	=	=
	Equipment Failure	21	7%	4	483	2%	5	83,110	1%	4	0.01	172	1
E	Equipment Hit	2	1%	7	797	3%	4	59,132	1%	5	0.01	74	1
V	Other*	38	13%	3	2,882	11%	3	903,357	12%	3	0.03	313	10
	Overload	-	0%	8	-	0%	8	-	0%	8	0.00	=	-
0	Tree	136	46%	1	14,951	57%	1	3,868,634	51%	1	0.16	259	41
N	Unknown	11	4%	5	112	0%	6	21,790	0%	6	0.00	195	0
L	Weather	80	27%	2	6,976	27%	2	2,673,259	35%	2	0.07	383	29
Υ	Sum	293	100%		26,270	100%		7,614,857	100%		0.28	290	81

^{*} Other Category Includes: Load Shed, Salt, Fire, Scheduled, Customer Equipment, Vandalism and Others; etc.

C1. Summary of Distribution Reliability Programs for ACE, Including Inspection and Maintenance Programs

A detailed description of the reliability programs was filed originally with the BPU on January 31, 2001. In addition, ACE's Inspection and Maintenance Programs for the Transmission and Distribution Electric System document was submitted to BPU Staff on February 2, 2009, pursuant to N. J. A. C. 14.5-8.6., and is incorporated by reference. That filing replaced the Inspection and Maintenance document originally filed January 31, 2001 pursuant to N.J.A.C. 14.5 – 7.7, and subsequent changes submitted with the yearly reliability reports.

C2. Changes and Exceptions to the Current Program(s)

The following update relates to programs originally submitted under Section C1:

<u>Inspection Programs – Updated 5/04/2017</u>

<u>Equipment</u>	<u>Inspection</u>	<u>ACE</u> (NJBPU)
Substation	General Inspection	Quarterly visual inspection Semi-annual detailed inspection
	Predictive Maintenance Routine	Annually
	Oil Collection and Analysis of Transformer Main Tank and Load Tap Changer (LTC)	Annually or more frequently if triggered by Transformer Oil Analyst (TOA) Program Rating
Substation Power Transformers	External(Routine) Inspection and Test	Every 6-12 Years or more frequent as recommended by Equipment Condition Assessment (ECA) Process
	LTC External Inspection and Test	Every 6-12 Years or more frequent as recommended by ECA Process
	LTC Filter Inspection/Change	N/A
	Routine Cooler Inspection	N/A
Substation Power Transformers	Mulsifyre System (Fire Protection)	N/A
Substation Capacitor Banks - Metal Enclosed	Routine Inspection	N/A
Substation Capacitor Banks - Open Rack	Routine Inspection	Quarterly visual inspection Semi-annual seasonal inspection
Substation Capacitor Banks - Open Rack with Circuit Switcher	Routine Inspection	Quarterly visual inspection Semi-annual seasonal inspection
Substation Circuit Breakers – Air	Predictive Maintenance (PDM) Tasks (Infrared)	Annually
Magnetic	Routine Test	8 years
	Oil Collection and Analysis Of OCB	1 to 6 years
Substation Circuit Breakers – Oil	PDM Tasks (Infrared)	Annually
	Internal Inspection and test (<34kV)	5 to 8 years or as recommended by Equipment Condition Assessment (ECA) Process

<u>Equipment</u>	Inspection	ACE (NJBPU)
	Internal Inspection and Test (34kv and above)	As recommended based on the ECA Process.
	Diagnostic (Routine)Testing	5 to 8 years
	Compressor Inspection/Pre-Charge Inspection (as applicable)	N/A
	Predictive Maintenance (PDM) Tasks (Infrared)	Annually
Substation Circuit Breakers – SF6	Routine Inspection – Intrusive	N/A
	Diagnostic Testing	8 years
Substation Circuit Breakers –	PDM Tasks (Infrared)	Annually
Vacuum	Routine Inspection	8 years
		N/A
Substation – 69 to 230kV High- Pressure Pipe-Type Potheads	Periodic Inspection with DGA	N/A
		N/A
Substation – Battery & Charger Systems	Visual & On-line Test/Inspection	Annual or based on condition assessment
Substation Regulators	Routine Inspection/Test	N/A
Substation – Building Heating, Ventilation and Air Conditioning (HVAC) System	Annual Inspection	N/A
Substation – Emergency Generators	Start and Run Test	Generator test run up to 2 times per year including routine inspections. Standby generator inspection 12 months and black start every 12 months
Substation – Fire Protection Pump	Routine Inspection	N/A
Right-of-Way Integrated VM (Transmission)	Routine Inspection	Annually
Scheduled Tree Trimming - Overhead Distribution Feeders	Routine and Condition Based Tree Trimming	4 years
Protective Relays and Automatic Reclosing Relays	Preventive Maintenance	4 to 8 years, based on system voltage class
Under-Frequency Relays	Preventive Maintenance	4 years (Electromechanical Relays) 8 years (Microprocessor Relays)
RTUs - SCADA	Predictive Maintenance	Failure to operate properly based on condition monitoring – self diagnostics, EMS trouble logs, real time data analysis, and remote communications
SCADA (Supervisory Control and Data Acquisition) Metering	Preventive Maintenance	In response to referrals

<u>Equipment</u>	<u>Inspection</u>	ACE (NJBPU)				
Digital Fault Recorder	Preventive Maintenance	Failure to operate properly based on condition monitoring – self diagnostics, fault records, real time data analysis and remote communications				
Power Line Carrier (PLC)	Preventive Maintenance	Every 12 to 18 months				
Microwave Equipment	Preventive Maintenance	Annually				
Fiber Optic Equipment	Preventive Maintenance	Based on condition				
Leased Line	Preventive Maintenance	N/A				
Pole-Type Recloser	Routine Inspection	1 year visual 3 to 6 years operational check 8 years ops check w/digital relay				
Pole-Type Regulators	Routine Inspection/Test	Every 24 months				
Critical (Hospital/Nursing Home) Network Transformers/Protectors	Routine Inspection					
Distribution and Subway Network Transformers/Protectors	Routine Inspection	Condition based – Every 2 to 10 years based on past inspection results.				
Underground Network Transformers/Protectors	Routine Long Inspection	results.				
Underground Network Transformers/Protectors	Routine Short Inspection	N/A				
Underground Distribution Radial Transformers	Routine Inspection	N/A				
Capacitor Banks – Pole Mounted	Routine Inspection	Annually (Switched) 4 years (Fixed)				
Distribution Padmounted Transformers / Switchgear	Routine Inspection	5 years				
Distribution Streetlights	Predictive Maintenance (PDM) Inspections	6 years or condition based				
Pipe-Type Cable Joint Sleeves in Manholes	Periodic Inspection	N/A				
Wood Poles	Wood Pole Inspection, Remedial Treatment and Restoration	10 years				
Power Line Over Navigable Waterway – Overhead Clearance	Routine Inspection	N/A				
Overhead Distribution Inspection – First Protective Device (OHMI)	Periodic Inspection	2 years				
Overhead Distribution Comprehensive Inspection w/poles	Periodic Inspection	10 years				
Underground Distribution Manhole and Cable Comprehensive Inspection	Routine Inspection	12 years				
High Voltage Transmission Structure Aviation Warning Lighting	Periodic Inspection	Per FAA requirement				
High Voltage Transmission Structure Grounding (230kv & above)	Periodic Inspection	10 years				

<u>Equipment</u>	<u>Inspection</u>	ACE (NJBPU)
Microwave Tower and Aviation Warning Lighting	Periodic Inspection	Per FAA requirements, tower inspections 3 years
High Voltage Transmission Line Comprehensive Inspection	Aerial Inspection	6 years
Cathodic Protection	Substation Inspection and Manhole Survey	N/A
Cable Oil and Gas Alarms	Annual Inspection	N/A
Fluid Pressurizing Plants for High-Pressure Pipe-Type Cables	Operational Test and Inspection	N/A

C3. Reliability Initiatives for ACE

A. Reliability Improvement Plan (RIP)

The Company continued the RIP by advancing work on existing programs as well as initiating new activities. The RIP programs are intended to reduce the likelihood of system faults and minimize their impact by reducing both the frequency and duration of customer outages. Improving the reliability of ACE's electric system is critically important. The Company continues in its efforts to improve its performance and works closely with customers to address their concerns.

The "Appendix 2. Reliability Improvement Plan Progress Report" supplementing this report provides an overview of that plan and an update of the progress ACE has made since implementing the RIP in 2011.

B. Overhead Feeder Inspection Program

Beginning in 2011 and continuing into 2017, ACE performs overhead distribution system inspections. The program is focused primarily upon:

- Reliability Performance
- Public Safety
- National Electric Safety Code (NESC) Compliance

Expected Benefits:

- Improved System Reliability
- Improved Public Safety / NESC Compliance
- Improved Management of Aging Assets
- Reduced Customer Outages
- Increased Customer Satisfaction

C. Oil Circuit Breaker Replacement Program

The Company continues with its replacement program for substation Oil Circuit Breakers (OCBs). Poor performing distribution OCBs are replaced with more reliable vacuum breakers that employ newer technology and require less maintenance.

D. Multiple Operations of Major Protective Devices (MDOs) and Customers Experiencing Multiple Interruptions (CEMI)

An important strategy for improving customer reliability performance is minimizing the number of interruptions to major protective devices, such as feeder breakers, line reclosers, and fuses. Mitigating the root causes that operate major protective devices can prevent outage events that affect hundreds and even thousands of customers.

In addition to managing the MDO program, high outage counts for individual customers are also performed in order to identify and remediate local reliability issues affecting smaller groups of customers.

CEMI data is analyzed to identify high customer outage rates and recurring outage causes. The CEMI indices are calculated pursuant to IEEE Standard 1366 (2012).

E. Load Studies and Proactive Actions

The Company performs load studies to ensure circuits can perform satisfactorily under peak loading conditions. In addition, studies are performed to analyze outage contingencies and to ensure sufficient load transferring capacity is available for circuits. In response to these studies, system improvement initiatives are developed and implemented.

F. Outage Follow-Up Investigations

The Company performs formal outage investigations on major device lockouts affecting more than 2,000 customers or when there are concerns regarding protective device coordination, operational errors, etc. The outage investigation includes identification of the root outage cause, generally a system fault related to equipment failure, tree or animal contacts, vehicle accident, etc. It also includes a determination if protective devices operated as expected. The investigation includes looking into the effectiveness and efficiency of the restoration activities. For example, if switching before repairing was performed where applicable in order to more quickly restore customers. Finally, recommendations for remedial actions are made to help prevent reoccurrences (fault prevention) and/or to improve restoration practices.

G. Daily/Weekly Outage Calls

The Company performs a daily operational call that includes a discussion of the previous day's major outage events, identification of transmission line outages that may affect customer reliability, and identification of contingency switching orders to help mitigate the risk of such line outages. The daily call also includes a discussion of distribution system lines and devices that may need to be placed in abnormal conditions circuit configuration to performance or maintenance improvement works, along with switching or contingencies to mitigate reliability risk.

ACE also performs a weekly outage call that focuses specifically on customer outage events that occurred during the previous week. While all outages events are reviewed, there is added emphasis on outage events that meet certain criteria, such as the number of customers affected, event duration, outage cause, repeat operations of protective devices over some specified time period, etc. The general objective of the call is to ensure all outage events are properly documented and that corrective actions are taken where necessary and practicable.

H. Other Initiatives

The Company also has the following programs/projects that are performed periodically in support of maintaining a reliable system.

- Infrared thermo-graphic scans of overhead circuit equipment;
- · Radio frequency emission monitoring;
- Wood pole inspections and treatment;
- Visual inspections and remediation of overhead circuits and equipment;
- Visual inspections and remediation of pad-mounted equipment; and
- Transformer dissolved gas analysis online monitoring.

C4. Methodology for Identifying Poor Performing Circuits

A. Number of Feeders Required to be Identified

According to N.J.A.C. 14:5 - 8.8(g), the greater of eight percent or a quantity of five of its worst-performing circuits identified in each of its operating areas need to be identified. As a result, the numbers of feeders to be identified in the Company's service territory are as follows:

District	Number of Feeders	Percent Required	No of Feeders by Percentage	Number of Feeders Selected (5 minimum)
Cape May	56	8%	4	5
Glassboro	113	8%	9	9
Pleasantville	86	8%	7	7
Winslow	53	8%	4	5
Total	308			26

B. Tools and Data Used System Performance Contribution

1) Beginning 2013, the Company began using the System Performance Contribution (SPC), a method that provides greater system performance improvement potential. The SPC value for each feeder is calculated using the following equation:

Feeder CI = Customer Interruptions of the feeder System CI = Customer Interruptions of the total system Feeder CMI = Customer Minutes of Interruption of the feeder

System CMI = Customer Minutes of Interruption of the total system

C. Process and Methodology

- 1) Storm exclusive data was used (based on IEEE Standard 1366-2003).
- 2) Please refer to Section (B) (1) above for Methodology used.
- 3) The top eight percent or five feeders (whichever is greater) in each district with highest SPC value are identified.
- 4) Feeders with a minimum SAIFI value of 2.00.
- 5) Feeders experienced at least 10 outage occurrences in the evaluation period.
- 6) Additional analysis at the feeder level is conducted to ensure the proper feeders are selected and corrective actions are reasonable (e.g., excluding feeders with abnormal configuration at the time of the outage occurrence, etc.).

D. Corrective Actions

- Detailed outage records for feeders identified in the past year are assembled and evaluated.
- Actions, recommendations and/or comments are made in accordance with problems found. Please refer to section G for detailed action(s) taken and/or planned on the worst performing feeder identified.

C5. Summary of the Company's Power Quality Program

The Company's Power Quality Program was filed with the Board of Public Utilities, pursuant to N.J.A.C. 14.5 - 8.4, on January 31, 2001. Additional copies are available from the Company upon request. The 41-page program is highlighted by the following:

In New Jersey, the Company has a requirement to maintain its steady state voltage at plus or minus 5% of the nominal voltage. The Company follows voltage standards as stipulated in the NEMA C84.1-2011 Electric Power Systems and Equipment standard. The Company designs to minimum voltages specified in the Power Quality Program ("Program").

The Company has determined that it shall design and operate the system to limit the maximum steady state voltage imbalance to 3% at the delivery point under no load conditions. The Company will review load balancing and if loads are unbalanced, the Company will require correction by customers.

The Company has determined that it should respond promptly to all customer concerns about transients and voltage variation on its system. The Company works with the customer using discussion, outage records, direct observation and instrumentation to identify any distribution problems and possible solutions to voltage issues.

ACE has also determined definitions and reasonable levels of flickers. The Company is using IEEE Standard 519-1992 "Recommended Practices and Requirements for Harmonic Control for Electric Power Systems" as a guide for controlling harmonics and as a reference for solving harmonics-related problems. If certain recommended limits or harmonic problems arise, the Company performs measures to identify and correct such occurrences. Follow-up actions can include harmonic measurements to determine sources of harmonic current injections, modifying the source impedance and isolating

the harmonic load.

The Company has determined that it shall design and operate the system to limit the maximum steady state voltage imbalance to 3% at the delivery point under no-load conditions. The Company will review load balancing and if loads are unbalanced, the Company will require correction by customers.

The Company has power quality complaint procedures, which also cover stray voltage complaints that establish a process which identifies problems, if any, sets up an investigation process and sets up a resolution process. The process includes an investigation procedure and recommended procedures. A process for problem resolution is included.

Additional details for the Program appear in the complete version of the Program, which is on file with the Board.

C6. Stray Voltage

Stray voltage inquiries are covered under the Company's Power Quality Program. See Section C5.

C7. Technology Initiative to Improve Reliability

Advanced Functionality Inverters

For large size solar, 250 kW to 3,000 kW, ACE is requiring a special Power Factor (PF) setting that mitigates voltage fluctuation, helps to reduce steady state high voltage and contributes to better system stability during system disturbances that would otherwise cause inverters to trip during cloud events.

For even larger size systems (over 3,000 kW), there are additional requirements that contribute further to reducing voltage fluctuation, ensuring proper steady state voltages and supporting system stability.

Photovoltaic Monitoring

ACE continues to collect data samples at solar sites to better understand the impact of solar on the grid and also to understand how operations of automatic line equipment and substation voltage regulation equipment can affect the operation of solar systems. The data will also help the Company find ways to better accommodate the needs of solar generators while maintaining acceptable levels of power quality for all customers.

Solar Generator Telemetry – ACE continues to explore methods to lower costs and to achieve secure communications for solar generators, which includes remote trip capability for the larger sites. The ability to get real time data benefits Operations and Planning and will support both present and future needs. For example, distribution automation schemes will benefit from real time solar generator output data as an input to the D/A master controller to help ensure post-fault system reconfiguration is optimized.

C8. Staffing and Training

The following lists the number of personnel in each operating District and provides information on ACE's training program.

	2017 ACE Staffing				
Group	Location	ACE Construction	ACE Maintenance	ACE Engineering	Grand Total
Local 210	Capemay District	28			28
	Glassboro District	86			86
	MLC District		66		66
	Pleasantville District	94			94
	Winslow District	51			51
Local 210 Total		259	66		325
Local 210-5	Capemay District			4	4
	Glassboro District			7	7
	Pleasantville District			11	11
	Winslow District			5	5
Local 210-5 Total				27	27
Non-Union	Capemay District	4		6	10
	Glassboro District	11		14	25
	MLC District	3	18	7	28
	Pleasantville District	9		14	23
	Winslow District	7		6	13
Non-Union Total		34	18	47	99
Grand Total		293	84	74	451

2017 Participants - Apprentice Training Program

Overhead	22	3-4 Year Training Program - 160 hours of formal training per year
Underground	3	3-4 Year Training Program - 160 hours of formal training per year
Relay Technician	2	3-4 Year Training Program - 160 hours of formal training per year
Substation Technician	0	3-4 Year Training Program - 160 hours of formal training per year
Comm Tech Apprentice	2	3-4 Year Training Program - 160 hours of formal training per year
	29	

C9. Vegetation Management Work and Planned Activities

The following identifies distribution circuits on which vegetation management work was performed during 2017.

2017 ACE Vegetation Management Work Completed

Substation	Feeder	Date Completed
Swainton	NJ0207	6/1/2017
England	NJ0213	9/11/2017
England	NJ0214	9/11/2017
Court	NJ0223	6/1/2017
Cape May	NJ0262	7/25/2017
Cape May	NJ0263	7/25/2017
Cape May	NJ0264	1/4/2018
Court	NJ0381	12/15/2017
Court	NJ0382	9/19/2017
Court	NJ0383	11/29/2017
Court	NJ0384	11/7/2017
Ocean City	NJ0474	12/18/2017
Ocean City	NJ0478	12/18/2017
Ocean City	NJ0479	12/18/2017
Beesley Point	NJ0611	1/4/2018
Peermont	NJ2603	10/17/2017
Peermont	NJ2604	10/17/2017
Peermont	NJ2606	12/18/2017
Peermont	NJ2607	10/10/2017
Second Street	NJ0214	9/14/2017
Second Street	NJ0215	10/3/2017
Second Street	NJ0216	8/23/2017
Second Street	NJ0217	8/23/2017
Salem	NJ0301	9/20/2017
Salem	NJ0302	9/20/2017
Paulsboro	NJ0303	1/10/2018
Glassboro	NJ0304	11/15/2017
Glassboro	NJ0305	5/23/2017
Deepwater	NJ0307	9/4/2017
River	NJ0310	1/10/2018
Salem	NJ0311	10/3/2017
Paulsboro	NJ0312	1/30/2018
Paulsboro	NJ0316	2/22/2017
Fairton	NJ0671	4/13/2017
Fairton	NJ0672	9/5/2017
Fairton	NJ0673	9/4/2017
Fairton	NJ0674	6/16/2017
Landis	NJ1101	12/18/2017
Landis	NJ1102	12/15/2017
Landis	NJ1103	1/30/2018

2017 ACE Vegetation Management Work Completed Continued

Substation	Feeder	Date Completed
Carlls Corner	NJ1461	11/16/2017
Carlls Corner	NJ1462	2/2/2018
Carlls Corner	NJ1463	7/24/2017
Carlls Corner	NJ1464	10/31/2017
Upper Pittsgrove	NJ2351	1/4/2018
Upper Pittsgrove	NJ2352	1/18/2018
Upper Pittsgrove	NJ2353	1/10/2018
Carlls Corner	NJ1466	1/4/2018
Carlls Corner	NJ1465	9/4/2017
Fairton	NJ0675	4/20/2017
Ontario	NJ0201	4/18/2017
Higbee	NJ0220	5/25/2017
Ontario	NJ0230	4/18/2017
Ontario	NJ0236	4/18/2017
Higbee	NJ0254	1/30/2017
Ontario	NJ0258	1/18/2018
Shipbottom	NJ0551	4/18/2017
Shipbottom	NJ0552	9/28/2017
Shipbottom	NJ0553	12/18/2017
Shipbottom	NJ0554	6/20/2017
Shipbottom	NJ0555	4/18/2017
Shipbottom	NJ0556	12/29/2017
Shipbottom	NJ0557	1/18/2018
Shipbottom	NJ0558	12/18/2017
Shipbottom	NJ0559	6/13/2017
Chestnut Neck	NJ0861	3/29/2017
Lenox	NJ0931	10/11/2017
Lenox	NJ0932	9/26/2017
Lenox	NJ0933	1/18/2018
Lenox	NJ0934	1/29/2018
Searstown	NJ0982	9/29/2017
Searstown	NJ0983	6/30/2017
Searstown	NJ0984	9/22/2017
Searstown	NJ0985	8/29/2017
Searstown	NJ0986	8/29/2017
Searstown	NJ0987	10/6/2017
Ontario	NJ0205	4/18/2017
Huron	NJ0217	4/18/2017
Stratford	NJ0306	12/19/2017
Stratford	NJ0307	12/18/2017
Stratford	NJ0308	1/18/2018
Lindenwold	NJ0634	11/28/2017

2017 ACE Vegetation Management Work Completed Continued

Substation	Feeder	Date Completed
Minotola	NJ0815	1/29/2018
Silverlake	NJ1071	6/30/2017
Silverlake	NJ1072	7/27/2017
Silverlake	NJ1073	9/20/2017
Silverlake	NJ1074	9/19/2017
Silverlake	NJ1075	9/21/2017
Silverlake	NJ1076	9/20/2017
Berlin	NJ1092	11/14/2017
Berlin	NJ1093	1/11/2018
Berlin	NJ1094	11/16/2017
Pinehill	NJ1142	5/17/2017
Pinehill	NJ1143	5/17/2017
Pinehill	NJ1144	5/17/2017
Pinehill	NJ1145	5/17/2017
Pinehill	NJ1146	5/17/2017
Pinehill	NJ1147	11/14/2017
Sickler	NJ1731	9/18/2017
Sickler	NJ1732	10/11/2017
Sickler	NJ1733	10/11/2017
Sickler	NJ1734	11/3/2017
Sickler	NJ1735	10/20/2017

The 2018 ACE Vegetation Management Plan (distribution system) is shown below and is subject to change based on priorities as dictated by the Reliability Improvement Plan.

2018 ACE Vegetation Management Schedule

Lake Avenue 0097A Cape May Lake Avenue 0097B Cape May Swainton NJ0042 Cape May Tuckahoe NJ0361 Cape May Lake Avenue NJ0972 Cape May Lake Avenue NJ0973 Cape May Lake Avenue NJ0974 Cape May Lake Avenue NJ0975 Cape May Lake Avenue NJ0976 Cape May Lake Avenue NJ0977 Cape May Lake Avenue NJ0977 Cape May Lake Avenue NJ0978 Cape May Lake Avenue NJ0979 Cape May Marion NJ1400 Cape May Merion NJ1401 Cape May Merion NJ1401 Cape May Merion NJ1403 Cape May Merion NJ1404 Cape May Merion NJ1405 Cape May Merion NJ1406 Cape May Merion NJ1407 Cape May Merion NJ1408 Cape May Merion NJ1409 Cape May Merion NJ1409 Cape May Merion NJ1409 Cape May Merion NJ1409 Cape May Merion NJ1410 Cape May Glassboro Newport NJ0571 Glassboro Newport NJ0572 Glassboro Newport NJ0585 Glassboro Clayton NJ0951 Glassboro Clayton NJ0952 Glassboro Nortonville NJ1111 Glassboro Nortonville NJ1111 Glassboro Nortonville NJ1112 Glassboro	Substation	Feeder	District
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	Nortonville	NJ1114	Glassboro

2018 ACE Vegetation Management Schedule Continued

Substation	Feeder	District
Terrace	NJ1291	Glassboro
Terrace	NJ1292	Glassboro
Terrace	NJ1293	Glassboro
Terrace	NJ1294	Glassboro
Terrace	NJ1295	Glassboro
Terrace	NJ1296	Glassboro
Terrace	NJ1297	Glassboro
Quinton	NJ1311	Glassboro
Quinton	NJ1312	Glassboro
Quinton	NJ1313	Glassboro
Oldmans	NJ1551	Glassboro
Union	NJ1841	Glassboro
Union	NJ1842	Glassboro
Washington	NJ2092	Glassboro
Washington	NJ2093	Glassboro
Washington	NJ2094	Glassboro
Washington	NJ2095	Glassboro
Washington	NJ2096	Glassboro
Washington	NJ2097	Glassboro
Washington	NJ2098	Glassboro
Pleasantville	NJ0423	Pleasantville
Pleasantville	NJ0424	Pleasantville
Pleasantville	NJ0426	Pleasantville
Pleasantville	NJ0427	Pleasantville
Pleasantville	NJ0428	Pleasantville
Pleasantville	NJ0429	Pleasantville
Pleasantville	NJ0430	Pleasantville
Ontario	NJ0691	Pleasantville
Ontario	NJ0692	Pleasantville
Ontario	NJ0693	Pleasantville
Ontario	NJ0694	Pleasantville
Ontario	NJ0695	Pleasantville
Ontario	NJ0696	Pleasantville
Ontario	NJ0698	Pleasantville

2018 ACE Vegetation Management Schedule Continued

Substation	Feeder	District
Cedar	NJ1323	Pleasantville
Cedar	NJ1324	Pleasantville
Cedar	NJ1325	Pleasantville
Cedar	NJ1326	Pleasantville
Cedar	NJ1327	Pleasantville
Cedar	NJ1328	Pleasantville
Cedar	NJ1329	Pleasantville
Cardiff	NJ1981	Pleasantville
Cardiff	NJ1982	Pleasantville
Cardiff	NJ1983	Pleasantville
Cardiff	NJ1984	Pleasantville
Cardiff	NJ1985	Pleasantville
Winslow	NJ0241	Winslow
Winslow	NJ0242	Winslow
Winslow	NJ0243	Winslow
Winslow	NJ0244	Winslow
Tansboro	NJ0531	Winslow
Tansboro	NJ0532	Winslow
Tansboro	NJ0533	Winslow
Minotola	NJ0813	Winslow

The following table identifies transmission system vegetation management work planned for 2018 through 2021.

Atlantic City Electric Company

Transmission System Vegetation Management Planned Work Areas by NJ Municipality

2018	2019	2020	2021
Berlin	Absecon	Buena	Alloway
Carney's Point	Atlantic City	Buena Vista	Bridgeton
Clayton	Barnegat	Cape May	Carney's Point
Clementon	Bass River	Corbin City	Commercial
East Greenwich	Eagleswood	Dennis	Deerfield
Elk	Egg Harbor	Egg Harbor	Downe
Evesham	Egg Harbor City	Estell Manor	Fairfield
Franklin	Galloway	Franklin	Franklin
Glassboro	Hamilton	Hamilton	Hopewell
Gloucester	Hammonton	Lower	Lawrence
Greenwich	Lacey	Maurice River	Mannington
Harrison	Linwood	Middle	Maurice River
Laurel Springs	Little Egg Harbor	Millville	Millville
Lindenwold	Margate	Ocean City	Monroe
Logan	Monroe	Sea Isle City	Newfield
Mannington	Mullica	Upper	Pennsville
Mantua	Ocean	Vineland	Pilesgrove
Medford	Pleasantville	West Cape May	Pittsgrove
Monroe	Port Republic	West Wildwood	Quinton
Oldmans	Ship Bottom	Weymouth	Salem
Paulsboro	Stafford	Woodbine	Stowe Creek
Penns Grove	Tuckerton		Upper Deerfield
Pennsville	Ventnor		Upper Pittsgrove
Pilesgrove	Winslow		Vineland
Pine Hill			Woodstown
Pitman			
Shamong			
Stratford			
Tabernacle			
Upper Pittsgrove			
Washington			
Waterford			
Winslow			
Woodstown			
Woolwich			

The following tables identify transmission system vegetation management work planned for specific municipalities for 2018 through 2021.

Atlantic City Electric Company

Transmission System Vegetation Management 2018 Cycle

		ement 2018 Cycle
Circuit	Substations	Municipalities
2301	Mickleton-Trainer	East Greenwich, Greenwich, Logan
2302	Cox's Corner-Silver	Berlinboro, Evesham, Berlin, Voorhees
2303/2319	Deptford-Mickleton	East Greenwich, Paulsboro
2304	Mickleton-Monroe #2	East Greenwich, Harrison, Mantua, Harrison, Elk
2305	New Freedom-Monroe	Winslow, Monroe
2306	New Freedom-Silverlake	Winslow, Pine Valley, Pine Hill, Gloucester
2308	New Freedom-Sickler	Winslow
2311	Pedricktown-Bridgeport	Logan, Oldmans, Carney's Point, Mannington, Pennsville
2312	Pedricktown-Chambers	Oldmans, Carney's Point
2313	Chambers-Churchtown	Carney's Point, Mannington, Pennsville
2315	Mickleton-Bridgeport	East Greenwich, Greenwich, Logan
2316	Mickleton-Monroe #1	East Greenwich, Harrison, Mantua, Elk
704	Pennsgrove-Oldmans	Oldmans, Penns Grove
705	Monsanto-Oldmans	Logan, Oldmans
706	Silver Lake-Atco	Berlinboro, Evesham
707	Atco-Tansboro	Waterford, Winslow
710	Deepwater-Pennsgrove	Penns Grove, Carney's Point
713	Tansboro-Certainteed	Winslow
714	Woodstown-Clayton	Woodstown, Upper Pittsgrove, Elk, Clayton
715	Clayton-Ekco	Elk
716	Monroe-Clayton	Clayton, Monroe, Franklin
722	Deepwater-Paulsboro	Pennsville, Mannington, Carney's Point, Oldmans,
722	Deepwater-Paulsboro	Woolwich, Logan
728	Lindenwold-Pinehill-Sickler	Clementon, Laurel Springs, Stratford, Lindenwold
729	Rowan-Monroe	Elk, Clayton, Glassboro
730	Oldman-BF Goodrich	Oldmans
732	Monroe-Sickler	Winslow, Monroe
738	Mickleton-Valero #3	Greenwich, East Greenwich
744	Lindenwold-Silverlake	Clementon
746	Mickleton-Paulsboro	Greenwich, East Greenwich
747	Mickleton-River	Greenwich, East Greenwich
748	Mickleton-Mantua	Mantua, East Greenwich
752	Pinehill-Monroe	Pine Hill, Gloucester, Winslow
753	Pitman-Washington	Glassboro, Washington, Monroe
754	Monroe-Tansboro	Winslow, Monroe
756	Pitman-Pinehill	Washington
763	Monsanto-River	Greenwich, Logan
765	Deepwater-Carney's Point	Carney's Point, Elk, Clayton
769	Tansboro-Johns Manville	Winslow
774	Paulsboro-Mobil Oil	Paulsboro
776	Sickler-Tansboro	Winslow
783	Atco-Tabernacle	Tabernacle, Shamong, Medford, Evesham
784	Tabernacle-Medford	Tabernacle
785	Mantua-Lamb	Mantua, Pitman
786	Monroe-Washington	Monroe, Washington
787	Pitman-Lamb	Washington, Pitman
788	Deepwater-Churchtown	Pennsville
793	Pitman-Rowan	Glassboro

Atlantic City Electric Company Transmission System Vegetation Management 2019 Cycle

Circuit	Substations	Municipalities
2310	New Freedom-Cardiff	Winslow, Hammonton, Hamilton, Egg Harbor
2317	Cardiff-Cedar	Egg Harbor, Galloway, Port Republic, Bass River, Little Egg Harbor, Eagleswood, Stafford
2318	Cedar-Oyster Creek	Stafford, Barnegat, Ocean, Lacey
1418	Cardiff-Lewis	Egg Harbor
701	Lewis-Moss Mill	Galloway, Absecon, Egg Harbor
702	Lewis-Absecon	Galloway, Absecon, Egg Harbor
703	Lewis-Huron	Egg Harbor, Pleasantville, Atlantic City
719	Lewis-McKee City	Egg Harbor
721	Lenox-Lewis	Galloway, Egg Harbor
731	Monroe-Dacosta	Monroe, Winslow, Hammonton
734	Ontario-Huron	Atlantic City
741	Lewis #1-Higbee	Egg Harbor, Pleasantville, Atlantic City
742	Lewis #2-Ontario	Pleasantville, Atlantic City, Egg Harbor
743	Lewis #1-Plesasantville	Egg Harbor, Pleasantville, Atlantic City
749	Mill-Marven	Egg Harbor, Linwood, Pleasantville
751	Lewis #2-Higbee	Egg Harbor, Pleasantville, Atlantic City
755	Monroe-Williamstown	Monroe, Winslow
766	Cedar #1-Shipbottom	Stafford, Ship Bottom
767	Cedar #2-Shipbottom	Stafford, Ship Bottom
770	Cedar #1-Motts Farm	Bass River, Little Egg Harbor, Tuckerton, Stafford, Eagleswood
771	Lewis #2-Pleasantville	Egg Harbor, Pleasantville
772	Ontario-Higbee	Atlantic City
773	Missouri-Higbee	Atlantic City
775	Mill-Ontario	Pleasantville, Egg Harbor, Atlantic City
777	Cedar #1-Barnegat	Stafford, Barnegat
779	Dacosta-Egg Harbor	Hamilton, Mullica, Egg Harbor, Galloway
781	Cardiff-Lewis	Egg Harbor
791	Cedar #2-Barnegat	Stafford, Barnegat
794	Lenox-Egg Harbor	Egg Harbor City, Galloway
795	Cedar #2-Motts Farm	Stafford, Eagleswood, Little Egg Harbor, Bass River, Tuckerton
796	Motts Farm-Moss Mill	Bass River, Little Egg Harbor, Tuckerton, Port Republic, Galloway

Atlantic City Electric Company Transmission System Vegetation Management 2020 Cycle

Circuit	Substations	Municipalities
2307	Cumberland-Dennis	Millville, Maurice River, Estell Manor, Upper, Dennis
1401	BL England-Merion	Ocean City, Upper
1402	Corson-Union	Upper, Dennis, Woodbine, Dennis
1403	Corson-BL England	Upper, Dennis
		Pennsville, Carney's Point, Pilesgrove, Mannington,
1404	Doonwater Monroe Lowis	Woodstown, Upper Pittsgrove, Pittsgrove, Monroe, Franklin,
1404	Deepwater-Monroe-Lewis	Buena, Vineland, Buena Vista, Hamilton, Weymouth, Estelle
		Manor, Egg Harbor
1407	England-Mill-Lewis #1	Egg Harbor, Upper
1408	England-Mill-Lewis #2	Upper, Egg Harbor
1409	Landis-Minotola	Franklin, Vineland, Buena, Buena Vista
1411	Corson-Merion	Dennis, Upper, Ocean City
1412	Corson-Middle #1	Middle, Dennis
1413	Corson-Middle #2	Middle, Dennis
717	Corson-Sea Isle-Swainton	Sea Isle, Dennis, Middle
718	Middle-Swainton	Middle, Swainton, Dennis
720	Corson-Middle-Lake	Middle, Dennis
735	Middle-Rio Grande-Cape May #2	Middle, Lower, Cape May
736	Middle-Lake	Lower, Middle, Wildwood
737	Middle-Rio Grande-Cape May #1	Lower, Middle, Cape May Point, West Cape May, Cape May
750	Corson-Mill	Upper, Dennis, Corbin City, Estell Manor, Egg Harbor
780	Corson-Sea Isle	Dennis, Sea Isle
782	Cardiff-Mill	Egg Harbor

Atlantic City Electric Company Transmission System Vegetation Management 2021 Cycle

Circuit	Substations	Municipalities	
2314	Orchard-Churchtown-Cumberland	Alloway, Upper Deerfield, Upper Pittsgrove	
4.405		Carney's Point, Pennsville, Mannington,	
1405	Deepwater-Upper Pittsgrove	Pilesgrove, Woodstown, Upper Pittsgrove	
1406	Upper Pittsgrove-Landis	Pittsgrove, Vineland	
1410	Landis-Franklin	Pittsgrove, Vineland, Franklin, Monroe	
1414	Sherman Ave-Lincoln	Vineland, Maurice River, Millville	
1415	Sherman Ave-Cumberland	Vineland, Millville	
1416	Cumberland-Union	Millville, Maurice River	
708	Laurel-Fairton	Fairfield, Bridgeton, Upper Deerfield	
709	Carlls Corner-Laurel	Bridgeton, Upper Deerfield	
711	Monroe-Central North	Vineland, Newfield, Franklin, Monroe	
712	Central North - G-10	Vineland	
723	Churchtown-Laurel	Carney's Point, Pennsville, Mannington	
724	Deepwater-Salem	Carney's Point, Mannington, Salem	
725	Deepwater-Woodstown #1	Carney's Point, Pilesgrove, Woodstown	
726	Deepwater-Woodstown #2	Carney's Point, Pilesgrove, Woodstown	
727	Fairton-Newport	Downe, Lawrence, Fairfield	
733	Second St-South Millville	Millville, Vineland	
720		Upper Deerfield, Fairfield, Deerfield, Millville,	
739	Carlls Corner-Sherman Ave	Vineland	
740	Woodstown-Laurel	Pilesgrove, Alloway, Hopewell,	
740	Woodstown-Lauren	Upper Deerfield, Bridgeton	
745	Salem-Woodstown	Salem, Mannington, Alloway, Pilesgrove,	
743	Salem-Woodstown	Woodstown	
757	#1 Sherman Ave-2nd St	Vineland, Millville	
758	#2 Sherman Ave-2nd St	Vineland, Millville	
759	#1 Second St-Wheaton	Millville	
760	#2 Second St-Wheaton	Millville	
761	Sherman Ave-W. Vineland	Vineland	
762	Newport-South Millville	Downe, Commercial, Millville	
764	South Millville-Butler	Vineland, Millville	
768	G-10 - West Vineland	Vineland	
778	Sherman Ave-Butler	Vineland	
789	Butler-VCLP	Vineland	
790	Cental-Butler-VCLP	Vineland	
799	Laurel - Roadstown - Quinton	Upper Deerfield, Hopewell, Stow Creek,	
,,,,		Alloway, Quinton	
1420	Monroe-Franklin	Monroe, Franklin	
1419	Union - Lincoln	Millville	
2309	Orchard-Churchtown	Pennsville, Mannington, Carneys Point,	
2309		Pilesgrove, Woodstown, Upper Pittsgrove	

The following table identifies hazard trees that were not mitigated due to customer refusals in 2017, consistent with the Board's February 20, 2013 order in BPU Docket No. EO12070650:

2017 Refusals

Feeder	Municipalities	
NJ0207	Avalon	
NJ0213	Commercial Township, Millville	
NJ0214	Vineland	
NJ0223	Ocean City	
NJ0262	West Cape May Borough, Cape May	
NJ0263	Lower Township	
NJ0264	Cape May Point Borough, Lower Township	
NJ0381	Middle Township	
NJ0382	Stone Harbor Borough, Middle Township	
NJ0383	Middle Township	
NJ0384	Middle Township	
NJ0474	Ocean City	
NJ0478	Ocean City	
NJ0479	Ocean City	
NJ0611	Upper Township	
NJ2603	Stone Harbor Borough, Avalon Borough	
NJ2604	Avalon Borough	
NJ2606	Avalon Borough	
NJ2607	Stone Harbor Borough, Avalon Borough	
NJ0211	Millville	
NJ0213	Commercial Township, Millville	
NJ0214	Vineland	
NJ0215	Millville	
NJ0216	Lawrence Township, Fairfield Township, Millville	
NJ0217	Millville	
NJ0301	Salem	
NJ0302	Clementon Borough, Laurel Springs Borough, Lindenwold Borough, Stratford Borough	
NJ0303	Paulsboro	
NJ0304	Glassboro, Franklin	
NJ0305	Laurel Springs Borough, Lindenwold Borough, Stratford Borough, Hi-Nella Borough	
NJ0307	Lindenwold Borough, Stratford Borough, Hi-Nella Borough, Somerdale Borough, Voorhees Township	
NJ0310	Greenwich	
NJ0311	Pennsville, Mannington	
NJ0312	Paulsboro, Greenwich	
NJ0316	Woolwich, Greenwich	
NJ0671	Fairfield Township, Bridgeton, Hopewell Township	

2017 Refusals Continued

Feeder	Municipalities	
NJ0672	Lawrence Township, Fairfield Township, Bridgeton,	
1130072	Hopewell Township	
NJ0673	Fairfield Township, Bridgeton	
NJ0674	Fairfield Township, Bridgeton, Deerfield Township	
NJ0675	Fairfield Township	
NJ1101	Vineland, Pittsgrove Township	
NJ1102	Newfield Borough, Vineland, Franklin Township	
NJ1103	Vineland, Pittsgrove Township, Franklin Township,	
NJ1103	Upper Pittsgrove Township	
NJ1461	Deerfield Township, Upper Deerfield Township,	
	Pittsgrove Township Deerfield Township, Upper Deerfield Township,	
NJ1462	Bridgeton, Fairfield Township	
	Millville, Deerfield Township, Upper Deerfield	
NJ1463	Township, Pittsgrove Township	
NJ1464	Hopewell Township, Upper Deerfield Township	
NJ1465	Bridgeton, Upper Deerfield Township	
NJ1466	Bridgeton, Upper Deerfield Township	
N IOOF4	Upper Deerfield Township, Pittsgrove Township,	
NJ2351	Elmer Borough, Upper Pittsgrove Township	
NJ2352	Alloway Township, Upper Pittsgrove Township,	
	Pilesgrove Township	
NJ2353	Alloway Township, Upper Pittsgrove Township,	
NJ0201	Upper Deerfield Township, Hopewell Township Atlantic City	
	,	
NJ0205	Pilesgrove Township	
NJ0217	Millville	
NJ0220	Atlantic City	
NJ0230	Atlantic City	
NJ0236	Atlantic City	
NJ0254	Atlantic City	
NJ0258	Atlantic City	
	Ship Bottom Borough, Surf City Borough, Long	
NJ0551	Beach Township, Harvey Cedars Borough, Barnegat	
NIOSSO	Light Borough	
NJ0552	Ship Bottom Borough	
NJ0553	Ship Bottom Borough, Long Beach Township	
NJ0554	Ship Bottom Borough, Surf City Borough	
NJ0555	Ship Bottom Borough, Surf City Borough,	
	Long Beach Township, Harvey Cedars Borough Beach Haven Borough, Ship Bottom Borough,	
NJ0556	Long Beach Township	
NIOSSZ	Beach Haven Borough, Ship Bottom Borough,	
NJ0557	Long Beach Township	
NJ0558	Beach Haven Borough, Ship Bottom Borough,	
1,00000	Long Beach Township	
N IOSSO	Ship Bottom Borough, Surf City Borough, Long	
NJ0559	Beach Township, Harvey Cedars Borough, Barnegat Light Borough	
NJ0861	Port Republic, Galloway Township	
1400001	1 or Ropublio, Calloway Township	

2017 Refusals Continued

Feeder	Municipalities	
NJ0931	Galloway Township, Hamilton Township	
NUCCO	Galloway Township, Hamilton Township,	
NJ0932	Egg Harbor City	
NJ0933	Galloway Township, Hamilton Township	
NJ0934	Galloway Township, Egg Harbor City	
NJ0982	Northfield City, Egg Harbor Township	
NJ0983	Egg Harbor Township	
NJ0984	Northfield City, Pleasantville, Egg Harbor Township	
NJ0985	Linwood, Northfield City, Egg Harbor Township	
NJ0986	Egg Harbor Township	
NJ0987	Egg Harbor Township	
NUMBER	Laurel Springs Borough, Lindenwold Borough,	
NJ0306	Stratford Borough, Gloucester Township	
NJ0307	Lindenwold Borough, Stratford Borough, Hi-Nella	
	Borough, Somerdale Borough, Voorhees Township	
NJ0308	Stratford Borough, Hi-Nella Borough,	
NJ0634	Somerdale Borough, Voorhees Township Lindenwold Borough	
1400054	Buena Borough, Newfield Borough, Vineland,	
NJ0815	Buena Vista Township, Franklin Township	
N 14074	Clementon Borough, Berlin Township,	
NJ1071	Lindenwold Borough	
NJ1072	Berlin Township, Voorhees Township	
NJ1073	Berlin Township, Lindenwold Borough, Gibbsboro	
N 14 07 4	Borough, Voorhees Township	
NJ1074	Berlin Township, Voorhees Township	
NJ1075	Berlin Township, Lindenwold Borough, Gibbsboro Borough, Voorhees Township	
N 14 07 C	Berlin Township, Evesham Borough, Gibbsboro	
NJ1076	Borough, Voorhees Township	
NJ1092	Winslow Township, Pine Hill Borough, Berlin Borough	
NJ1093	Pine Hill Borough, Berlin Borough, Clementon	
	Borough, Berlin Township, Lindenwold Borough	
NJ1094	Berlin Borough, Berlin Township	
NJ1142	Pine Hill Borough, Gloucester Township	
NJ1143	Pine Valley Borough, Pine Hill Borough,	
NJ1144	Clementon Borough, Lindenwold Borough Pine Hill Borough, Lindenwold Borough	
NJ1144 NJ1145	-	
INJ 1145	Pine Hill Borough, Gloucester Township Pine Hill Borough, Gloucester Township,	
NJ1146	Lindenwold Borough	
N 14 4 4 7	Pine Hill Borough, Gloucester Township, Lindenwold	
NJ1147	Borough	
NJ1731	Winslow Township, Gloucester Township	
NJ1732	Winslow Township	
NJ1733	Monroe Township, Winslow Township	
NJ1734	Monroe Township, Winslow Township,	
	Gloucester Township	
NJ1735	Winslow Township, Gloucester Township	

The following table identifies the transmission and distribution system miles that the Company has inspected since 2014 as per N.J.AC. 14:5-9.9(e):¹

2014-2017 Transmission and Distribution Miles Inspected

Year	Distribution Miles	Distrbution Percentage of System	Transmission Miles	Transmission Percentage of System
2014	1,743	23.8%	140	12.6%
2015	1,782	24.3%	281	25.4%
2016	1,902	26.1%	282	23.4%
2017	1,844	25.2%	272	24.3%

The following table identifies the transmission and distribution system miles that the Company plans to inspect from 2018 through 2020 as per N.J.AC. 14:5-9.9(e):²

Planned Transmission and Distribution Inspection Miles

Year	Distribution Miles	Distrbution Percentage of System	Transmission Miles	Transmission Percentage of System
2018	1,747	24.0%	241	20.0%
2019	1,782	24.5%	409	34.0%
2020	1,902	26.0%	306	27.3%

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¹ Tables provided in accordance with N.J.A.C. 14:5-9.9.

² Id.

D. Certification

A copy of the signed Certification is contained in this report following the cover page.



E. Summary of Major Events³

There were three major events in 2017, which impacted ACE's service territory. The Major Event Reports were submitted to the Board within the required timeframe. Information on the major events is as follows:

2017 Major Events			
Date(s)	Event Type	Customers Impacted (Peak)	
Jan. 23-26	Nor'easter	14,904	
Mar. 14-17	Winter Storm Stella	14,291	
Oct. 24-25	Rain and Wind Storm	19,188	

Copies of the reports on these events are included in this report beginning on the following page.

³ Major Event as defined in N.J.A.C. 14:5-1.2, Definitions.



State of New Jersey Major Event Report January 23-26, 2017

Nor'easter

Prepared By: Atlantic City Electric Company

5100 Harding Highway

Mays Landing, New Jersey 08330

February 15, 2017



Foreword

A major event is defined in the New Jersey Administrative Code ("N.J.A.C.") 14:5-1.2 (in part) as "a sustained interruption of electric service resulting from conditions beyond the control of the EDC, which may include, but is not limited to, thunderstorms, tornadoes, hurricanes, heat waves or snow and ice storms, which affect at least 10 percent of the customers in an operating area." A major event occurred in Atlantic City Electric Company's ("ACE" or "the Company") service territory as a result of a nor'easter storm that affected the entire service territory. The storm brought heavy sustained and gusting winds beginning in the early morning hours of Monday, January 23, 2017.

Pursuant to the N.J.A.C. 14:5-8.8 (a), ACE is required to file with the Board of Public Utilities ("BPU") a written report within 15 business days following the end of a major event detailing the event's impact on the Company's electric system and the associated system restoration efforts.

Overview

On Monday January 23, 2017, beginning at approximately 3:00 a.m., heavy winds and rains struck the ACE region. Sustained winds of 40 miles per hour developed, with wind gusts up to 60 miles per hour.

All four of the ACE operating districts were affected and sustained considerable distribution system damage from gusting winds and tree contacts. The western part of the ACE service territory received the most equipment damage, while the eastern shore experienced tidewater and localized flooding that hampered restoration efforts.

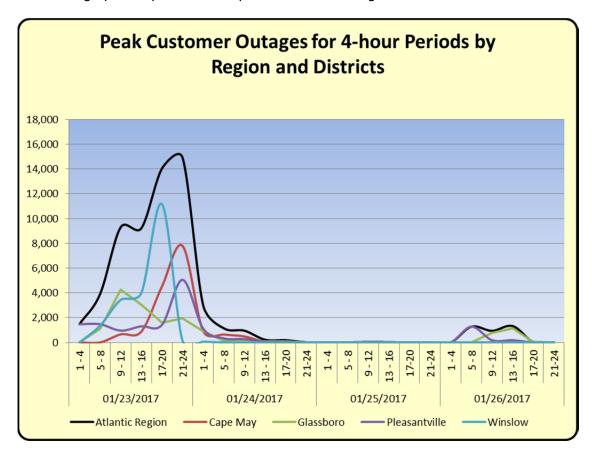
To aid in the restoration effort, ACE was able to obtain additional resources from other Pepco Holdings utilities, namely, Delmarva Power & Light Company and Potomac Electric Power Company. Resources were readily shared among ACE Districts, with resources re-directed as needed.

ACE had a total of 54,632 customer outages for this event. The 10 percent outage threshold for declaring a Major Event was reached in the Cape May and Winslow districts on January 23. The chart below indicates the date and time at which the 10 percent threshold was met:

District	Start Date	Start Time	Number of Customers Out	Percent of Customer Base
Cape May	Jan. 23	3:00 a.m.	11,380	10.3%
Glassboro	Jan. 23	3:00 a.m.	10,238	6.5%
Pleasantville	Jan. 23	3:00 a.m.	10,013	5.9%
Winslow	Jan. 23	3:00 a.m.	23,001	24.1%



Below is a graphic depiction of the peak customer outages over the course of the event:



The following are ACE's responses to specific requirements set forth in N.J.A.C. 14:5-8.8 (a).

1. The date and time when ACE's Storm Centers opened and closed.

Storm Room Operations						
Location	Opened	Closed				
Atlantic Regional	Jan. 23 at 7:00 a.m.	Jan. 26 at 10:00 p.m.				
Cape May	Jan. 23 at 7:00 a.m.	Jan. 26 at 11:59 p.m.				
Glassboro	Jan. 23 at 7:00 a.m.	Jan. 26 at 11:59 p.m.				
Pleasantville	Jan. 23 at 7:00 a.m.	Jan. 26 at 11:59 p.m.				
Winslow	Jan. 23 at 7:00 a.m.	Jan. 26 at 11:59 p.m.				



- 2. The total number of customers out of service over the course of the major event over four hour intervals, identified by operating area or circuit area. For purposes of this count, the starting time shall be when the storm center opens and the ending time shall be when the storm center closes. Regardless of when the storm center is closed, the EDC shall report the date and time when the last customer affected by a major event is restored.
 - a. <u>See</u> Appendix A for the 4-hour outage report.
 - b. The date and time when the last customer affected by the major event is restored:

The last customer affected by the storm was restored on January 24, 2017 at 9:55 p.m.

- 3. The number of trouble locations and classifications: <u>See</u> Appendix B.
- 4. The time at which the mutual aid and non-company contractor crews were requested, arrived for duty, were released and the mutual aid and non-contractor response(s) for assistance (number of crews):

See Appendix C.

- A timeline profile of the number of company line crews, mutual aid crews, noncompany contractor line and tree crews working on restoration activities during the duration of the major event.
 See Appendix D.
- The timeline profile of the number of company crews sent to an affected operating area to assist in the restoration:
 See Appendix E.

In addition to the requirements above, BPU-16 of the BPU's January 2013 order issued in response to Hurricane Irene (BPU Docket No. EO11090543) requires:

BPU-16) Prior to and during a Major Event the [electric distribution companies] shall hold daily conference calls with municipal officials of the affected municipalities. Information on these calls shall be included in the Major Event Report.

Below is the required information (continued on the next page):



Daily Stakeholder Calls:

Date	Time	District	# External Stakeholder Participants
01/20/2017	0930	Cape May	1
01/20/2017	1221	Cape May	1
01/22/2017	1400	Cape May	38
01/22/2017	1400	Pleasantville	3
01/22/2017	1500	Pleasantville	2
01/22/2017	1500	Winslow	15
01/22/2017	1600	Glassboro	6
01/23/2017	0930	Cape May	1
01/23/2017	1000	Pleasantville	2
01/23/2017	1000	Winslow	2
01/23/2017	1100	Cape May	2
01/23/2017	1400	Glassboro	14
01/23/2017	1500	Pleasantville	8
01/23/2017	1500	Winslow	8
01/23/2017	1700	Cape May	13
01/24/2017	0900	Cape May	14
01/24/2017	0900	Pleasantville	1
01/24/2017	0900	Winslow	1
01/24/2017	1300	Pleasantville	1
01/24/2017	1300	Winslow	1
01/24/2017	1500	Winslow	1
01/24/2017	1600	Pleasantville	1
01/24/2017	1900	Glassboro	9
01/25/2017	0900	Cape May	1
01/26/2017	1030	Cape May	1



Appendix A

The total number of customers out of service over the course of the major event.

Date	4-hour Time Period	Atlantic Region	Cape May	Glassboro	Pleasantville	Winslow
01/23/2017	1 - 4	1,476	1	2	1,473	0
	5 - 8	3,903	3	1,074	1,475	1,351
	9 - 12	9,305	656	4,252	955	3,442
	13 - 16	9,216	879	3,036	1,307	3,994
	17-20	14,038	4,523	1,602	1,416	11,161
	21-24	14,904	7,786	1,945	5,055	118
01/24/2017	1 - 4	2,974	901	899	1,110	64
	5 - 8	1,138	642	159	328	9
	9 - 12	950	485	185	273	7
	13 - 16	217	54	103	55	5
	17-20	183	43	88	51	1
	21-24	20	16	0	3	1
01/25/2017	1 - 4	3	1	0	1	1
	5 - 8	12	2	9	1	0
	9 - 12	38	11	8	17	2
	13 - 16	29	8	4	17	0
	17-20	2	0	2	0	0
	21-24	1	0	1	0	0
01/26/2017	1 - 4	0	0	0	0	0
	5 - 8	1,275	0	1	1,274	0
	9 - 12	937	1	754	181	1
	13 - 16	1,326	1	1,142	182	1
	17-20	46	1	41	3	1
	21-24	20	1	14	5	0



Appendix B

The number of trouble locations and classifications.

Order Rep		Atla Reg		Cape	May	Glass	boro	Pleasa	ntville	Win	slow
Date	4- hour Time Period	Outage Orders	Non- outage Orders								
01/23/2017	1 - 4	9	4	2	1	3	1	2	1	2	1
	5 - 8	31	20	2	4	12	5	9	6	8	5
	9 - 12	138	93	19	10	55	41	23	24	41	18
	13 - 16	240	175	34	33	93	68	55	42	58	32
	17-20	244	182	32	35	85	71	56	41	71	35
	21-24	273	195	47	50	79	67	64	46	83	32
01/24/2017	1 - 4	255	192	45	51	70	65	63	46	77	30
	5 - 8	204	167	38	45	51	58	53	39	62	25
	9 - 12	190	178	36	44	52	62	45	45	57	27
	13 -										
	16	119	139	14	26	40	55	27	35	38	23
	17-20	53	101	8	26	14	31	15	27	16	17
	21-24	16	64	3	18	4	18	5	20	4	8
01/25/2017	1 - 4	8	47	2	13	1	14	3	14	2	6
	5 - 8	5	32	2	9	1	12	1	6	1	5
	9 - 12	13	32	5	9	3	10	3	9	2	4
	13 - 16	15	30	5	5	5	11	3	11	2	3
	17-20	8	17	2	3	3	5	2	5	1	4
	21-24	7	12	1	3	4	3	1	4	1	2
01/26/2017	1 - 4	4	11	1	2	1	3	1	4	1	2
	5 - 8	7	11	1	0	2	3	3	6	1	2
	9 - 12	11	21	2	3	3	7	5	9	1	2
	13 - 16	13	28	2	6	5	11	4	9	2	2
	17-20	20	25	2	7	8	11	6	6	4	1
	21-24	11	15	1	3	4	9	3	3	3	0



Appendix C

The time at which the mutual aid and non-Company contractor crews were requested, arrived for duty, were released, and their response for assistance (number of resources).

	Summary of Mutual Aid - Foreign Utility and Contract Crews								
Requested	Arrival	Туре	Type Name		Released				
1/22/2017_2000	1/23/2017 0700	Contractor	Matrix - Lincoln Union	4	1/26/2017_2200				
1/22/2017_2000	1/23/2017 0700	Contractor	Valiant-High Street-Woodstown	5	1/26/2017_2200				
1/22/2017_2000	1/23/2017 0700	Contractor	Valiant-High Street-Woodstown	4	1/26/2017_2200				
1/22/2017_2000	1/23/2017 0700	Contractor	Riggs Distler-Deepwater Salem	5	1/26/2017_2200				
1/22/2017_2000	1/23/2017 0700	Contractor	Northline Utilities-Det. Poles	3	1/26/2017_2200				
1/22/2017_2000	1/23/2017 1900	Contractor	Valiant-High Street-Woodstown	3	1/26/2017_2200				
1/22/2017_2000	1/23/2017 1900	Contractor	Valiant-Beckett Paulsboro	1	1/26/2017_2200				
1/22/2017_2000	1/23/2017 1900	Contractor	Riggs Distler-Roadstown South	2	1/26/2017_2200				
1/22/2017_2000	1/23/2017 1900	Contractor	Matrix-Rt. 322 Reconductor	2	1/26/2017_2200				
1/22/2017_2000	1/23/2017 1900	Contractor	Matrix-Shipbottom Reconductor	2	1/26/2017_2200				
1/23/2017_0900	1/24/2017 0700	Contractor	Riggs Distler (Pepco)	6	1/25/17 @ 0700				
1/23/2017_0900	1/24/2017 0700	Contractor	Contractor Henkels (Pepeco)		1/25/17 @ 0700				
1/23/2017_0900	1/24/2017 0700	Contractor	Riggs Distler (Pepco)	14	1/25/17 @ 0700				
1/23/2017_0900	1/24/2017 0700	Utility	DPL Line Crews	8	1/25/17 @ 0700				



Appendix D

A timeline profile of the number of Company line crews, mutual aid crews, non-Company contractor line and tree crews.

Line and Tree Contractor Crews Working on Restoration Activities						
Date	Time Period	District	Company Line Crews	Non- company Crews	Tree Crews	
		Cape May	2	0	0	
	0-4	Glassboro	3	0	0	
	0-4	Pleasantville	3	0	0	
		Winslow	2	0	0	
		Cape May	2	0	0	
	4-8	Glassboro	3	0	0	
	4-0	Pleasantville	3	0	0	
		Winslow	2	0	0	
		Cape May	8	2	3	
	8-12	Glassboro	17	1	6	
	0-12	Pleasantville	25	5	7	
1/23/2017		Winslow	11	0	6	
1/23/2017		Cape May	8	2	3	
	12-16	Glassboro	17	1	6	
	12-10	Pleasantville	25	5	7	
		Winslow	10	1	6	
		Cape May	6	2	3	
	16-20	Glassboro	24	1	6	
	10-20	Pleasantville	25	5	7	
		Winslow	11	5	6	
		Cape May	8	4	2	
	20-24	Glassboro	26	1	6	
	ZU-Z4	Pleasantville	20	16	7	
		Winslow	15	7	6	



Appendix D (Continued)

Line and Tree Contractor Crews Working on Restoration Activities (Cont'd)						
Date	Time Period	District	Company Line Crews	Non- company Crews	Tree Crews	
		Cape May	4	2	2	
	0-4	Glassboro	10	0	4	
	0-4	Pleasantville	12	4	4	
		Winslow	7	2	2	
		Cape May	5	2	2	
	4-8	Glassboro	10	0	4	
	4-0	Pleasantville	12	4	4	
		Winslow	7	3	2	
		Cape May	7	9	2	
	8-12	Glassboro	18	9	6	
	0-12	Pleasantville	22	4	5	
1/24/2017		Winslow	12	7	6	
1/24/2017		Cape May	7	9	2	
	12-16	Glassboro	18	9	6	
	12-10	Pleasantville	22	4	5	
		Winslow	13	7	6	
		Cape May	2	2	2	
	16-20	Glassboro	18	9	6	
	16-20	Pleasantville	22	4	5	
		Winslow	13	7	6	
		Cape May	2	2	2	
	20-24	Glassboro	2	9	1	
	20-24	Pleasantville	12	4	4	
		Winslow	16	7	6	

Line and Tree Contractor Crews Working on Restoration Activities (Cont'd)						
Date	Time Period	District	Company Line Crews	Non- company Crews	Tree Crews	
		Cape May	2	2	2	
	0-4	Glassboro	4	0	4	
	0-4	Pleasantville	3	4	4	
		Winslow	2	3	3	
		Cape May	2	2	2	
	4-8	Glassboro	8	10	4	
	4-0	Pleasantville	3	4	4	
		Winslow	3	7	3	
		Cape May	4	4	2	
	8-12	Glassboro	10	10	5	
	0-12	Pleasantville	7	4	5	
1/25/2017		Winslow	7	7	3	
1/25/2017		Cape May	4	4	2	
	12-16	Glassboro	10	10	5	
	12-10	Pleasantville	7	4	5	
		Winslow	7	7	3	
		Cape May	4	4	2	
	16-20	Glassboro	10	10	5	
	16-20	Pleasantville	7	4	5	
		Winslow	7	7	3	
		Cape May	2	2	2	
	20-24	Glassboro	4	2	4	
	20-24	Pleasantville	4	2	4	
		Winslow	2	2	3	



Appendix D (Continued)

Line and	Tree Contrac	tor Crews Work	ing on Restora	tion Activities	(Cont'd)
Date	Time Period	District	Company Line Crews	Non- company Crews	Tree Crews
		Cape May	2	2	2
	0-4	Glassboro	4	0	4
	0-4	Pleasantville	3	4	4
		Winslow	2	3	3
		Cape May	2	2	2
	4-8	Glassboro	8	10	4
	4-0	Pleasantville	3	4	4
		Winslow	3	7	3
		Cape May	4	4	2
	8-12	Glassboro	10	10	5
	0-12	Pleasantville	7	4	5
1/26/2017		Winslow	7	7	3
1/20/2017		Cape May	4	4	2
	12-16	Glassboro	10	10	5
	12-10	Pleasantville	7	4	5
		Winslow	7	7	3
		Cape May	4	4	2
	16-20	Glassboro	10	10	5
	10-20	Pleasantville	7	4	5
		Winslow	7	7	3
		Cape May	2	2	2
	20-24	Glassboro	4	2	4
	20-24	Pleasantville	4	2	4
		Winslow	2	2	3



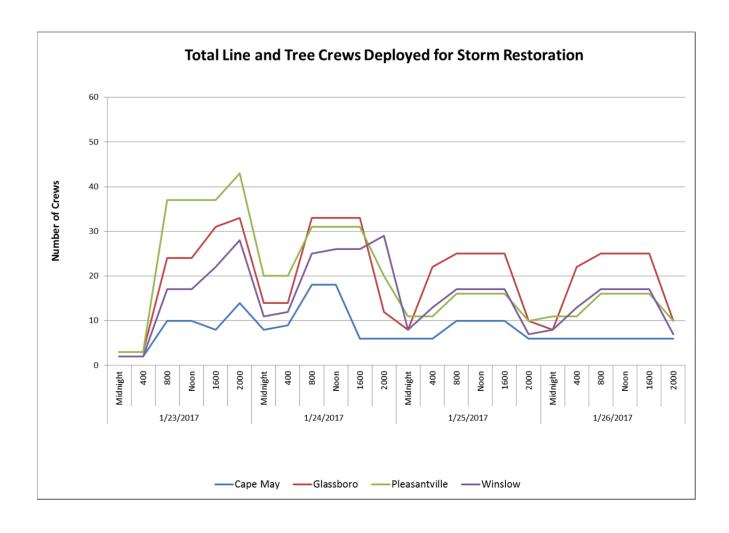
Appendix E

The timeline profile of the number of Company crews sent to an affected operating area to assist in the restoration.

	ACE Line and Tree Storm Resource Deployment								
Date	Time Period	Cape May	Glassboro	Pleasantville	Winslow				
	Midnight	2	3	3	2				
	400	2	3	3	2				
1/23/2017	800	10	24	37	17				
1/20/2017	Noon	10	24	37	17				
	1600	8	31	37	22				
	2000	14	33	43	28				
	Midnight	8	14	20	11				
	400	9	14	20	12				
1/24/2017	800	18	33	31	25				
1/24/2017	Noon	18	33	31	26				
	1600	6	33	31	26				
	2000	6	12	20	29				
	Midnight	6	8	11	8				
	400	6	22	11	13				
1/25/2017	800	10	25	16	17				
1/25/2017	Noon	10	25	16	17				
	1600	10	25	16	17				
	2000	6	10	10	7				
	Midnight	6	8	11	8				
	400	6	22	11	13				
1/26/2017	800	6	25	16	17				
1/20/2017	Noon	6	25	16	17				
	1600	6	25	16	17				
	2000	6	10	10	7				



Appendix E (Continued)





State of New Jersey Major Event Report March 14 – 17, 2017

Winter Storm Stella

Prepared By: Atlantic City Electric Company

5100 Harding Highway

Mays Landing, New Jersey 08330

April 7, 2017



Foreword

A major event is defined in the New Jersey Administrative Code (N.J.A.C.) 14:5-1.2 (in part) as "a sustained interruption of electric service resulting from conditions beyond the control of the EDC, which may include, but is not limited to, thunderstorms, tornadoes, hurricanes, heat waves or snow and ice storms, which affect at least 10 percent of the customers in an operating area." A major event occurred in Atlantic City Electric Company's (ACE or the Company) service territory as a result of Winter Storm Stella mainly affecting the Glassboro District. The storm brought snow and freezing rain along with heavy sustained and gusting winds beginning in the morning hours of Tuesday, March 14, 2017.

Pursuant to the N.J.A.C. 14:5-8.8 (a), ACE is required to file with the Board of Public Utilities (BPU) a written report within 15 business days following the end of a major event detailing the event's impact on the Company's electric system and the associated system restoration efforts.

Overview

On Tuesday, March 14, 2017, beginning at approximately 4:00 a.m., snow and freezing rain along with heavy winds struck the ACE region. Sustained winds around 35 miles per hour developed, with wind gusts up to 50 miles per hour.

Winter Storm Stella primarily struck the Glassboro District, which experienced more than 27,000 outages over the storm period and more than 14,000 peak outages, affecting more than 17 percent of Glassboro District customers. The other three ACE Districts experienced less damage, though Governor Chris Christie declared a state of emergency by Executive Order No. 221, on Monday, March 13, 2017. Winslow, Pleasantville, and Cape May Districts were all able to provide Glassboro with repair crews—both internal company crews and external contract crews—as well as other resources, such as engineering support and damage assessors to support the restoration effort. ACE also received assistance from other utilities within Exelon Corporation (Exelon). Four Exelon Utilities (EUs) provided more than 400 full-time equivalent (FTE) internal employees and contractors for the event, which is listed in the table below. The EU FTEs saved significant restoration time for ACE because the Company would have otherwise needed to make formal requests for mutual assistance.

Exelon Utility	FTEs	Date of Arrival	Contractors
BGE (Internal)	20	March 15	
BGE (Contractors)	45	March 15	Utility Lines, Henkels, Pappas
ComEd (Contractors)	201	March 14	MJ Electric, Intren, Meade
PECO (Internal)	20	March 15	
PECO (Contractors)	51	March 15	Henkels, MJ Electric, Riggs Distler
Pepco (Internal)	22	March 15	
Pepco (Contractors)	69	March 15	CW Wright, Henkels, Pappas

In addition, the Glassboro District received resources from Exelon subsidiary Philadelphia Electric Company (PECO), which provided both internal utility and contract crews to aid in

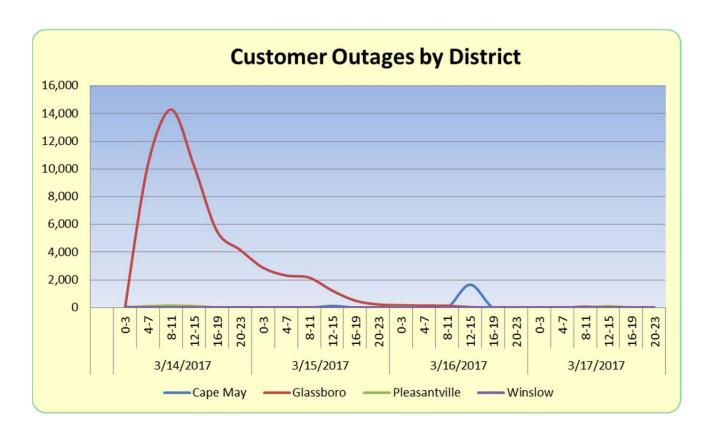


the ACE restoration.

ACE had a total of 29,881 customer outages for this event. In addition to the declared state of emergency in New Jersey, the 10 percent threshold for declaring a Major Event was met in the Glassboro District. The chart below indicates the total number of sustained customer interruptions (CI) for the peak 24-hour period during the storm event and also indicates the percentage of customers affected.

District	Total CI for highest 24-hour period	Percent of Customer Base
Cape May	1,687	1.53%
Glassboro	27,007	17.17%
Pleasantville	340	0.20%
Winslow	53	0.06%

Below is a graphic depiction of the peak customer outages over the course of the event by District:





The following are ACE's responses to specific requirements set forth in N.J.A.C. 14:5-8.8 (a).

3. The date and time when ACE's Storm Centers opened and closed.

Storm Room Operations					
Location Opened Closed					
Atlantic Regional	Mar. 13 at 9 p.m.	Mar. 16 at 4 p.m.			
Cape May	Mar. 14 at 7 p.m.	Mar. 15 at 12 a.m.			
Glassboro	Mar. 14 at 7 p.m.	Mar. 17 at 10 p.m.			
Pleasantville	Mar. 14 at 7 p.m.	Mar. 15 at 12 a.m.			
Winslow	Mar. 14 at 7 p.m.	Mar. 15 at 12 a.m.			



- 4. The total number of customers out of service over the course of the major event over four hour intervals, identified by operating area or circuit area. For purposes of this count, the starting time shall be when the storm center opens and the ending time shall be when the storm center closes. Regardless of when the storm center is closed, the EDC shall report the date and time when the last customer affected by a major event is restored.
 - c. <u>See</u> Appendix A for the 4-hour outage report.
 - d. The date and time when the last customer affected by the major event is restored:

The last customer affected by the storm was restored on March 16, 2017 at 7:25 p.m. After the last customer was restored, ACE continued repairing storm damaged distribution equipment as identified during the storm and post-storm assessment process.

- 3. The number of trouble locations and classifications: <u>See</u> Appendix B.
- 4. The time at which the mutual aid and non-company contractor crews were requested, arrived for duty, were released and the mutual aid and non-contractor response(s) for assistance (number of crews):

See Appendix C.

- A timeline profile of the number of company line crews, mutual aid crews, noncompany contractor line and tree crews working on restoration activities during the duration of the major event.
 <u>See</u> Appendix D.
- The timeline profile of the number of company crews sent to an affected operating area to assist in the restoration: <u>See</u> Appendix E.



In addition to the requirements above, BPU-16 of the BPU's January 2013 order issued in response to Hurricane Irene (BPU Docket No. EO11090543) requires:

BPU-16) Prior to and during a Major Event the [electric distribution companies] shall hold daily conference calls with municipal officials of the affected municipalities. Information on these calls shall be included in the Major Event Report.

Below is the required information:

Daily Stakeholder Calls

Date	Time	District	# External Stakeholder Participants
3/12/2017	1700	Cape May	2
	1700	Glassboro	3
	1400	Pleasantville	2
	1400	Winslow	26
3/13/2017	1500	Cape May	12
	1300	Glassboro	25
	1400	Pleasantville	8
	1200	Winslow	27
3/14/2017	1200	Cape May	4
	1700	Glassboro	43
	0800	Pleasantville	8
	1300	Winslow	3
3/15/2017	0900	Glassboro	17
	1700	Glassboro	20
3/16/2017	0900	Glassboro	9



Appendix A

The total number of customers out of service over the course of the major event.

Date	Time Period	Cape May	Glassboro	Pleasantville	Winslow
3/14/2017	0-3	61	51	0	1
	4-7	1	10,378	95	0
	8-11	18	14,291	179	6
	12-15	15	10,202	123	7
	16-19	0	5,501	36	1
	20-23	0	4,175	2	1
3/15/2017	0-3	0	2,878	2	0
	4-7	0	2,324	1	0
	8-11	1	2,171	4	0
	12-15	128	1,240	21	1
	16-19	8	510	4	0
	20-23	1	235	4	0
3/16/2017	0-3	0	176	61	0
	4-7	0	148	1	0
	8-11	2	144	18	0
	12-15	1,663	44	15	27
	16-19	0	15	0	27
	20-23	0	2	0	0
3/17/2017	0-3	0	0	0	0
	4-7	0	2	0	0
	8-11	1	75	1	1
	12-15	1	6	128	25
	16-19	0	3	8	0
	20-23	0	0	1	1



Appendix B

The number of trouble locations and classifications.

Order I	-	Atlantic	Region	Cape	May	Glass	boro	Pleasa	ntville	Win	slow
Date	4-hour Time Period	Outage Orders	Non- outage Orders								
3/14/2017	0 - 3	11	7	2	1	5	2	1	1	2	3
	4 - 7	64	14	3	1	57	10	2	1	1	2
	8 - 11	330	117	5	1	317	108	4	4	3	4
	12 - 15	432	170	6	2	415	159	5	3	3	6
	16-19	445	174	3	1	436	169	4	2	2	2
	20-23	463	176	1	1	457	173	3	0	2	2
3/15/2017	0 - 3	456	170	1	0	452	170	3	0	1	0
	4 - 7	417	161	1	0	414	161	2	0	1	0
	8 - 11	410	158	3	0	404	154	2	3	2	1
	12 - 15	297	130	2	1	292	123	3	6	2	0
	16-19	219	114	2	1	214	109	3	4	1	0
	20-23	146	81	2	1	141	79	3	1	1	0
3/16/2017	0 - 3	121	77	2	0	117	76	2	1	1	0
	4 - 7	96	76	3	1	92	74	1	1	1	0
	8 - 11	91	75	3	2	85	69	1	2	2	2
	12 - 15	54	66	4	3	44	56	2	3	2	4
	16-19	25	48	1	2	17	38	2	3	2	5
	20-23	9	24	1	0	4	20	1	1	1	3
3/17/2017	0 - 3	7	22	1	0	2	19	1	0	1	3
	4 - 7	6	18	1	1	2	15	1	0	1	2
	8 - 11	16	29	2	2	6	21	4	2	3	4
	12 - 15	15	29	2	3	6	22	4	1	2	3
	16-19	12	15	1	1	6	11	3	1	1	2
	20-23	3	8	1	0	1	8	1	0	2	0



Appendix C

The time at which the mutual aid and non-Company contractor crews were requested, arrived for duty, were released, and their response for assistance (number of resources).

	Summary of Mutual Aid - Foreign Utility and Contract Crews						
Requested	Arrival	Туре	Name	Number of Crews	Released		
3/13/17_1400	3/14/17_0600	Contractor/Bid	Matrix	13	3/17/17_2200		
3/13/17_1400	3/14/17_0600	Contractor/Bid	Valiant	23	3/17/17_2200		
3/13/17_1400	3/14/17_0600	Contractor/Bid	3-Phase Line	7	3/17/17_2200		
3/13/17_1400	3/14/17_0600	Contractor/Bid	Riggs Distler	15	3/17/17_2200		
3/13/17_1400	3/14/17_0600	Contractor/Units	Riggs Distler	5	3/17/17_2200		
3/13/17_1400	3/14/17_0600	Contractor/Bid	Henkels & McCoy	3	3/17/17_2200		
3/13/17_1400	3/14/17_0600	Contractor/Units	Hawkeye	5	3/17/17_2200		
3/14/17_1600	3/15/17_0600	Contractor	Carr & Duff (PECO)	3	3/16/17_1800		
3/14/17_1600	3/15/17_0600	Contractor	Mirachi (PECO)	12	3/16/17_1800		
3/14/17_1600	3/15/17_0600	Utility	PECO (Internal)	12	3/15/17_1800		
3/13/17_1800	3/14/17_0600	Contractor	Asplundh (Tree)	57	3/16/17_1800		
3/13/17_1800	3/14/17_0600	Contractor	Davey (Tree Planners)	14	3/16/17_1800		



Appendix D

A timeline profile of the number of Company line crews, mutual aid crews, non-Company contractor line and tree crews.

Line	Line and Tree Contractor Crews Working on Restoration Activities						
Date	Time Period	District	Company Line Crews	Non- company Crews	Tree Crews		
		Cape May	2	0	2		
	0-4	Glassboro	4	0	6		
	0-4	Pleasantville	4	0	4		
		Winslow	2	0	4		
		Cape May	2	0	2		
	4-8	Glassboro	4	0	6		
	4-0	Pleasantville	4	0	4		
		Winslow	2	0	4		
		Cape May	8	2	3		
	8-12	Glassboro	22	16	12		
	0-12	Pleasantville	15	14	6		
3/14/2017		Winslow	11	8	6		
3/14/2017		Cape May	6	0	3		
	12-16	Glassboro	22	16	12		
	12-10	Pleasantville	15	8	6		
		Winslow	11	0	6		
		Cape May	8	8	3		
	16-20	Glassboro	22	16	12		
	10-20	Pleasantville	15	8	6		
		Winslow	11	0	6		
		Cape May	8	0	3		
	20-24	Glassboro	22	16	12		
	20-24	Pleasantville	15	8	6		
		Winslow	11	0	6		

Line and Tree Contractor Crews Working on Restoration Activities (Cont'd)						
Date	Time Period	District	Company Line Crews	Non- company Crews	Tree Crews	
		Cape May	4	0	2	
	0-4	Glassboro	8	0	4	
	0-4	Pleasantville	6	0	0	
		Winslow	4	0	2	
		Cape May	4	0	2	
	4-8	Glassboro	8	0	4	
	4-0	Pleasantville	6	0	0	
		Winslow	8	0	2	
		Cape May	3	0	2	
	8-12	Glassboro	22	38	20	
		Pleasantville	6	0	0	
3/15/2017		Winslow	4	0	2	
3/13/2017		Cape May	3	0	2	
	12-16	Glassboro	22	38	20	
	12-10	Pleasantville	6	0	0	
		Winslow	4	0	2	
		Cape May	6	0	2	
	16-20	Glassboro	22	38	20	
	10-20	Pleasantville	14	0	0	
		Winslow	4	0	2	
		Cape May	4	0	0	
	20-24	Glassboro	22	38	20	
	20-2 4	Pleasantville	4	0	0	
		Winslow	4	0	0	



Appendix D (Cont'd)

Line and	Line and Tree Contractor Crews Working on Restoration Activities (Cont'd)						
Date	Time Period	District	Company Line Crews	Non- company Crews	Tree Crews		
		Cape May	4	0	2		
	0-4	Glassboro	8	0	4		
	0 4	Pleasantville	6	0	0		
		Winslow	4	0	2		
		Cape May	4	0	2		
	4-8	Glassboro	8	0	4		
	4-0	Pleasantville	6	0	0		
		Winslow	4	0	2		
		Cape May	3	0	2		
	8-12	Glassboro	22	30	20		
		Pleasantville	6	0	0		
3/16/2017		Winslow	4	0	2		
3/10/2017		Cape May	3	0	2		
	12-16	Glassboro	22	30	20		
	12-10	Pleasantville	6	0	0		
		Winslow	4	0	2		
		Cape May	6	0	2		
	16-20	Glassboro	22	30	20		
		Pleasantville	14	0	0		
		Winslow	4	0	2		
		Cape May	4	0	0		
	20-24	Glassboro	22	30	20		
	20-27	Pleasantville	4	0	0		
		Winslow	4	0	0		

Line and	Line and Tree Contractor Crews Working on Restoration Activities (Cont'd)					
Date	Time Period	District	Company Line Crews	Non- company Crews	Tree Crews	
		Cape May	4	0	2	
	0-4	Glassboro	8	0	4	
	0-4	Pleasantville	6	0	0	
		Winslow	4	0	2	
		Cape May	4	0	2	
	4-8	Glassboro	8	0	4	
	4-0	Pleasantville	6	0	0	
		Winslow	4	0	2	
		Cape May	3	0	2	
	8-12	Glassboro	22	30	20	
		Pleasantville	6	0	0	
3/17/2017		Winslow	4	0	2	
3/11/2011		Cape May	3	0	2	
	12-16	Glassboro	22	30	20	
	12-10	Pleasantville	6	0	0	
		Winslow	4	0	2	
		Cape May	6	0	2	
	16-20	Glassboro	22	30	20	
	10-20	Pleasantville	14	0	0	
		Winslow	4	0	2	
		Cape May	4	0	0	
	20-24	Glassboro	8	30	20	
	20-24	Pleasantville	4	0	0	
		Winslow	4	0	0	



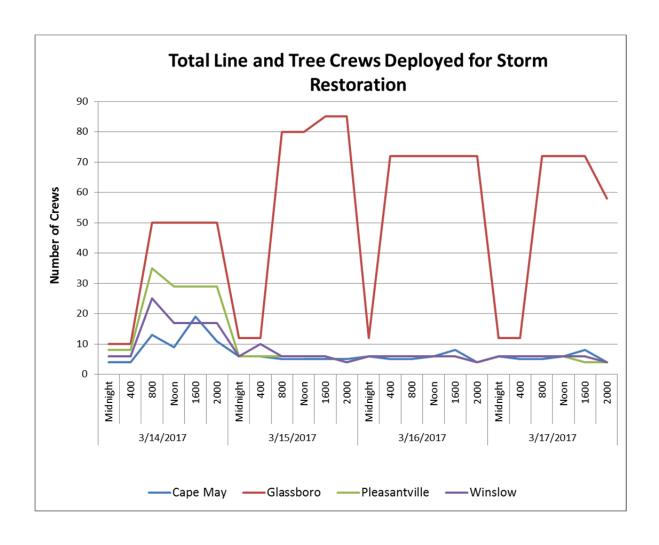
Appendix E

The timeline profile of the number of Company crews sent to an affected operating area to assist in the restoration.

ACE Line and Tree Storm Resource Deployment							
Date	Time Period	Cape May	Glassboro	Pleasantville	Winslow		
	Midnight	4	10	8	6		
	400	4	10	8	6		
3/14/2017	800	13	50	35	25		
3/14/2017	Noon	9	50	29	17		
	1600	19	50	29	17		
	2000	11	50	29	17		
	Midnight	6	12	6	6		
	400	6	12	6	10		
3/15/2017	800	5	80	6	6		
3/13/2017	Noon	5	80	6	6		
	1600	5	85	6	6		
	2000	5	85	4	4		
	Midnight	6	12	6	6		
	400	5	72	6	6		
3/16/2017	800	5	72	6	6		
3/16/2017	Noon	6	72	6	6		
	1600	8	72	6	6		
	2000	4	72	4	4		
	Midnight	6	12	6	6		
	400	5	12	6	6		
3/17/2017	800	5	72	6	6		
3/11/2011	Noon	6	72	6	6		
	1600	8	72	4	6		
	2000	4	58	4	4		

Major Event Report - Rain and Wind Storm

Appendix E (Continued)





State of New Jersey Major Event Report October 24 - 25, 2017

Rain and Wind Storm

Prepared By: Atlantic City Electric Company

5100 Harding Highway

Mays Landing, New Jersey 08330

November 16, 2017

atlantic city electric. An Exelon Company

Major Event Report – Rain and Wind Storm

Foreword

A major event is defined in the New Jersey Administrative Code ("N.J.A.C.") 14:5-1.2 (in part) as "a sustained interruption of electric service resulting from conditions beyond the control of the EDC, which may include, but is not limited to, thunderstorms, tornadoes, hurricanes, heat waves or snow and ice storms, which affect at least 10 percent of the customers in an operating area." A major event occurred in Atlantic City Electric Company's ("ACE" or the "Company") Glassboro operating district on October 24, 2017, when 10 percent of Glassboro customers experienced sustained electrical interruptions.

Pursuant to the N.J.A.C. 14:5-8.8 (a), ACE is required to file with the Board of Public Utilities ("BPU") a written report within 15 business days following the end of a major event detailing the event's impact on the Company's electric system and the associated system restoration efforts.

Overview

On Tuesday, October 24, 2017, beginning at approximately 3:00 a.m., lightning, rain, and heavy winds struck the ACE region. Sustained winds of 25 - 30 miles per hour developed, with wind gusts up to 40 miles per hour.

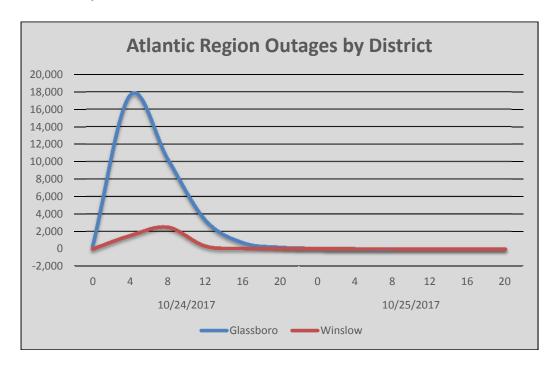
To aid in the restoration effort, the Glassboro and Winslow Districts received support from the Pleasantville and Cape May Districts, which received only minor storm damage. In addition, ACE received assistance from affiliate Delmarva Power & Light Company and Potomac Electric Power Company, as well as assistance from the Philadelphia Electric Co.

ACE had a total of 31,136 customer outages for this event. The 10 percent outage threshold for declaring a Major Event was reached in the Glassboro District where 26,733 (17%) customers were interrupted.

Below is a graphic depiction of the peak customer outages over the course of the event:



Major Event Report - Rain and Wind Storm



The following are ACE's responses to specific requirements set forth in N.J.A.C. 14:5-8.8 (a).

5. The date and time when ACE's Storm Centers opened and closed.

Storm Room Operations					
Location Opened Closed					
Atlantic Regional	Oct 24 at 7:00 a.m.	Oct 25 at 4:00 p.m.			
Glassboro	Oct 24 at 7:00 a.m.	Oct 25 at 7:00 p.m.			
Winslow	Oct 24 at 7:00 a.m.	Oct 25 at 4:00 p.m.			

- 6. The total number of customers out of service over the course of the major event over four-hour intervals, identified by operating area or circuit area. For purposes of this count, the starting time shall be when the storm center opens and the ending time shall be when the storm center closes. Regardless of when the storm center is closed, the EDC shall report the date and time when the last customer affected by a major event is restored.
 - e. See Appendix A for the 4-hour outage report.
 - f. The date and time when the last customer affected by the major event is restored:

The last customer affected by the storm was restored on **October 25**, **2017 at 11:53 a.m.**



Major Event Report - Rain and Wind Storm

- 3. The number of trouble locations and classifications: See Appendix B.
- 4. The time at which the mutual aid and non-company contractor crews were requested, arrived for duty, were released and the mutual aid and non-contractor response(s) for assistance (number of crews):

See Appendix C.

- A timeline profile of the number of company line crews, mutual aid crews, noncompany contractor line and tree crews working on restoration activities during the duration of the major event.
 See Appendix D.
- 6. The timeline profile of the number of company crews sent to an affected operating area to assist in the restoration:

 See Appendix E.



Major Event Report – Rain and Wind Storm

In addition to the requirements above, BPU-16 of the BPU's January 2013 order issued in response to Hurricane Irene (BPU Docket No. EO11090543) requires:

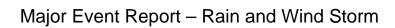
BPU-16) Prior to and during a Major Event the [electric distribution companies] shall hold daily conference calls with municipal officials of the affected municipalities. Information on these calls shall be included in the Major Event Report.

Note: No County Offices of Emergency Management officially opened during this storm event; therefore, daily stakeholder calls were not necessary. ACE Governmental Affairs reached out and assisted State, county, and municipal officials in the expediting of outage restoration to critical customers, resolve road closure issues, etc., as needed.

Appendix A

The total number of customers out of service over the course of the major event.

Date	4-hour Time Period	Atlantic Region	Glassboro	Winslow
10/24/2017	0-3	322	312	10
	4-7	19,188	17,642	1,546
	8-11	12,833	10,324	2,509
	12-15	3,666	3,325	341
	16-19	805	721	84
	20-23	262	194	68
10/25/2017	0-3	116	61	55
	4-7	48	25	23
	8-11	28	9	19
	12-15	0	0	0
	16-19	0	0	0
	20-23	0	0	0





Appendix B

The number of trouble locations and classifications.

Order Report (Trouble Locations)		Atlantic Region		Glassboro		Winslow	
Date	4- Hour Time Periods	Outage Orders	Non- outage Orders	Outage Orders	Non- outage Orders	Outage Orders	Non- outage Orders
10/24/2017	0-3	8	6	5	6	3	0
	4-7	171	74	115	52	56	22
	8-11	252	116	181	85	71	31
	12-15	231	121	175	85	56	36
	16-19	88	96	76	69	12	27
	20-23	37	74	33	56	4	18
10/25/2017	0-3	6	63	5	45	1	18
	4-7	0	51	0	32	0	19
	8-11	0	49	0	28	0	21
	12-15	0	30	0	21	0	9
	16-19	0	19	0	15	0	4
	20-23	0	5	0	4	0	1

Appendix C

The time at which the mutual aid and non-Company contractor crews were requested, arrived for duty, were released, and their response for assistance (number of resources).

Summary of Mutual Aid - Foreign Utility and Contract Crews					
Requested	Arrival	Туре	Name	Number of Crews	Released
10/23/2017_1600	10/24/2017_0600	Contractor	Valiant - Bid	12	10/24/2017_2200
10/23/2017_1600	10/24/2017_1800	Contractor	Valiant - Bid	2	10/24/2017_2200
10/23/2017_1600	10/24/2017_0600	Contractor	Riggs Distler & Co Inc Units	15	10/25/2017_1000
10/23/2017_1600	10/24/2017_0600	Contractor	Hawkeye - Unit	5	10/24/2017_2200
10/23/2017_1600	10/24/2017_0600	Contractor	Northline Utilities - Bid	3	10/24/2017_2200
10/23/2017_1600	10/24/2017_0600	Contractor	Matrix - Bid	2	10/24/2017_2200
10/23/2017_1600	10/24/2017_0600	Contractor	Matrix - Bid	5	10/24/2017_2200
10/23/2017_1600	10/24/2017_0600	Contractor	Riggs Distler & Co Inc Bid	3	10/24/2017_2200
10/24/2017_0900	10/24/2017_1100	Contractor	Miller Bros PECO	17	10/24/2017_2359
10/24/2017_0500	10/24/2017_0730	Utility	DPL	7	10/24/2017_2200
10/24/2017_12:30	10/24/2017_1800	Contractor	Matrix - PECO	1	10/24/2017_2300
10/24/2017_12:30	10/24/2017_1800	Contractor	MJ Electric - PECO	3	10/25/2017_0500
10/24/2017_12:30	10/24/2017_1800	Contractor	Mirarchi Bros PECO	5	10/25/2017_0600
10/24/2017_12:30	10/24/2017_1800	Contractor	Intren - PECO	5	10/24/2017_2030
10/24/2017_12:30	10/24/2017_1800	Contractor	IB Abel - PECO	2	10/24/2017_2030
10/24/2017_0500	10/24/2017_2300	Utility	DPL	2	10/25/2017_1000
10/23/2017_1600	10/24/2017_0600	Contractor	Asplundh - Bid	2	10/24/2017_2200
10/23/2017_1600	10/24/2017_0600	Contractor	Asplundh - Bid	16	10/24/2017_2200
10/23/2017_1600	10/24/2017_0600	Contractor	Asplundh - Bid	14	10/24/2017_2200
10/23/2017_1600	10/24/2017_0600	Contractor	Asplundh - Bid	3	10/24/2017_2200
10/23/2017_1600	10/24/2017_1900	Contractor	Asplundh - Bid	2	10/25/2017_1100
10/23/2017_1600	10/24/2017_1900	Contractor	Asplundh - Bid	3	10/25/2017_1100

Appendix D

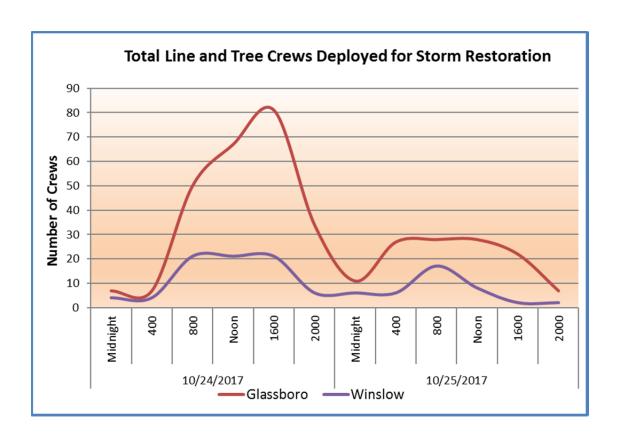
A timeline profile of the number of Company line crews, mutual aid crews, non-Company contractor line and tree crews.

Line and Tree Contractor Crews Working on Restoration Activities					
Date	Time Period	District	Company Line Crews	Non- company Crews	Tree Crews
	0 - 3	Glassboro	4	0	3
	0-3	Winslow	2	0	2
	4 - 7	Glassboro	4	0	3
	4 - 7	Winslow	2	0	2
	8 - 11	Glassboro	26	16	8
10/24/2017	0 - 11	Winslow	18	1	2
10/24/2017	12 - 15	Glassboro	23	15	29
	12 - 15	Winslow	18	1	2
	16 - 19	Glassboro	30	22	29
		Winslow	18	1	2
	20 -23	Glassboro	8	18	8
		Winslow	6	0	0
-	0 - 3	Glassboro	8	0	3
		Winslow	6	0	0
	4 - 7	Glassboro	8	16	3
		Winslow	6	0	0
	8 - 11	Glassboro	22	0	6
10/25/2017		Winslow	16	1	0
	12 - 15	Glassboro	22	0	6
	12 - 13	Winslow	8	0	0
	16 - 19	Glassboro	16	0	6
		Winslow	2	0	0
	20 -23	Glassboro	4	0	3
		Winslow	2	0	0

Appendix E

The timeline profile of the number of Company crews sent to an affected operating area to assist in the restoration.

ACE Line and Tree Storm Resource Deployment					
Date	Time Period	Glassboro	Winslow		
	Midnight	7	4		
	400	7	4		
10/24/2017	800	50	21		
10/24/2017	Noon	67	21		
	1600	81	21		
	2000	34	6		
	Midnight	11	6		
	400	27	6		
10/25/2017	800	28	17		
	Noon	28	8		
	1600	22	2		
	2000	7	2		



F. Minimum Reliability Requirements

ACE met all the minimum performance requirements for 2017.

Priority Feeders (Least-Performing Feeders) and Corrective Actions

G.

2017 Priority Feeder List											
						Rel	iability Ind	lices	Fee	eder Milea	ges
Circuit	Substation	Feeder	District	Customers Served	Outage Events	SAIFI	CAIDI	SAIDI	UG	ОН	Total
NJ0041	Swainton	Avalon	CAPE MAY	2,747	40	11.84	50	597	15.48	6.67	20.38
NJ0382	Court	No. 2	CAPE MAY	1,921	14	10.49	56	584	12.64	1.49	15.1
NJ0485	Rio Grande	Drum	CAPE MAY	2,926	35	3.90	124	485	21.03	21.03	26.81
NJ0852	Corson	Woodbine	CAPE MAY	3,143	11	2.83	98	278	1.19	14.02	106.38
NJ0853	Corson	Stage	CAPE MAY	2,419	43	2.78	95	264	12.35	28.36	24.78
NJ0211	Second Street	East	GLASSBORO	2,050	60	4.18	45	189	5.36	2.77	15.64
NJ0213	Second Street	South	GLASSBORO	2,416	70	4.22	59	250	2.39	4.94	48.25
NJ0745	Glassboro	South	GLASSBORO	2,693	29	3.75	66	248	9.13	7.32	67.97
NJ0832	Roadstown	South	GLASSBORO	1,443	83	2.81	153	431	5.99	3.61	99.83
NJ1463	Carlls Corner	East	GLASSBORO	1,981	86	2.81	115	322	3.61	6.96	84.34
NJ2041	Mantua	Sewell	GLASSBORO	1,638	63	3.43	53	183	19.53	19.53	25.55
NJ2061	Churchtown	Sportsman	GLASSBORO	1,945	48	3.90	83	324	4.67	5.99	100.05
NJ2062	Churchtown	Sakima	GLASSBORO	1,436	85	2.88	78	226	10.82	5.49	32.22
NJ2553	Franklin	Iona	GLASSBORO	1,914	43	2.83	60	171	18.01	3.61	99.83
NJ0143	Egg Harbor	Green Bank	PLEASANTVILLE	2,040	58	2.47	82	202	14.95	3.65	60.48
NJ0423	Pleasantville	Crown	PLEASANTVILLE	3,079	16	2.47	79	194	15.67	4.02	29.29
NJ0694	Ontario	Inlet	PLEASANTVILLE	3,773	26	3.33	178	591	4.59	8.99	10.78
NJ0861	Chestnut Neck	Nacote	PLEASANTVILLE	788	29	2.77	128	356	0.47	34.27	46.74
NJ0934	Lenox	Stockton	PLEASANTVILLE	417	34	4.81	64	307	10.53	9.87	35.33
NJ1633	Scull	Ocean Heights	PLEASANTVILLE	2,291	30	2.15	92	197	17.16	18.25	21.25
NJ2032	Harbor Beach	South	PLEASANTVILLE	3,429	23	2.52	110	276	23.87	19.19	3.41
NJ0244	Winslow	Braddock	WINSLOW	1,347	42	4.82	98	473	9.18	11.79	37.22
NJ0306	Stratford	Glen Oaks	WINSLOW	2,353	71	3.33	61	204	52.51	9.18	16.76
NJ1602	Tabernacle	Caranza	WINSLOW	907	36	2.87	97	279	0.33	26.54	113.91
NJ1604	Tabernacle	Medford Farms	WINSLOW	1,414	27	3.17	92	290	7.19	16.71	26.46
NJ1607	Tabernacle	Seneca	WINSLOW	1,176	79	3.16	98	309	12.06	1.5	6.82

ACE Priority Feeder Work Completed in 2017						
		Cape Ma	y District	Priority Feeder Work Completed in 2017		
Circuit	Substation	Feeder	W/R #	Description		
			5659945	Reconfigure 21st St behind W6942		
NJ0041	Swainton	Avalon	5659992	Improvements behind W6857, 24th St		
1110041	Swaiiitoii	Avaion	5660088	First zone work, install CLFs, animal guards, and stinger covers		
			5660118	First zone work, install CLFs, animal guards, and stinger covers		
			5659892	Second Zone work behind RCL W44675, 3rd Ave, Stone Harbor		
			5659898	First Zone work on Stone Harbor Blvd and 94th RPL WS Pole		
NJ0382	Court	No. 2	5659905	Reconfigure and segment single phase lateral n Stone Harbor Blvd behind W20508		
NJU382	Court	NO. 2	5659934	Install fuses at W7382 and install animal protection		
			5661414	Install fuse and general improvement behind W27127		
			5662330	Remove temp pole and reclocate service		
			5638375	Priority Feeder Work, Rio Drum Feeder		
			5653671	Fuse CPS		
NJ0485	Rio Grande	Drum	5660215	First zone work, install CLFs, animal guards, and stinger covers		
			5660235	Install 25K fuse @W25470		
			5660238	3rd Zone work behind W12573		
			5660607	First zone work, install CLFs, animal guards, cutouts, and stinger covers		
			5660655	Rpl Xfmr O4900		
			5660671	2nd Zone work behind RCL 70363/24366		
NJ0852	Corson	Woodbine	5664742	First zone work, install CLFs, animal guards, cutouts, and stinger covers, and upgrade		
			5004742	construction at Outdoor World Campground		
			5664902	2nd Zone work behind RCL W26450, DeHirsch Ave		
			5664907	2nd Zone work behind W33413 along Petersburg Ave		
			5660258	First Zone work		
NJ0853	Corson	Stage	5660264	Install fusing at W29116, O8261 Riser, and Switch W29118		
			5663049	Reliability improvement behind O4984, Peach Orchard Rd		

Glassboro District Priority Feeder Work Completed in 2017								
Circuit	Substation	Feeder	W/R #	Description				
NJ0211	Second Street	East	5658248	Reliability improvments beyond fuse MV891, 6th St				
NJ0213	Second Street	South	5658263	2nd zone work along Siver Run Rd				
NJU213	Second Street	South	5658290	Reconfigure primary at Ridge Rd & Battle Ln				
			5658596	Zone work, fuse laterals, tap wire, repl deteriorated equipment				
NJ0745	Glassboro	South	5658613	Create a tie between the South and Downer feeders, R/C from PN6681 to G3974,				
			3036013	Rt 322				
			5640928	Reconductor Hospital Rd - 477 AAC				
NJ0832	Roadstown	South	5658292	Reconductor 4,700' along Roadstown Rd				
			5662580	Install anmimal protection along Market Ln				
NJ1463	Carlls Corner	East	5658241	Relocate N.O. from B33751 to B41758				
	Mantua	Sewell	5640804	Reconductor with 477 from PN3569 to PN7937				
			5643726	First zone work, fuse laterals, CSPs, Animal Guards, Trim Trees				
NJ2041			5658923	Zone work, replace CSPs, animal guards, poles. Trim trees.				
NJ2041			5660505	Install Riser Cables 750 kCM, PN3662 & PN3563				
			5660614	Relace Risers near Rt 55				
			5664623	Install 65K fuses and Relocate N.O. point, Bankbridge Rd				
NJ2061	Churchtown	Sportsman	5658197	Install animal protection, lightning protection, replace deteriorated poles, etc.				
NJ2062	Churchtown	Sakima	5658195	Reconductor 3,300' with 477 AAC S4741 to S9709				
NJ2002	Churchtown	Sakiiila	5658921	Zone work, replace CSPs, animal guards, poles. Trim trees.				
			5658569	First Zone work, animal guards, fuse laterals, tap wire, repl deteriorated				
NIGET	منابات مادان	lone	5058509	equipment				
NJ2553	Franklin	Iona	5658580	Relocate RCL from PN1119 to PN9001				
			5658583	Install 25K fuse on Morrow Ave, PN22414				

_	Pleasantville District Priority Feeder Work Completed in 2017								
Circuit	Substation	Feeder	W/R #	Description					
NJ0143	Egg Harbor	Green Bank	5655877	First zone work, fuse laterals, CSPs, Animal Guards					
10143	Lgg Harbor	Green Bank	5655878	2nd zone work, fuse laterals, CSPs, Animal Guards					
			5656467	First and 2nd zone reliability improvement work					
			5656468	Install TripSaver Greenfield & Main Sts					
NJ0423	Pleasantville	Crown	5656469	Extend primary down Van Mar and create N.O. point					
			5656470	Reconfigure primary along Broad St					
			5656471	Install (2) TripSavers, animal guards, lateral fuses					
		Inlet	5657628	Extend main stem of feeder					
NJ0694	Ontario		5671245	First zone work, fuse laterals, CSPs, Animal Guards					
			5655889	First zone work, fuse laterals, CSPs, Animal Guards					
			5655890	2nd zone work behind P12422					
NJ0861	Chestnut Neck	Nacote	5655891	2nd zone work behind P14096					
			5656536	Install TripSaver at P10623					
			5658105	Reconductor Adams Ave with Tree Wire					
NJ0934	Lenox	Stockton	5655991	First zone work, fuse laterals, CSPs, Animal Guards					
NJ1633	Scull	Ocean Heights	5656543	First and 2nd zone reliability improvement work					
1/11022	Scuii	Ocean Heights	5656546	Install TripSaver, animal guards, and fuses along Crestview Dr					
NJ2032	Harbor Beach	South	5671209	First zone work, fuse laterals, CSPs, Animal Guards					

	Winslow District Priority Feeder Work Completed in 2017								
Circuit	Substation	Feeder	W/R #	Description					
			5655258	Replace poles, xfmrs, install lateral fuses, animal protection below RCL H25837					
			5657296	Install 40K on H14770, S. Grove St					
NIO244	Minglow	Droddool	5657326	Replace poles, xfmrs, install lateral fuses, animal protection below RCL H25881					
NJ0244	Winslow	Braddock	5657339	Install N.O. Cutout on H2595, Install 40K on H2877					
			5657342	Install animal and lightning protection along Beebetown Rd					
			5657602	First zone work, fuse lateral and CSPs, animal protection, etc.					
			5657605	2nd zone work behind fuse PN36177, chg xfmr H38112					
				Install animal protection behind H12339 and 25Ks on H2792 & H12338					
NJ0306	Stratford	Glen Oaks	5657735	2nd zone work behind RCL C13518					
		Caranza	5633554	Replace steel bracket, cutouts, and arresters on riser pole					
NJ1602	Tabernacle		5657616	First zone work, fuse lateral and CSPs, animal protection, etc.					
			5657634	Animal protection behind fuse H32247, Chg metal brk H43327					
			5657649	First zone work, fuse lateral and CSPs, animal protection, replace aged					
			3037043	infrastructure, replace metal brks.					
NJ1604	Tabernacle	Medford Farms	5657656	2nd zone work behind C6461, fuse lateral and CSPs, animal protection, replace					
1431004	rabernacie	IVICUIOI A I AITIIS	3037030	aged infrastructure, replace metal brks.					
			5657660	2nd zone work behind C8261 C8232, fuse laterals and CSPs, animal protection,					
			3037000	replace aged infrastructure, replace metal brks.					
			5657690	First zone work, fuse lateral and CSPs, animal protection, replace aged					
			3037030	infrastructure, replace metal brks.					
NJ1607	Tabernacle	Seneca	5657697	2nd zone work behind 72193/4978, fuse lateral and CSPs, animal protection,					
			3037037	replace aged infrastructure, replace metal brks.					
			5657710	Replace old infrastructure, install animal protection, behind H34603					

Appendix 1. Supplemental Reporting Metrics in Accordance with the Stipulation of Settlement in connection with BPU Docket No. ER09080664

Supplemental Metrics for CEMI and MAIFI

CEMI

2017 CEMI Indices

District C State Lurisdistion	CEMI Counts and Indices - NJAC Exclusion Criteria (Year 2017) - Additional Requirement								
District & State Jurisdiction	CEMI-2*	CEMI-2 Ind	CEMI-4*	CEMI-4 Ind	CEMI-6*	CEMI-6 Ind	CEMI-8*	CEMI-8 Ind	
Cape May District	15,597	14.2%	1,062	1.0%	10	0.0%	0	0.0%	
Glassboro District	48,030	30.4%	9,496	6.0%	1,890	1.2%	336	0.2%	
Pleasantville District	21,701	12.8%	1,219	0.7%	14	0.0%	0	0.0%	
Winslow District	24,402	25.2%	3,475	3.6%	284	0.3%	0	0.0%	
Total New Jersey (ACE)	109,730	20.6%	15,252	2.9%	2,198	0.4%	336	0.1%	

^{*} Note the definition of CEMI as shown in 3.2.7 of the IEEE Standard 1366 - 2012.

MAIFI

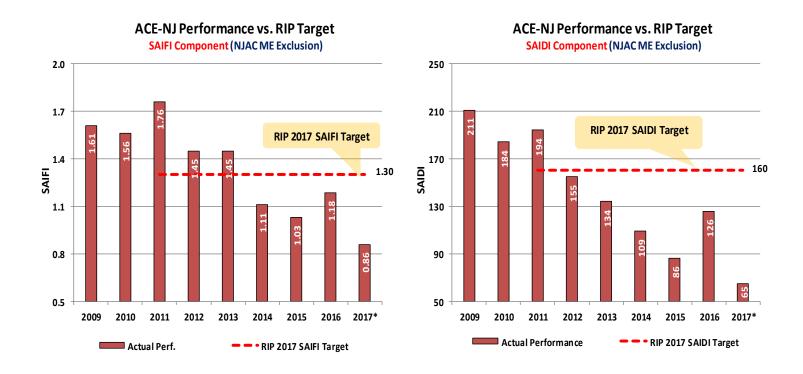
2017 MAIFI Indices

District & State Jurisdiction	MAIFI*
Cape May District	2.39
Glassboro District	0.75
Pleasantville District	1.76
Winslow District	1.61
Total New Jersey (ACE)	1.56

^{*} Includes only breaker with SCADA capabilities Most of the ALE (Automatic Line Equipment, such as Reclosers and Sectionalizers) not included.

Appendix 2. Reliability Improvement Plan Progress Report

ACE's reliability performance in 2017 was substantially below the RIP targets as established in the Stipulation Agreement under BPU Docket No. ER09080664. ACE's current focus is to meet the performance goals as stipulated under the merger agreement.



Reliability Improvement Plan Supplemental Report 2017 Annual System Performance Report for Atlantic City Electric Company

1. Vegetation Management (VM)

(See Section C9 for ACE VM Completed Work Details)

Vegetation management includes tree trimming along public rights of way to obtain sufficient clearance between the overhead electric wires and existing trees. In addition to tree trimming, ACE also works with counties, communities and homeowners to remove diseased or dead trees which would damage the distribution system if they were to fall.

For overhead systems, vegetation management (tree trimming) is ACE's largest single preventive maintenance program. ACE has had a routine cyclical program of tree trimming in place for four years. This program is designed to maintain minimum clearances between vegetation and overhead facilities.

Efficient implementation of this program throughout the electric distribution industry has proven to minimize incidental contact between vegetation and overhead distribution circuits and thus improve SAIFI.

ACE's vegetation management program aims to provide safe and reliable electric service to its customers while maintaining the aesthetics of the environment. Vegetation management, while challenging, is essential to meeting the Company's commitment to maintaining electric reliability and is a key priority for the company. ACE places an equal amount of importance on the beauty and the environmental health of the area vegetation in its VM program execution.

The Company's International Society of Arboriculture (ISA) certified arborists and contract tree pruning experts perform their functions for public safety and the safety and health of the trees and in accordance with state and

national standards. Tree pruning for all PHI operating companies is performed following the standards and practices as outlined in the *American National Standards Institute (ANSI) publication A300 (Part 1) – 2001: Tree, Shrub and Other Woody Plant Maintenance* and its companion best management practices publication, *Utility Pruning of Trees*. Additionally, ACE must comply with all state and local laws and regulations regarding vegetation management practices.

ACE conducts tree and vegetation maintenance, which includes trimming and/or removing branches that overhang power lines and removing dead and diseased trees that are too close to the lines. Trees located along the overhead lines are trimmed as appropriate for the specific locality and in accordance with state and local regulations. Circuits are selected for inspection and trimming according to a pre-scheduled plan, created on the basis of a prioritization process that takes into account the number of vegetation related outages and overall reliability statistics of the circuit.

At a minimum, ACE inspects and mitigates imminent vegetation problems as necessary on all overhead feeder sections at least once every four years. In addition, the Company has a Vegetation Management program that is designed to:

- Maintain a high degree of reliability across the entire electric system;
- Target areas of the electric system found to be most susceptible to damage from trees during storms;
- Assist in the removal of trees in close proximity to ACE's electric lines;
- Perform emergency tree and limb removal from electric lines; and
- Provide support for local jurisdictions that require assistance to remove trees that are in close proximity to the electric facilities.

ACE added elements to the vegetation management practices currently utilized by the Company, removing more circuit overhang and off right-of-way danger trees and increasing zones of electrical clearances where possible.

Reduction of vegetation-caused outages is a key driver of ACE's system reliability improvement efforts. ACE is constantly seeking opportunities to enhance tree- trimming management to improve reliability. The application of herbicides, ground-to-sky trimming, public and private partnerships and a public education campaign are all initiatives underway by ACE in order to improve the program even further.

Since much of this program is dependent upon increased customer approvals and continued cooperative efforts with state and local jurisdictions, ACE is optimistic the VM program will be supported by regulators, legislators and community stakeholders.

2. Priority Feeder Program

(See Section G for Priority Feeder Completed Work Details)

The objective of the Priority Feeder Program is to identify the least reliable distribution feeders in each operating district, analyze and prioritize those feeders and initiate corrective actions to improve individual and overall distribution feeder reliability. ACE conducts annual system performance reviews of its 308 distribution feeders and ranks these feeders from the most reliable to the least reliable, based on high frequency and extended duration outages, using data from a rolling 12-month period from October 1 to September 30.

From each of ACE's four operating districts, five (5) feeders are selected based on their overall reliability performance and targeted for improvements under the BPU supported program. For 2017, a total of (26) feeders were selected in response to Board Order Docket EO12070650. Based on the field inspection results and historical outage data, the information for each selected feeder is reviewed, evaluated and analyzed in order to recommend appropriate corrective actions.

Proposed corrective actions may include but are not limited to the following activities:

- Perform infrared thermal scanning of lines and equipment to remediate poor connections, overloads, and defective equipment;
- Install animal guards;
- Replace blown lightning arresters and defective grounds;
- Replace deteriorated structures: poles, cross-arms, braces, down guys, etc.:
- Re-tension conductors with excessive slack, re-pull guys, install conductor spacers, etc.;
- Replace defective insulators;
- Replace or repair transformers and other distribution equipment

based on observed condition;

- Install new lateral tap fuses;
- Install sectionalizing and reclosing devices;
- Trim trees to provide sufficient clearances to lines and equipment;
- Verify protective device coordination to ensure effective fault isolation;
 and
- Reconfigure overhead lines to avoid or minimize physical hazards such as large trees, motor vehicle hazards, etc.

In an effort to reduce overall SAIFI, ACE is emphasizing the importance of reducing feeder lockouts with added emphasis on the priority feeders. Starting in 2011, the first feeder line segment(s), defined as the feeder segment originating at the substation feeder breaker or riser terminal pole and extending to the first major protective device (usually a recloser) will receive extra scrutiny with the objective to remediate moderate to high level outage risk factors. Additional remedial work is justified for the critical line segments of a feeder. For example, ensuring all lighting arresters are either fused or equipped with ground fault isolators may make sense for the first line segment, but perhaps not the best use of funds for the last segment.

ACE continually reviews the system performance of its distribution feeders. Distribution feeders are ranked from the most to the least reliable according to several criteria over a rolling 12 month period. A group of the least reliable feeders is selected for improvements over the ensuing year. Detailed investigations are performed to determine the cause of outages and necessary corrective actions to reduce the number of outages.

3. Load Growth Projects

The design of reliable electric systems requires a thorough understanding of load growth trends. Whenever new loads are added or systems are reconfigured to incorporate new services, it is good design and planning practice to model the addition of new load to determine its impact on the system.

ACE continuously analyzes the adequacy of its electric system to ensure that the demand for energy on its system is met and that plans to meet future growth are in place. The Company maintains engineering and operating criteria to be used in the design of new and modified portions of the system as follows:

- Voltage and reactive support;
- Ratings of facilities; and
- Reliability.

ACE completes short-term planning studies for every area in the ACE distribution system on a biennial basis. When forecasting ACE's feeder and substation loads, System Planning begins with a close examination of the summer historical load. Engineering staff compare the peak meter readings on the summer peak day for each feeder and substation with the previous historical loads and the previously predicted load, while considering the effects of predicted new customer load, actual new customer load, planned changes in feeder configuration and emergency transfers.

Solutions to relieve equipment capacity overloads and voltage deficiencies at the feeder or substation level are developed, usually with alternatives. The alternatives are evaluated on an economic and effectiveness basis with the most effective/least cost solution being proposed into a Construction Recommendation. Following the review of components of the existing electrical system and the requirements for new service hookups, system planners develop the costs and schedule for the changes to

the electric system, which will be taken forward as candidates for inclusion in the construction budget process.

Major Load Projects

Distribution Lines

- Peermont Substation: New feeder
- Beckett Substation: Reconductor feeder
- Atlantic Region: Perform various load relief projects
- Quinton Substation: Reconductor Oakwood feeder

Transmission Lines

- Upper Pittsgrove Lewis 138kV Rebuild
- Orchard Cardiff 230kV Line
- Monroe Tansboro 69kV Rebuild
- Court Middle Lake 69kV Rebuild

Distribution Substation

- Dorothy Substation: 12kV bus upgrade
- Landis Distribution Rebuild (BL England at risk project)
- Mickleton Substation: Upgrade 12 kV transformers and feeder bays

4. Distribution Automation

Distribution Automation (DA) is a major component of ACE's overall strategy for improving customer reliability in the future.

In 2017, ACE installed a net total of 175 new distribution line reclosers with remote visibility and control capability. In addition, communications equipment was added at 170 existing recloser locations in order to give system operators remote visibility and control capability through the Company's energy management system. Ninety-four of these new and existing reclosers were also integrated into an automatic sectionalizing and restoration (ASR) scheme as part of the Glassboro Group DA expansion project. This added ASR functionality to 16 feeders in Glassboro and Winslow districts.

Distribution automation involves installing advanced intelligent electronic devices in the substation and in the field. Facilitated via an established telecom network, these devices work in concert with an automation control program to carry out the automatic sectionalizing and restoration (ASR) DA function. This "self-healing" concept is the heart of DA. Feeders are designed with good segmentation using reclosers and smart switches and utilize one or more feeder tie switches to provide alternate power sources. Should a permanent fault occur, the appropriate protective device locks out as expected. In a conventional radially designed feeder, all customers beyond a locked out protective device experience a sustained outage. ASR, the faulted segment is isolated by opening additional switches, and the non-faulted portion of the feeder is quickly restored by closing one or more available feeder tie switches. This automatic isolation and restoration process normally takes less than two minutes.

DA does not prevent faults or reduce their likelihood of occurring. However, a well performing DA system can minimize the number of customers experiencing sustained outages and reduce restoration times by positively identifying and isolating the faulted line segment. Knowing the location of the fault reduces patrol times and speeds up the restoration process

for the customers impacted by the faulted section.

There are many other potential benefits of DA. For example, one of the challenges distribution engineers face is maintaining acceptable time-current coordination as feeder segmentation is increased for reliability. conventional radial design feeder, poor device coordination results in the sustained interruption of more customers than is necessary and makes it more difficult to locate faulted equipment, thereby increasing restoration times. However, since the DA master controller receives input from all devices, it can quickly determine which devices or sensors have "seen" fault current and which ones have not. Therefore, should an over-trip occur, the DA master controller can open the correct devices and close back in the mis-tripped device(s), thereby isolating only the faulted line segment. By closing one or more feeder ties, all customers are quickly restored except those served by the faulted line segment. In addition, the DA devices are able to be controlled remotely by the control center operators. This capability can improve the time efficiency of scheduled maintenance work as well as the service restoration work discussed.

5. Feeder Improvement Program

ACE's RIP includes an expanded feeder improvement program and aggressive vegetation management. With the pairing of complementary efforts to reduce outages on the distribution system, ACE has taken assertive steps to immediately improve customer reliability while simultaneously making asset improvements to ensure long term success. The RIP not only captures a greater number of feeders, but it entails a larger array of mitigation and preventative options ACE may deploy.

In addition to the 26 Priority Feeders selected in 2017 for reliability performance improvement, ACE will identify additional feeders as needed in order to achieve better overall system reliability. Reliability improvement at the feeder level is accomplished by performing capital improvements, aggressive tree trimming, and prudent maintenance.

Measuring Benefits

The metrics that will be used to demonstrate the effectiveness of these efforts will be calculated at the feeder level. ACE will evaluate the results of improvement efforts against historical average SAIFI and SAIDI. Additionally, ACE will track performance against CEMI trending.

In order to assure the effectiveness of the program, ACE will qualitatively and quantitatively address the following four issues:

- 1. Cost Management: ACE will track the dollars spent on each priority feeder and characterize the type of remedial work performed.
- Outage cause analysis: The feeder improvement program will not apply a blanket list of remediation efforts to every feeder, but instead identify the root cause of poor performance and address it directly to ensure that money is effectively targeted. For example, if a feeder is continually plagued by asset failures, ACE will focus its effort on asset

- upgrades or replacement.
- Quality control: ACE will ensure that the work implemented is being carried out correctly and adheres to prescribed methodologies. This will be achieved in large part by effective construction management and performing post- construction compliance inspections.

ACE continually reviews the system performance of its distribution feeders. Distribution feeders are ranked from the most to the least reliable according to several criteria over a rolling 12-month period. A group of the least reliable feeders is selected for improvements over the ensuing year. Detailed investigations are performed to determine the cause of outages and necessary corrective actions to reduce the number of outages.

Multiple Operations of Protective Devices

ACE monitors and analyzes the operation frequency of the major protective devices on a feeder. These devices include: Feeder Main Breakers, Reclosers, Sectionalizers, and primary line fuses. Data is maintained to provide year-to-date- operations as well as the rolling 12-month operations. Managing multiple device operations (MDO's) by mitigating faults along line segments served can greatly reduce CEMI, substantially improve feeder performance, and significantly improve overall system reliability performance.

CEMI

ACE monitors the incidence of CEMI. Identifying poor or chronic CEMI performance allows ACE to target smaller groups of customers. Targeting CEMI will probably not have the greatest impact on overall system or feeder level SAIFI, but can dramatically improve reliability for those customers experiencing poor reliability due to a localized performance issue.

Tactical Remediation Efforts

Proposed corrective actions may include but are not limited to the following activities:

- Install animal guards;
- Replace blown lightning arresters;
- Upgrade older style arresters with modern MOV types;
- Replace deteriorated poles/cross arms;
- Re-tension slack spans and installing spacers;
- Replace deteriorated insulators;
- Inspect and/or replace transformers and other distribution equipment based on observed condition;
- Install new lateral tap fuses;
- Install sectionalizing devices, such as ACRs;
- Tree pruning & vegetation management;
- Danger tree removals;
- Replace missing or damaged grounds and guys; and
- Check for appropriate fuse installation and resizing of fuses for fuse coordination with respect to inspection results.

Strategic Remediation Efforts

ACE follows a process that utilizes the routine correction actions that history has shown provide significant reliability improvement. In those cases where significant reliability improvement has not been obtained, and a feeder is repeated on the feeder improvement listing within a five-year period, then ACE will examine more extensive options for addressing performance. Such options may include:

- Installation of Automatic Circuit Reclosers (ACRs) to provide improved feeder segmentation and greater success clearing temporary faults;
- Implement ASR schemes;

- Installation of larger class poles for strength with double arms, double dead ends, and larger and stronger conductors; and
- Reconfigure and/or reroute main trunk of feeder to avoid potential fault hazards such as heavily treed areas and high vehicular accident zones.

<u>Analysis</u>

In the Analysis phase, the Reliability Engineer shall gather and review all relevant feeder data to identify the more "obvious" feeder issues and determine inspection requirements. The goal of this process step is to determine if the feeder is optimally designed and to ensure sectionalizing devices are properly located and operating effectively. Analysis includes the following steps:

- Determine root causes of feeder faults and consider improvements to reduce the probability of reoccurrences;
- 2. Look for opportunities to improve feeder segmentation;
- 3. Ensure all laterals are fused to protect main trunk of feeder;
- 4. Consider replacing high-count fuse operations with single-phase reclosers;
- Conduct a Protective Device Coordination Study/Evaluation, especially for suspected mis-trips;
- 6. Refer Substation, Transmission, and Operational issues to the appropriate groups; and
- 7. For apparent nuisance tripping of devices during heavy loading periods, perform a detailed load study and upgrade equipment as necessary.

<u>Inspection</u>

The Inspection phase includes visually examining the feeder and equipment to confirm and augment the findings of the Analysis. For Priority Feeder work, the entire feeder is inspected. Other reliability improvement initiatives may focus only on specific areas. Field inspections are performed to determine a feeder's structural and electrical integrity, identify major

equipment problems, and verify proper tree clearance.

At a minimum, all inspections will include the following for backbone and three phase taps:

Overhead

- 1. Check locations for proposed ACRs;
- 2. Concentrate inspection activities and significant recommendation between the substation and the first automatic sectionalizing device;
- Verify that all completely self-protected (CSP) transformers protected by a recloser or circuit breaker are fused (or replaced, as necessary), animal guarded, and upgraded with an MOV arrester;
- 4. Verify that all lightning arrestors on main lines are MOV type or located below a fused cutout;
- 5. Replace all blown arresters;
- 6. Conduct a grounding survey to identify grounding issues if the outage cause is lightning;
- 7. Examine equipment down grounds on poles to ensure their presence and integrity;
- 8. Verify that all taps are fused as close as safely and feasibly possible to the backbone; and
- 9. Verify that all electrical equipment and configuration/connectivity are accurately reflected on the GIS feeder map/ drawing.

Underground

- 1. Verify that no leaks are visible on switching equipment;
- 2. Review leaded joints on feeder trunks for swelling or extreme deflation (where the phases are visible through the jacket); and
- 3. Identify areas for possible URD cable replacement or renewal (curing).

In addition to the minimum Inspection requirements noted above, Analysis results may also necessitate the following feeder attributes be examined:

General

- Note areas that require tree trimming and forward this information to local Forester. A drawing showing the approved corrective actions shall be forwarded to Vegetation Management;
- 2. Discrepancies identified on other circuits on the same pole line as the subject PF should be remedied:
- 3. Identify damage to cross arms, braces, insulators;
- Replace wood pins and 5kV insulators;
- Replace porcelain insulators with polymer types where tree wire burn-downs have occurred;
- 6. If insulators do not match on existing pole, replace so they all match (polymer insulator with jacketed wire or porcelain Insulator with bare wire);
- 7. Inspect non-standard design/ installations to determine potential for future outages (e.g., inadequate clearance, long spans, etc.);
- 8. Examine overall pole health (e.g., wood pecker damage, cracks, decay);
- Identify incipient pole fires resulting from tracking/charring on crossarms or poles; and
- 10. Reinforced Poles (Banded Poles):
 - Replace all fiberglass wrapped poles;
 - b. For other c-truss banded poles, check inspection badge date;
 - c. If over 15 years old, replace pole;
 - d. If no date, replace pole; and
 - e. If under 15 years, do not replace pole unless work is being performed on the pole.

Equipment:

- 1. Assess condition fused, rusted, deteriorating, inadequate spacing, etc.
 - a. Transformers
 - b. Capacitor banks
 - c. Regulators
 - d. Switches
 - e. Reclosers

- f. Cutouts
- 2. Guy/ guy insulator/ anchor
- 3. Identify missing or improperly installed lightning arresters:
 - a) Ensure that all 13kV circuits have LAs in the same location as 69 or 34 kV arrester locations.
 - b) Verify that LAs are installed every 1/4 mile on 13 or 4 kV circuits.
 - c) Replace all blown arresters.
 - d) Install LAs where missing.
 - i. Risers
 - ii. Either side of Feeder Trunk Tie switches
- 4. Identify missing or improperly placed animal guards:
 - a) Risers/Transformers/Caps/Regs, etc. Animal guards similar to bottle cap should be replaced. New Animal Guards (tall profile-hinged style) should enclose only the top skirt of the bushing. Replace all old animal guards (such as "funnel- shaped" soft plastic type and round –handle insulated bushing connector types).
- 5. Conduct an infrared survey on all three-phase mainlines under high load conditions, if possible.

2018 Comprehensive Feeders

2018 ACE Comprehensive Feeder Listing										
(Indices are based on October 1, 2016 through September 30, 2017)										
DISTRICT	CIRCUIT	SUBSTATION	FEEDER	SAIFI	CAIDI	SAIDI				
CAPE MAY	NJ0483	Rio Grande	Erma	2.15	100.7	216.3				
CAPE MAY	NJ0484	Rio Grande	Rio Grande	4.55	81.7	371.6				
GLASSBORO	NJ0185	Williamstown	Main	2.71	44.1	119.4				
GLASSBORO	NJ1101	Landis	Brotmanville	2.99	92.2	275.2				
GLASSBORO	NJ1291	Terrace	Grenloch	3.95	125.0	493.7				
GLASSBORO	NJ1464	Carlls Corner	Rt 77	2.30	192.5	443.6				
GLASSBORO	NJ2352	Upper Pittsgrove	Aldine	2.50	62.5	156.4				
GLASSBORO	NJ2041	Mantua	Sewell	3.43	53.4	183.1				
PLEASANTVILLE	NJ0428	Pleasantville	North	2.09	327.294	156.6				
PLEASANTVILLE	NJ1328	Cedar	Mill Creek	1.38	165.3	277.3				
PLEASANTVILLE	NJ1329	Cedar	McKinley	1.69	98.4	165.9				
WINSLOW	NJ1731	Sickler	West	2.17	74.4	161.3				
WINSLOW	NJ1146	Pine Hll	Millbridge	2.10	104.8	200.6				

	ACE Comprehensive Reliability Work for 2018								
District	Circuit	Substation	Feeder	Description					
		s: 0 l	_	First zone work, install CLFs, fuse CSPs and Laterals, animal					
Cape May	NJ0483	Rio Grande	Erma	protection					
	NJ0484	Rio Grande	Rio Grande	Install Tree Wire at Various Locations and reconductor parts of main stem					
	NJ0185	Williamstown	Main	Feeder zone work, install CLFs, fuse CSPs and Laterals, animal protection					
	NJ1101	Landis	Brotmanville	Second zone work, install CLFs, fuse CSPs and Laterals, animal protection					
Glassboro	NJ1291	Terrace	Grenloch	First zone work, install CLFs, fuse CSPs and Laterals, animal protection					
	NJ1464	Carlls Corner	Rt 77	Feeder zone work, install CLFs, fuse CSPs and Laterals, animal protection					
	NJ2352	Upper Pittsgrove	Aldine	Second zone work, install CLFs, fuse CSPs and Laterals, animal protection					
	NJ2041	Mantua	Sewell	Recondcutor Bankbridge Rd and Reconfigure Circuit					
	NJ0428	Pleasantville	North	Recondcutor old copper with 477 AAC					
Pleasantville	NJ1328	Cedar	Mill Creek	Reliability upgrades along Jennifer Ln and Johnathan Dr					
Pleasantville	NJ1329	Cedar	McKinley	First zone work, install CLFs, fuse CSPs and Laterals, animal protection and Install tree wire					
Winslow	NJ1731	Sickler	West	Replace old infrasructure and install animal protection behind C25472					
	NJ1146	Pine HII	Millbridge	Reconductor from C13310 to C2607 and replace pole C2606					

Atlantic City Electric Company

Vegetation Management Program May 31, 2018

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EXECUTIVE SUMMARY

This Program contains Atlantic City Electric's ("ACE" or the "Company") strategies and activities for the management of vegetation in proximity to poles, substations, and energized electric plant. Generally, ACE's Vegetation Management ("VM") Program (the "Program") applies to energized electric overhead ("OH") facilities greater than 600 volts, and less than 35 kV.

The Program is an important part of improving and maintaining reliability of the electric system. Due to the density of tree coverage in the Company's service territory and public concerns relating to tree pruning, challenges exist when balancing the value of trees to customers and communities and the need for reliable electric service. The main objectives that the VM Program attempts to balance are safety, reliability, regulatory compliance, environmental stewardship, and customer satisfaction. ACE appreciates the environmental and societal benefits of a mature tree canopy, including improving air quality, serving as habitat for wildlife, reducing energy costs, attributing to the control of storm water and runoff, and providing aesthetic value to homes and neighborhoods.

ACE's vegetation management strategy focuses on:

- achieving and maintaining a high degree of reliability across the entire electric system;
- targeting areas of the electric system found to be most susceptible to outages and damage from trees;
- performing cyclical inspections and pruning to maintain the stability of the system;
- working with local governments and property owners to remove trees in close proximity to ACE's electric lines;
- communicating with customers through various media;
- performing emergency tree and limb removal from electric lines;
- performing VM work consistent with good environmental stewardship; ANSI Standards. ISA BMPs, among other standards and methods; ¹ and

¹ ACE VM practices are consistent with, but not limited to, the following standards and methods. In the case of a conflict, the most appropriate standard or method will be selected by ACE:

providing educational resources that focus on a variety of VM topics including planting
the right tree in the right place in order to prevent and avoid hazards created by tree
interaction with power lines.

OVERVIEW OF THE ACE VM PROGRAM

ACE's subtransmission and distribution systems are particularly vulnerable to tree damage because a large portion of the Company's electric and the tree canopy occupy the same and adjacent space. The Company also faces significant pressure from residential customers to minimize VM and is limited when requests to remove trees in private and municipal areas are denied. In addition, the Company is subject to relevant state and local requirements relating to VM. Due to this challenging operating environment, a carefully conceived, comprehensive, and

- 1. Part 1 of the document entitled Tree, Shrub, and Other Woody Plant Maintenance-Standard Practices (Pruning). This document, also known as ANSI A300, is published by the American National Standards Institute, and may be obtained at www.ansi.org;
- **2.** Part 7 of the document entitled for Tree Care Operations-Tree, Shrub, and Other Woody Plant Maintenance Standard Practices (Integrated Vegetation Management A. Utility Rights-Of-Way). This document, also known as ANSI A300, is published by the American National Standards Institute, and may be obtained at www.ansi.org;
- **3.** Part 9 of the document entitled for Tree Care Operations Tree, Shrub, and Other Woody Plant Maintenance Standard Practices (Tree Risk Assessment). This document, also known as ANSI A300, is published by the American National Standards Institute, and may be obtained at www.ansi.org;
- **4.** Best Management Practices, Utility Pruning of Trees. This title is published by the International Society of Arboriculture and may be obtained at http://www.isaarbor.com/store/product.aspx?ProductID=65;
- **5.** Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush--Safety Requirements. This document, also known as ANSI Z133.1, is published by the American National Standards Institute, and may be obtained at www.ansi.org;
- **6.** Native Trees, Shrubs And Vines For Urban And Rural America: A Planting Design Manual for Environmental Designers, by Hightshoe, G.L., is published by John Wiley and Sons and may be obtained from various resellers;
- 7. Manual of woody landscape plants 5th Ed., by Michael A. Dirr. Stipes Publishing, LLC; 5th edition, and may be obtained from various resellers;
- 8. Hortus Third: A concise dictionary of plants cultivated in the United States and Canada, by L.H. Bailey Hortorium, and may be obtained from various resellers; and
- **9.** National Electric Safety Code C2-2012. ISBN: 9780738165882 is published by the Institute of Electrical and Electronics Engineers, Inc., and may be purchased at www.ieee.org.

proactive program is essential to address tree-related outages, and will therefore play a large role in meeting the Company's commitment to improve electric reliability.

ABE's VM Program does not apply to any electric transmission plant regulated by the Federal Energy Regulatory Commission ("FERC") and does not include transmission strategies and activities filed with North American Electric Reliability Corporation (also referred to as NERC), an entity approved by the FERC, that contain confidential critical energy infrastructure information.

All work described in this Program must comply with a variety of laws, standards, specifications, and guidelines, including those listed below (as any of them may be amended or supplemented from time to time):

- wetland delineation;
- local/municipal tree permits;
- ANSI A300 Tree, Shrub, and other Woody Plant Standard Practices;
- ISA Best Management Practices Utility Tree Pruning, Integrated Vegetation Management; Tree Risk Assessment;
- OSHA 1910.269, subpart r;
- Exelon Utilities ("EU") Safety policies and procedures;
- EU VM contract work specifications; and
- all other relevant federal, state and local legal standards, including N.J.A.C. 14:5, Subchapter 9 (Electric Utility Line Vegetation Management) statutes.

VEGETATION MANAGEMENT PLANNING

In accordance with the provisions of N.J.A.C. 14:5, Subchapter 9, the following factors are taken into consideration in determining the extent and priority of VM to be performed at a particular site:

- Facilities being maintained:
 - o voltage of affected energized conductor, with higher voltages requiring larger clearances;
 - o relative importance of affected energized conductor in maintaining safety and reliability;
 - o type of conductors and overhead construction; and
 - o the potential movement of energized conductors and vegetation during various weather conditions.

• Vegetation involved:

the extent of the potential for vegetation to interfere with poles, substation, and energized overhead electric plant;

- o the likely re-growth rate for each species of vegetation at the site;
- o the maturity of the vegetation;
- o the identification of the structural conditions of the vegetation, including the characteristics of a species as one having a high probability of causing a service interruption during weather events; and
- o presence and condition of hazard trees.

• Legal considerations:

- o utility's legal rights to access the area where VM is to be performed; and
- o state and local statutes, regulations or ordinances affecting utility performance of VM.

Customer considerations:

o customer acceptance of the proposed vegetation management where the utility does not have legal rights to perform VM.

VEGETATION MANAGEMENT WORK PROCESS OVERVIEW

ACE performs both preventive and reactive maintenance on vegetation. Preventive maintenance is the planned vegetation management activities that are the focus of this VM Program. The planning and implementation are described in detail below under Preventive Maintenance. ACE also performs corrective maintenance activities. These activities are all unplanned, non-routine vegetation management driven by customer inquiries, and weather events (emergency restoration). The planning and implementation of this work is also detailed below under Corrective Maintenance. In addition, detailed below is vegetation management done in support of new capital project work.

Preventative Maintenance

ACE Vegetation Management staff determines the Annual Plan for vegetation management on OH facilities less than 35 kV. All planning, work, and tracking of these overhead facilities will be feeder/circuit-based, and a long-term schedule has been developed based on a four-year cycle strategy. The overall annual plan will generally target 25% of the total applicable circuit miles in ACE's territory.

The Vegetation Management Department implements the VM strategy. There are three steps that ACE takes to execute the VM Annual Plan. These steps are planning, execution, and quality control/quality assurance.

ACE VM has specific roles and responsibilities for its internal Program Managers, a Contract Forester or Work Planner, and the Tree Contractor. A Contract Arborist or Work Planner, monitored by ACE's Program Managers, generally conducts the following activities in order to develop a work plan that a Tree Contractor can execute:

- use GIS-based hand-held computers and software to schedule work, and work with a contract Work Planner, whose job it is to evaluate and inventory all VM work on a given feeder/circuit;
- field inspect circuit on which VM is performed in its entirety, from substation all primary, and to the last secondary line section on the circuit;
- abide by the above-mentioned standards and regulations on tree pruning, removal, brush clearing, herbicide application, etc.; and
- document planned work on GIS map layers through the GIS-based, GPS enabled hand-held computer. Data is then uploaded, and work maps and summaries are created and made available to the ACE Program Manager. These summaries should include work units including amount of tree removals, customer information relative to the work location, such as customer notice, refusals, and debris management information.

Once work is planned, the contract Work Planner conveys vegetation data and maps to the responsible ACE Program Manager.

The Program Manager has the following responsibilities in preventive maintenance activities:

- preparing any unit cost estimates required for unit priced work;
- delivering circuit vegetation data and maps to the Vegetation Management Tree Contractor:
- reaching agreement with Tree Contractor on work described and pricing of project;
- initiating customer notification through mailing and/or door hanger notification;
- monitoring work implementation for contract compliance, including federal \, state, and local legal and regulatory requirements;
- auditing completed circuit work project, identifying non-compliance on punch list; documenting and assuring that Tree Contractor corrects issues;
- completing Job Acceptance Form and files along with other data and maps from circuit; Data is retained for required timeframe; and
- recording completion date of circuit in Company tracking reports.

Tree Contractors are responsible for:

- reviewing unit cost estimates for unit priced work;
- reviewing and verifying circuit vegetation data and maps;
- initiating VM work on vegetation per EU contract specifications, including federal, state,

and local legal and regulatory requirements, EU safety policies and procedures;

- receiving and addressing non-compliance items on punch list;
- submitting invoices and documentation for payment, per contract terms;
- providing reports and other documentation on work completed; and
- managing multiple circuit projects for completion deadlines.

Corrective Maintenance

Non-routine work is known as corrective maintenance ("CM"). The majority of CM work is received when customers call the Company to request assistance related to a tree issue that is not associated with an outage. These calls generally come in through the Call Center and are assigned to VM for resolution. CM work is non-cyclical work, and resources are specifically allocated to this work in an organized, safe, and efficient manner.

Customers, municipalities, businesses, internal departments, and other entities may encounter vegetation problems around energized OH facilities throughout the ACE service territory. To manage this non-cyclical work, the VM Department currently uses the ACE Advantex System. ACE is in the process of transitioning to Exelon mobile dispatch systems as part of the merger. This transition is expected to be completed across ACE in late 2018. This system interfaces with the Customer Information Systems and logs requests based on a customer's account and address. It provides the capability to receive, investigate, dispatch for work execution, and complete customer-requested VM work.

Contract Work Planners are used to investigate most of the CM work orders, most within 10 working days of receipt. The Work Planners evaluate the vegetation, facilities, customer's request, and legal rights to determine whether or not work is required and/or permitted.

Once work is determined to be required, the investigation order is converted to a work order in the system and sent to a VM Contractor's tree crew for implementation of required work. When work is completed, the work order is completed, closed, and documented on the customer's account.

Capital Construction Work

Another type of VM work is done in support of capital construction projects. Engineers designing new distribution line sections and upgrades to existing line sections, transmission rebuilds or even new right of way ("ROW") corridors may require vegetation clearing or pruning in order for a project to be built. Once appropriate regulatory approvals are obtained, the Vegetation Management Department plans VM work, provides notification, obtains permission as required, and implements the vegetation clearing necessary for these projects to be built.

VEGETATION MANAGEMENT PRACTICES

Tree Pruning

ACE abides by the following tree-wire clearances when pruning trees near ACE's OH energized facilities:

- Voltages 12 kV to 34.5 kV Sub-transmission Feeder
 - o Horizontal Greater of 4 year growth clearance or 10'
 - o Clearance beneath conductor is measured radially from the horizontal requirement
 - o Vertical Blue Sky at horizontal clearance measurement
 - o Mature Tree Exemption
- Voltages 12 kV to 34.5 kV Distribution Feeder From the Substation to the First Protective Device
 - o Horizontal 4 to 5 year growth clearance
 - o Clearance beneath conductor is measured radially from the horizontal requirement
 - o Vertical Blue Sky at horizontal clearance measurement
 - o Mature Tree Exemption
- Voltages 24 kV to 34.5 kV Distribution Feeder Beyond the First Protective Device
 - o Horizontal 4 to 5 year growth clearance
 - o Clearance beneath conductor is measured radially from the horizontal requirement
 - o Vertical 15' at horizontal clearance measurement
 - o Mature Tree Exemption
- Voltages 124 kV to 34.5 kV Distribution Feeder Single Phase or Pre-Assembled Aerial Cable ("PAC")
 - o Horizontal 4 to 5 year growth clearance
 - o Clearance beneath conductor is measured radially from the horizontal requirement
 - o Vertical 6' at horizontal clearance measurement
 - Mature Tree Exception
- Less than 12 kV, but at least 600 volts From the Substation to the first protective device
 - o Horizontal 4 to 5 year growth clearance,
 - o Clearance beneath conductor is measured radially from the horizontal requirement
 - o Vertical Blue Sky at horizontal clearance measurement
 - o Mature Tree Exemption
- Less than 12 kV but at least 600 volts Beyond the first protective device
 - o Horizontal 4 to 5 year growth clearance
 - o Clearance beneath conductor is measured radially from the horizontal requirement
 - o Vertical 15' at horizontal clearance measurement
 - o Mature Tree Exception

- Less than 12 kV but at least 600 volts Single Phase or Pre-Assembled Aerial Cable ("PAC")
 - o Horizontal 4 to 5 year growth clearance
 - o Clearance beneath conductor is measured radially from the horizontal requirement
 - o Vertical 6' at horizontal clearance measurement
 - o Mature Tree Exception

When determining the exact tree growth to be pruned back, each individual tree's size, shape and growth rate is taken into consideration. This is done under the guidance and direction of a certified arborist. The amount of pruning varies based on the different tree species, unique growth rates, the health of the individual tree and other factors such as the relative location of the tree to the power lines.

Annual tree growth is measured as the distance from the terminal bud leaf scar from the current year back to the previous year terminal bud leaf scar. This method can be extended back into the crown to measure previous years' growth as well. This method is used to determine how much a tree grew in the previous years and then to determine how much of the tree must be pruned in the current cycle to establish an average of four years growth clearance. Trees of different species grow at different rates. Please refer to the definition of "rate of growth" below from Dirr's Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses.

"Rate of growth refers to the vertical increase in growth unless specified differently. Rate, as is true for size, is influenced by numerous variables such as soil, drainage, water, fertility, light, exposure, *ad infinitum*. The designation *slow* means the plant grows 12" or less per year; *medium* refers to 13-24" of growth per year; and *fast* to 25" or greater."²

Tree Removal

Hazard trees³ are identified by Company Work Planners during preventative maintenance inspections and are documented on the work planning tool. The documented hazard trees are worked by Company tree contractors during preventative maintenance execution in accordance with New Jersey Board of Public Utilities ("BPU") regulations:

14:5-9.5 Hazard trees

(a) If the EDC's VM determines that a tree meets the definition of a hazard tree, the EDC shall determine if it is permitted (for example, by easement, tariff or law) to remove or mitigate the hazard tree. If the EDC determines that it is not

² Dirr, M. A., 2009, Manual of Woody Landscape Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses, Stipes Publishing L.L.C. Champaign, Illinois, pg. xii.

³ "Hazard tree" is a structurally unsound tree on or off the right of way that could strike electric supply lines when it fails. Structural unsoundness distinguishes a hazard tree from a danger tree, such that, while all hazard trees are danger trees, not all danger trees are hazard trees.

permitted to remove or mitigate the hazard tree, the EDC shall attempt to obtain permission to remove or mitigate the hazard tree.

- (b) If permission is granted or it is determined that permission is not necessary under (a) above, the EDC shall arrange to remove or mitigate the hazard tree as part of the scheduled vegetation management work to be performed during the current year, unless the VM determines that the condition of the hazard tree poses an imminent risk of failure, in which case, the EDC shall remove or mitigate the hazard tree as soon as practicable.
- (c) The EDC is required to comply with the recording and reporting requirements of this subchapter as set forth at N.J.A.C. 14:5-9.9(d)2.

Inspections

Before commencement of trimming and other VM activities, ACE personnel will inspect the feeder and plan the appropriate VM activities to address vegetation issues on that circuit. After trimming and other VM activities are completed, ACE personnel will once again inspect the feeder to assure corrective actions were completed appropriately.

Right of Way Reclamation and Brush Removal

When vegetation around a distribution or transmission ROW is overgrown and has made it difficult to access equipment for maintenance, outage restoration or capital improvement, the ROW must be reclaimed to its original width and length. This involves using non-selective control methods, including mechanical methods such as hand-cutting or mowing brush. Hand cutting involves crew members using chainsaws to cut small trees, vines, and other small vegetation overtaking the ROW. Mowing uses various sizes of rubber tired or tracked mowing units that specialize in woody plant cutting and mulching of the debris. ROW reclamation is done in consultation with ACE Environmental Planning to ensure proper permitting and approvals are sought based on the extent and nature of the proposed work.

Herbicide Application

ACE uses herbicides as a control method to manage vegetation on both distribution and transmission ROWs. Herbicides are used once a ROW has been reclaimed to control undesirable vegetation and encourage desirable, compatible vegetation. ACE uses selective herbicides that control selective plant types versus non-selective herbicides that can impact both grasses and broadleaf growth. Additionally, ACE uses individual stem treatment methods such as stump, basal, injection, and selective foliar to avoid damage and apply the least amount of herbicide required to achieve the vegetation management objective. When ACE does use a broadcast treatment, the herbicide selectivity is considered. Selective methods are used as much as possible to control undesirable species of vegetation and retain desirable vegetation. ACE Foresters use the most effective and environmentally methods available, depending on the objectives, and after evaluating the site to be treated.

Vegetation Management Around Substations

Substation Vegetation Control: All active substation sites are treated each spring to prevent weeds and any other undesirable growth. Trees are not permitted to grow in substations. Weeds are eliminated to prevent fires within these facilities, from clogging cooling apparatus in transformers, and to protect the grounding grid within substations. This work is done by treating the inside of each site (usually stoned area) using pre-emergent herbicides.

Substation Lawn Maintenance: Lawn maintenance on transmission and distribution substations and rights-of-way is performed by contractors, coordinated by ACE, on a predetermined mowing schedule.

Debris Management

Any utility vegetation management activity – tree pruning, removal, and brush control – creates wood debris that must be disposed of. ACE has methods in place to handle this debris stream in a safe, environmentally acceptable manner. Where permitted, the following describes ACE's debris removal practices.

• Under Normal Routine Maintenance: The basic component of a wood disposal program under normal conditions includes chipping tree branches, small wood pieces, and leaves through a trailered wood chipper and into a container on a truck. The brush to be chipped must be of a size to fit through the chipper, and the wood chips created must be emptied after the container is filled. Wood chips generated may be blown into a container and disposed of off-site in an acceptable manner – given to nurseries, landscapers, property owners, municipal/county waste disposal sites, etc. In addition, with permission, wood chips are sometimes blown and spread into wooded areas or onto ROW corridors and left to degrade, providing nutrition and erosion control to soil in upland, non-wetland areas. Pursuant to N.J.A.C. 14:5-9.6(g), debris is to be removed from the property within five business days after the vegetation was cut, unless consent is obtained by ACE from the property owner to leave the trimmings or cut vegetation.

Larger wood is normally cut up into manageable lengths and stacked on-site for the tree owner or left according to mutual agreement of ACE with the tree owner or regulatory body. The debris may be removed from the property within a specific time period agreed to with the tree owner. Under specific situations, logs and very large wood pieces are sometimes removed and disposed of in an environmentally acceptable manner.

Tree stumps created when trees are removed are cut as close to the ground as possible to promote disintegration and prevent tripping. ACE does not remove tree stumps by grinding or excavation.

Mowing with heavy-duty brush mowers involves debris management as well, as trees and other vegetation are chopped up by the mower head and dispersed onto the ROW. It is important that mowers are in good working order so that debris is mulched into small, degradable pieces and spread evenly over the ROW. Operators must take special care to assure the safe mulching of debris, protecting themselves, nearby property owners and the general public.

• Under Outage Conditions: Under outage conditions (e.g., during storm restoration events), wood debris is handled differently than under routine maintenance. Utility tree crews work with utility line crews and others to eliminate tree problems to enable electric line crews to restore power and repair damaged facilities. This involves clearing trees and tree branches on top of downed wires, cutting access routes into electric facilities or clearing trees or tree branches lying on energized electric wires.

These tree crews cut wood to allow for power restoration, but do not cut debris into chips or manageable sizes. No brush chipping is performed during storm restoration events, and tree crews are instructed not to use a chipper during these events. Tree debris that falls during storms is an act of nature and is not due to ACE maintenance activities; therefore, ACE is not responsible for the tree owners' debris from their tree(s). As such, ACE is not responsible for disposing of this debris during or after a storm event.

PUBLIC EDUCATION AND CUSTOMER NOTIFICATION, PERMITTING, PERMISSION, AND REFUSALS

ACE uses various notification methods to communicate with property owners and occupants, depending on the type of planned vegetation management work being implemented. These specifically include:

- Direct mailing: A notification letter is sent to each customer (by Vegetation Management) on the feeder/circuit being worked or to owners of property adjacent to feeowned ROWs being worked, using ACE's customer database and real estate records. Customer information for those receiving a letter will be retained.
- Personal contact/informational door hangers to customers: Work Planners, ACE Foresters
 or Tree Contractor notification personnel will knock on doors and attempt to make
 contact with property owners or occupants where work is to be performed. These ACE
 representatives will explain what work is to be performed and will explain vegetation
 management methods. If no one is home or available, ACE informational brochures will

be dropped off by same ACE representative. The door hanger notifies customers of impending work, and explains ACE's utility vegetation management method.

Personal contact with counties and municipalities: Work Planners, ACE Foresters, Tree Contractor notification personnel or the Company or designated representative will contact appropriate county/municipal authorities when working in their jurisdiction, in accordance with local regulations. Written notice of planned VM will be provided at least two months in advance, and the ACE representative shall document contact and retain documentation per regulation.

These methods are used to notify customers of the Company's presence in their communities, the need to access their property, and to let them know ACE will be pruning their tree(s). ACE does not obtain written permission for normal routine tree pruning, as this is the utility's responsibility to perform under certain municipal consent documents with various communities and counties in which ACE operates or is contained in relevant easement agreements, covenants, public rights-of-way, etc.

- Customer Permission: When removing trees or clearing brush involving cutting down small diameter trees and other vegetation, written permission is obtained from the managing entities or occupant. Standard permission forms are used to obtain customer signatures and document any special conditions. Permission forms are retained, and Work Planners document this notification data on work planning software. When the Company has identified a tree for removal that it has the legal right to remove, notification of the removal will be made to the managing entity or occupant.
- Permits: ACE Foresters or contract Work Planners apply to appropriate federal, state, and/or local official to obtain authorization to perform utility vegetation management work as necessary. Permit application and correspondence should be performed electronically as much as possible to expedite the process and document the request and permit. Permits are retained electronically and in hard copy filed with the inspection records for each feeder/circuit where routine, cyclical VM is performed.
- Easement Rights: ACE Foresters have access to ACE easement data through the Real Estate and ROW Department ("RE/ROW"). Easements are not available for every property where ACE facilities are located, so research by RE/ROW must be performed to determine easement availability and requirements. A search for easement records should be performed if a refusal occurs or ACE rights on a property are questioned.

• Refusals: Occasionally, customers refuse to allow ACE to implement its VM work, for a number of reasons. Initial refusals are many times resolved through further explanation of the work, presentation of ROW easement or negotiation with the tree owner. If negotiation fails, and customer absolutely refuses, legal counsel may be sought for further action. Customers that refuse any work are documented as "refusals" in the GIS based, GPS enabled handheld computer for routine, cyclical VM work. Generally, the tree or trees in question are photographed to document the condition of the vegetation at the time the refusal occurred. Whatever the outcome at this point in the process, it is important to document this issue. This documentation is important for reporting reasons, and for an explanation of future reliability issues. Further, in the event of a customer refusal of a hazard tree is documented as a BPU Hazard Tree Refusal.

VEGETATION MANAGEMENT PUBLIC OUTREACH PROGRAMS

- Program and Materials: ACE has an ongoing Public Outreach Program that educates customers, property owners, and the general public about the importance of vegetation management, as well as the utility's role and responsibility in managing vegetation around the Company's energized facilities. ACE has created a number of outreach avenues to be used for specific situations. This includes general VM information to educate the customers, such as customer brochures discussing the type of work planned to be performed on an owner's property. Other topics may include, for example, information on the following topics: the Company's "Right Tree in the Right Place" initiative, trees' role in reducing greenhouse gases, the importance of proper tree planting near power lines, information of why trees interrupt power supply, and how ACE prunes and conducts vegetation management activities near distribution lines, information on the importance of the selection of tree size and species when planting trees, and information on pruning methods used by ACE Foresters and proper homeowner pruning care.
 - Bill Inserts: These documents contain general information about a variety of utility topics, including billing, safety, emergency preparedness, etc., and are sent out in customers' electric bills. On a periodic basis, ACE includes articles on VM topics, such as proper tree pruning, tree species selection and planting, customer tree work near energized wires, websites to access for further information, etc. These are also available electronically on the ACE website.
 - o TV, newspaper, magazine, and radio advertisements: These various media outlets have been used to educate and remind customers of various topics, including vegetation management and how the Company is working to improve service reliability.

- O VM Brochures: These documents contain specific information about the VM Program, the utility's responsibility to manage vegetation around energized facilities for reliability and safety, and contact information to learn more about work on property owners' trees. Brochures are offered to property owners with whom the Company interacts and are left for owners and occupants who are not at home when the VM representative is in the area.
- Tree Line USA Program: ACE has been the recipient for many years of the "Tree Line USA" award from the Arbor Day Foundation. The Arbor Day Foundation is an international environmental organization that works with municipalities, utilities, citizen groups, and individuals to encourage the planting, maintenance, and benefits of trees. The benefits to customers are numerous, as ACE must annually:
 - provide training to all ACE tree workers and supervisors. Past topics have included proper tree pruning, working with customers, and tree risk assessment;
 - work with one or more communities on Arbor Day activities, including tree planting, tree maintenance, and educational programs;
 - publish or otherwise distribute literature on the importance of trees, planting the right tree in the right place, electric safety around trees, etc.;
 and
 - promote energy conservation through the use of trees tree planting for shade, etc.
 - More information is available at adf.org or on the ACE website.
- Coordinated Outreach as part of ACE's Environmental Stewardship: ACE conducts environmental outreach at various events including annual Earth Day celebrations, non-for profit agency support, and environmentally-focused event support. ACE's Environmental Services Department works with ACE Forestry to provide focused information on specific forestry conservation measures practices by ACE. These include:
 - "Right Tree in the Right Place" communication;
 - Best Practices and Impact Minimization in Forestry Practices; and
 - General Tree Pruning information and handouts.

- o ACE Shade Tree Energy Conservation Program: ACE, in partnership with Arbor Day Foundation, offers free trees to be planted by residential customers in strategic locations to provide energy cost savings. This program includes:
 - education related to "Right Tree in the Right Place";
 - education on the energy savings a properly placed tree can provide a homeowner;
 - estimated cost savings that the tree can provide over a 5, 10, and 15 year time period;
 - education on the benefits of a tree to a customer 's community;
 - education and information of the specific species of trees available in the program; and
 - a powerful, online tool that recommends proper planting locations at a customer's property.