

**BEFORE THE PENNSYLVANIA
SENATE DEMOCRATIC POLICY COMMITTEE**

Testimony Of

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ACTING CONSUMER ADVOCATE**

**Regarding
Electricity Outages, Reliability, Preparedness**

**Harrisburg, Pennsylvania
September 29, 2020**

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**Chair Boscola, Senator Santasiero
and Members of the Senate Democratic Policy Committee**

Thank you for inviting me to testify today regarding electricity outages, reliability and preparedness. My name is Tanya McCloskey and I am the Acting Consumer Advocate for the Office of Consumer Advocate. Let me first introduce the Members of the Committee to the Pennsylvania Office of Consumer Advocate (OCA). The OCA was established by the General Assembly in 1976 to fill a gap that had long existed in the representation of utility consumers – particularly residential consumers – before the Pennsylvania Public Utility Commission (PUC) and other state and federal agencies and courts that regulate the activities of Pennsylvania’s public utilities. Traditionally, utilities have always been well-represented at the PUC by lawyers and expert witnesses who could advocate for utility investors in matters such as rate increase requests for utility services. Our Office was created so that the consumers who have to pay those utility bills would be represented by professional attorneys and experts who could advocate for the consumer interest.

In addition to our litigation activities, the OCA helps to educate consumers on matters involving their utility services. The Consumer Liaison and other members of the OCA staff help to plan and participate in consumer presentations, roundtables, and forums across the Commonwealth to help educate consumers about changes in the utility industry and to advise them about cases that affect them. The OCA has an active social media presence to provide consumers with helpful information about their utility service and we have a small staff of consumer service representatives who can assist individual consumers with utility problems. The OCA also serves as a resource to members of the General Assembly by responding to constituent concerns and by

providing our views on how proposed legislation would affect the interests of Pennsylvania consumers.

The topic of electric reliability is an important subject at all times of the year but can be particularly critical to consumers as we enter the winter season. Ensuring continuous and reliable electric service is necessary to ensuring the safety of consumers and the public. This winter, it will be even more important to have continuous and reliable electric service as more consumers shelter at home for health reasons and remain at home for work and school. While some number of outages will inevitably occur, efforts to reduce both the frequency and the duration of outages should be a critical focus for our electric utilities.

There are several interconnected components to a reliable electric system, including adequate generation capacity, the reliability of the bulk transmission system, and the reliability of the local distribution system. While these interconnected components must all work together to provide reliable electric systems, they are subject to different regulatory authorities or entities. For the most part, the adequacy of the generation capacity serving Pennsylvania and the reliability of the bulk transmission system is provided through the PJM Interconnection as the Regional Transmission Operator (RTO) for the Mid-Atlantic region. PJM establishes the reserve margins for generation capacity, the rules for the reliable operation of the generation resources, and analyzes the bulk transmission system to identify reliability violations. One need only remember back to the Polar Vortex of 2014 when generation capacity was at a premium to understand the importance of PJM and its operations in maintaining the reliability of our electric service. PJM also serves a critical role in ensuring that the bulk transmission system meets all of the reliability criteria established by the North American Electric Reliability Corporation (NERC), the industry

organization designated under federal statute by the Federal Energy Regulatory Commission (FERC) to establish the reliability standards for the industry.

Given the importance of PJM to ensuring reliable electric service, my Office participates actively at PJM. We serve as a voting member of PJM, giving us the ability to vote on rules impacting the operations of the market and the provision of reliable service. In addition, we participate in numerous committees, including the Markets and Reliability Committee (MRC), the Transmission Expansion Advisory Committee (TEAC) and the Resource Adequacy Analysis Subcommittee, where many key decisions about the operation of the system are developed before being voted on at the Members' Committee. We participate both as an individual office and with other consumer advocate offices in the PJM region through the Consumer Advocates of the PJM States (CAPS) which provides us the ability to bring technical experts into the discussions occurring at PJM.

My Office also serves as the consumer representative on one of the critical committees of NERC. As one of the two voting members of NERC's Reliability and Security Technical Committee (RSTC) representing small, end-use customers, my office represents the interests of all residential electric customers in the United States, five Canadian Provinces and parts of Mexico. Through our work on the RSTC, my Office strives to ensure that necessary physical and cyber security measures are enacted while at the same time recognizing that the costs of these measures will ultimately be borne by consumers. As such, our participation on the RSTC actively advocates for the use of reasonable cost/benefit analyses for any proposals that are put forth that could create additional costs for consumers.

That brings me to the local distribution system where most of the outages as we think of them occur. The Public Utility Commission has primary responsibility for ensuring the reliability of the local distribution systems. In 1996 when enacting the Electricity Generation Customer Choice and Competition Act (Restructuring Act), 66 Pa.C.S. §2801, *et seq.*, the General Assembly sought to ensure that the reliability of the interconnected electric system was maintained, and that adequate inspection, maintenance, repair and replacement standards were met. *See*, 66 Pa.C.S. §§ 2802 (12), (20); 2804(1). The Commission established regulations to carry out these provisions of the Act and the OCA actively participated in those rulemaking proceedings. 52 Pa. Code Section 57.191-57.197 (Reliability Standards) and 52 Pa. Code Section 57.198 (Inspection and Maintenance Standards). Through the reliability standards rulemaking, the Commission established benchmarks and standards for reliability metrics for each electric distribution company based on historic performance before restructuring to ensure that the reliability of the distribution system did not decline. Through the inspection and maintenance standards rulemaking, the Commission established minimum inspection and maintenance standards and required the filing of each EDC's inspection and maintenance plan on a regular basis for PUC review. Some of the issues we raised in these rulemakings included the need for more frequent and detailed inspections of critical facilities, the need for standards and timeframes for corrective actions, and the need to examine the use of automatic penalties for failure to meet reliability benchmarks.

In the most recent Reliability Report issued by the Public Utility Commission for 2019, the Commission noted that the overall reliability performance of most EDCs in meeting the benchmark performance metrics “continued to be poor in 2019.” *Electric Service Reliability in Pennsylvania, 2019*, Executive Summary at ii. Indeed, a review of the data presented in the Report shows an increasing number of EDCs failing to meet the benchmarks, and even the standards, for reliability

from 2015 through 2019. *Electric Service Reliability in Pennsylvania, 2019*, Appendix B – Reliability Performance Standards Results 2015-2019. I have attached the charts from Appendix B of the Report to this testimony. The standards represent a lower level of reliability performance than the historic benchmark, which was the metric sought to be achieved under the Restructuring Act. It must also be recognized that these metrics do not include major storm events, such as many winter storms.¹

As the Commission notes in its Report, most of the EDCs have submitted Long Term Infrastructure Improvement Plans (LTIIPs) under which the EDC is making repairs and improvements to the distribution system, including storm hardening measures, with cost recovery through the Distribution System Improvement Charge (DSIC). Spending on the LTIIPs has steadily increased but this has not resulted in overall improved reliability performance for consumers. In our review of the LTIIPs of the EDCs, my Office has supported the storm hardening work that is being proposed and has further encouraged the use of “selective undergrounding” for repeat problem areas. Undergrounding of distribution facilities has been a common practice for decades in urban and suburban settings. In rural areas, however, aerial infrastructure predominates mainly due to the added initial cost of undergrounding. In my view, for those areas that experience repeat outages primarily from storm activity, selective undergrounding of facilities in those areas should become more commonplace as the human and economic costs of prolonged and repeat outages must be adequately weighed against the potential increased initial costs.

In the context of an EDC’s base rate case, we examine the EDC’s reliability performance as such quality of service is an important consideration in determining just and reasonable rates.

¹ A major event is defined as an interruption of electric service resulting from conditions outside of the EDCs control impacting at least 10% of the customers in the service area for five minutes or longer, or an unscheduled interruption of electric service to maintain the adequacy and security of the electrical system. 52 Pa. Code §57.192.

In addition, we examine the EDC's claims for vegetation management and the actual performance of vegetation management activities. Falling trees are the number one cause of distribution system outages in Pennsylvania, making the vegetation management program a critical piece of ensuring reliable service. In this regard, a member of my staff served on the Commission's Vegetation Management Working Group where best practices were discussed and issues identified for resolution. As part of our participation, we stressed the need to spend the amounts provided in base rates for vegetation management and to meet a reasonable vegetation management schedule.

Tree trimming and or removal of trees, however, can become a source of friction between EDCs and homeowners. Some EDCs have found innovative ways to deal with these issues, such as educating consumers about tree types and growth patterns, and even offering to replace trees that could pose a threat to the electric system, with more compatible species that consumers can choose from at no cost to the homeowner. These are the types of best practices that my Office seeks to facilitate through its participation in Working Groups and base rate cases, as well as in our communications with customers. While on right-of-way vegetation management is a critical component of reliability, there remains a significant issue with off right-of-way danger trees. Greater engagement with landowners, including the types of education and offers of more compatible replacement trees are practices that can be utilized to address such off right-of-way danger trees.

Any discussion about a reliable electric system, however, would not be complete without mentioning the emerging issues surrounding cyber security and increased physical security of electrical facilities. As we all know, "being hacked" is an ever-present and unfortunate reality in today's world. Our EDCs are not immune from this type of illegal activity. My office continues to work with EDCs during base rate cases and through other proceedings to ensure that our EDCs'

continued investments in these areas are prudent, reasonable, and consistent with the consumers' best interests.

Finally, I would like to highlight the importance of consumer education and outreach regarding electric system reliability and preparedness for storm-related outages. Through our outreach activity and social media presence, my Office provides information to consumers on these important topics. We also stand ready to work with our electric utilities in the development of their customer communication materials. Since we initiated our social media presence, we have used our social media platforms to provide important information to consumers in advance of approaching major storms, such as utility outage contact information and safety information. This month of September, we have used the "Tuesday Tip" feature of our social media campaign to coordinate and present information on emergency preparedness as part of National Preparedness Month education efforts.

Also, through our Call Center, we at times receive calls from consumers with persistent outages. We have been able to assist consumers in these neighborhoods and local areas through contacting the utility and attempting to work through solutions to these local outage-related complaints. When we encounter safety-related complaints, however, we will make an immediate referral to the Commission's Bureau of Electrical Safety which is better situated to address such issues in a timely manner. Our Office also fields calls following storm events and attempts to assist consumers in obtaining important information about the status of their local outage and can assist consumers with communicating any specific issues to our contacts at the utility or the Public Utility Commission.

Thank you again for inviting me to testify here today. I am happy to answer any questions you may have.

ATTACHMENT

**ELECTRIC SERVICE RELIABILITY IN
PENNSYLVANIA, 2019**

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July 2020

**Appendix B – Reliability Performance
Scorecard Results 2015-2019**

Appendix B – Reliability Performance Scorecard Results 2015-2019

2019 EDC Performance Scorecard												
Metrics achieved		GREEN		Benchmark Metrics not achieved				YELLOW		Standard Metrics not achieved		RED
		Rolling 12-Month										
		Benchmark Score					Standard Score					
EDCs	¹ Metrics	² BM	Q1	Q2	Q3	Q4	³ STD	Q1	Q2	Q3	Q4	
Large EDCs												
Duquesne Light	CAIDI	108	106	109	100	106	130	106	109	100	106	
	SAIDI	126	92	107	98	106	182	92	107	98	106	
	SAIFI	1.17	0.87	0.99	0.98	1.01	1.40	0.87	0.99	0.98	1.01	
PECO	CAIDI	112	112	138	149	189	134	112	138	149	189	
	SAIDI	138	117	145	166	205	198	117	145	156	205	
	SAIFI	1.23	1.05	1.05	1.05	1.08	1.48	1.05	1.05	1.05	1.08	
PPL	CAIDI	145	177	162	155	176	174	177	152	155	176	
	SAIDI	142	161	131	123	160	205	161	131	123	150	
	SAIFI	0.98	0.91	0.86	0.79	0.85	1.18	0.91	0.86	0.79	0.85	
Met-Ed (FirstEnergy)	CAIDI	117	145	150	151	164	140	145	150	151	164	
	SAIDI	135	200	230	211	253	194	200	230	211	253	
	SAIFI	1.15	1.37	1.54	1.40	1.54	1.38	1.37	1.54	1.40	1.54	
Penelec (FirstEnergy)	CAIDI	117	115	122	136	147	141	115	122	136	147	
	SAIDI	148	209	233	241	252	213	209	233	241	252	
	SAIFI	1.26	1.82	1.91	1.77	1.72	1.52	1.82	1.91	1.77	1.72	
Penn Power (FirstEnergy)	CAIDI	101	126	138	131	129	121	126	138	131	129	
	SAIDI	113	143	179	163	178	162	143	179	163	178	
	SAIFI	1.12	1.13	1.30	1.25	1.38	1.34	1.13	1.30	1.25	1.38	
West Penn (FirstEnergy)	CAIDI	170	169	162	155	165	204	169	162	155	165	
	SAIDI	179	209	195	169	196	257	209	195	169	196	
	SAIFI	1.05	1.24	1.20	1.09	1.19	1.26	1.24	1.20	1.09	1.19	
Small EDCs												
Citizens'	CAIDI	105	73.1	82.7	80.5	77	141	73.1	82.7	80.5	77	
	SAIDI	21	26.9	25.3	24.3	21.5	38	26.9	25.3	24.3	21.5	
	SAIFI	0.20	0.37	0.31	0.30	0.28	0.27	0.37	0.31	0.30	0.28	
Pike County	CAIDI	174	322	322	196	177	235	322	322	196	177	
	SAIDI	106	148	114	64	69	194	148	114	64	69	
	SAIFI	0.61	0.46	0.35	0.33	0.39	0.82	0.46	0.35	0.33	0.39	
UGI	CAIDI	169	141	149	190	188	228	141	149	190	188	
	SAIDI	140	172	166	161	182	256	172	166	161	182	
	SAIFI	0.83	1.22	1.11	0.85	0.96	1.12	1.22	1.11	0.85	0.96	
Wellsboro	CAIDI	124	140	110	115	105	167	140	110	115	105	
	SAIDI	153	197	128	107	81	278	197	128	107	81	
	SAIFI	1.23	1.41	1.17	0.93	0.77	1.66	1.41	1.17	0.93	0.77	
¹ CAIDI	(Customer Average Interruption Duration Index) - Measures average power restoration time (minutes) for every customer who lost power during this year.											
SAIDI	(System Average Interruption Duration Index) - Measures average outage duration time (minutes) for every customer served during this year.											
SAIFI	(System Average Interruption Frequency Index) - Measures average frequency of power interruptions for every customer served during this year.											
² BM	(Benchmark) - EDC's attained performance baseline score prior to electric restructuring. Calculated by averaging historical performance metrics over the five-year period directly prior to electric restructuring (1994 to 1998).											
³ STD	(Standard) - EDC's upper limit performance value. CAIDI STD & SAIFI STD is calculated by multiplying BM by 120% for large EDCs and 135% for small EDCs. SAIDI STD is calculated by multiplying CAIDI STD x SAIFI STD.											

2019 Pennsylvania Electric Reliability Report

2018 EDC Performance Scorecard												
Metrics achieved		GREEN		Benchmark Metrics not achieved				YELLOW		Standard Metrics not achieved		RED
EDCs		Rolling 12-Month										
		Benchmark Score					Standard Score					
EDCs		¹ Metrics	² BM	Q1	Q2	Q3	Q4	³ STD	Q1	Q2	Q3	Q4
Large EDCs												
Duquesne Light	CAIDI	108	114	103	116	106	130	114	103	116	106	
	SAIDI	126	97	77	95	89	182	97	77	95	89	
	SAIFI	1.17	0.85	0.75	0.82	0.84	1.40	0.85	0.75	0.82	0.84	
PECO	CAIDI	112	98	96	106	110	134	98	96	106	110	
	SAIDI	138	70	75	98	106	198	70	75	98	106	
	SAIFI	1.23	0.72	0.78	0.93	0.97	1.48	0.72	0.78	0.93	0.97	
PPL	CAIDI	145	137	185	173	168	174	137	185	173	168	
	SAIDI	142	90	145	146	141	205	90	145	146	141	
	SAIFI	0.98	0.65	0.78	0.85	0.84	1.18	0.65	0.78	0.85	0.84	
Met-Ed (FirstEnergy)	CAIDI	117	144	147	139	130	140	144	147	139	130	
	SAIDI	135	171	175	173	165	194	171	175	173	165	
	SAIFI	1.15	1.19	1.19	1.25	1.27	1.38	1.19	1.19	1.25	1.27	
Penelec (FirstEnergy)	CAIDI	117	132	127	116	114	141	132	127	116	114	
	SAIDI	148	199	198	194	195	213	199	198	194	195	
	SAIFI	1.26	1.51	1.56	1.67	1.71	1.52	1.51	1.56	1.67	1.71	
Penn Power (FirstEnergy)	CAIDI	101	155	114	131	138	121	155	114	131	138	
	SAIDI	113	170	124	154	152	162	170	124	154	152	
	SAIFI	1.12	1.09	1.09	1.17	1.10	1.34	1.09	1.09	1.17	1.10	
West Penn (FirstEnergy)	CAIDI	170	163	176	175	171	204	163	176	175	171	
	SAIDI	179	191	219	219	209	257	191	219	219	209	
	SAIFI	1.05	1.18	1.25	1.26	1.22	1.26	1.18	1.25	1.26	1.22	
Small EDCs												
Citizens'	CAIDI	105	139	128	127	76	141	139	128	127	76	
	SAIDI	21	43	36	26	16	38	43	36	26	16	
	SAIFI	0.20	0.31	0.28	0.20	0.21	0.27	0.31	0.28	0.20	0.21	
Pike County	CAIDI	174	135	189	235	236	235	135	189	235	236	
	SAIDI	106	100	129	195	200	194	100	129	195	200	
	SAIFI	0.61	0.74	0.69	0.82	0.85	0.82	0.74	0.69	0.82	0.85	
UGI	CAIDI	169	208	213	183	178	228	208	213	183	178	
	SAIDI	140	109	150	221	213	256	109	150	221	213	
	SAIFI	0.83	0.53	0.71	1.21	1.19	1.12	0.53	0.71	1.21	1.19	
Wellsboro	CAIDI	124	84	138	119	131	167	84	138	119	131	
	SAIDI	153	76	162	172	178	278	76	162	172	178	
	SAIFI	1.23	0.91	1.17	1.45	1.36	1.66	0.91	1.17	1.45	1.36	
¹ CAIDI (Customer Average Interruption Duration Index) - Measures average power restoration time (minutes) for every customer who lost power during this year. SAIDI (System Average Interruption Duration Index) - Measures average outage duration time (minutes) for every customer served during this year. SAIFI (System Average Interruption Frequency Index) - Measures average frequency of power interruptions for every customer served during this year. ² BM (Benchmark) - EDC's attained performance baseline score prior to electric restructuring. Calculated by averaging historical performance metrics over the five-year period directly prior to electric restructuring (1994 to 1998). ³ STD (Standard) - EDC's upper limit performance value. CAIDI STD & SAIFI STD is calculated by multiplying BM by 120% for large EDCs and 135% for small EDCs. SAIDI STD is calculated by multiplying CAIDI STD x SAIFI STD.												

2019 Pennsylvania Electric Reliability Report

2017 EDC Performance Scorecard												
Metrics achieved		GREEN	Benchmark Metrics not achieved				YELLOW	Standard Metrics not achieved				RED
EDCs		¹ Metrics	Rolling 12-Month									
			Benchmark Score				Standard Score					
		² BM	Q1	Q2	Q3	Q4	³ STD	Q1	Q2	Q3	Q4	
Large EDCs												
Duquesne Light	CAIDI	108	92	113	116	115	130	92	113	116	115	
	SAIDI	126	87	117	111	112	182	87	117	111	112	
	SAIFI	1.17	0.95	1.04	0.96	0.98	1.40	0.95	1.04	0.96	0.98	
PECO	CAIDI	112	109	99	95	99	134	109	99	95	99	
	SAIDI	138	111	92	80	82	198	111	92	80	82	
	SAIFI	1.23	1.02	0.93	0.85	0.83	1.48	1.02	0.93	0.85	0.83	
PPL	CAIDI	145	123	127	134	146	174	123	127	134	146	
	SAIDI	142	99	98	99	104	205	99	98	99	104	
	SAIFI	0.98	0.81	0.78	0.74	0.71	1.18	0.81	0.78	0.74	0.71	
Met-Ed (FirstEnergy)	CAIDI	117	127	121	138	147	140	127	121	138	147	
	SAIDI	135	199	181	205	217	194	199	181	205	217	
	SAIFI	1.15	1.57	1.50	1.48	1.47	1.38	1.57	1.50	1.48	1.47	
Penelec (FirstEnergy)	CAIDI	117	125	188	137	138	141	125	188	137	138	
	SAIDI	148	202	340	232	239	213	202	340	232	239	
	SAIFI	1.26	1.62	1.81	1.69	1.73	1.52	1.62	1.81	1.69	1.73	
Penn Power (FirstEnergy)	CAIDI	101	99	129	135	150	121	99	129	135	150	
	SAIDI	113	108	173	161	160	162	108	173	161	160	
	SAIFI	1.12	1.09	1.34	1.19	1.06	1.34	1.09	1.34	1.19	1.06	
West Penn (FirstEnergy)	CAIDI	170	159	159	165	166	204	159	159	165	166	
	SAIDI	179	191	198	211	214	257	191	198	211	214	
	SAIFI	1.05	1.20	1.25	1.28	1.29	1.26	1.20	1.25	1.28	1.29	
Small EDCs												
Citizens'	CAIDI	105	175	172	166	185	141	175	172	166	185	
	SAIDI	21	67	70	74	84	38	67	70	74	84	
	SAIFI	0.20	0.38	0.41	0.45	0.45	0.27	0.38	0.41	0.45	0.45	
Pike County	CAIDI	174	251	201	167	185	235	251	201	167	185	
	SAIDI	106	134	113	84	102	194	134	113	84	102	
	SAIFI	0.61	0.53	0.56	0.51	0.53	0.82	0.53	0.56	0.51	0.53	
UGI	CAIDI	169	127	114	134	131	228	127	114	134	131	
	SAIDI	140	55	56	57	64	256	55	56	57	64	
	SAIFI	0.83	0.43	0.49	0.42	0.49	1.12	0.43	0.49	0.42	0.49	
Wellsboro	CAIDI	124	108	98	105	90	167	108	98	105	90	
	SAIDI	153	203	175	143	97	278	203	175	143	97	
	SAIFI	1.23	1.88	1.78	1.35	1.08	1.66	1.88	1.78	1.35	1.08	
¹ CAIDI	(Customer Average Interruption Duration Index) - Measures average power restoration time (minutes) for every customer who lost power during this year.											
SAIDI	(System Average Interruption Duration Index) - Measures average outage duration time (minutes) for every customer served during this year.											
SAIFI	(System Average Interruption Frequency Index) - Measures average frequency of power interruptions for every customer served during this year.											
² BM	(Benchmark) - EDC's attained performance baseline score prior to electric restructuring. Calculated by averaging historical performance metrics over the five-year period directly prior to electric restructuring (1994 to 1998).											
³ STD	(Standard) - EDC's upper limit performance value. CAIDI STD & SAIFI STD is calculated by multiplying BM by 120% for large EDCs and 135% for small EDCs. SAIDI STD is calculated by multiplying CAIDI STD x SAIFI STD.											

2019 Pennsylvania Electric Reliability Report

2016 EDC Performance Scorecard											
Metrics achieved GREEN		Benchmark Metrics not achieved YELLOW				Standard Metrics not achieved RED					
EDCs		Rolling 12-Month									
		Benchmark Score						Standard Score			
¹ Metrics		² BM	Q1	Q2	Q3	Q4	³ STD	Q1	Q2	Q3	Q4
Large EDCs											
Duquesne Light	CAIDI	108	92	70	71	100	130	92	70	71	100
	SAIDI	126	76	55	64	69	182	76	55	64	69
	SAIFI	1.17	0.83	0.79	0.90	0.69	1.40	0.83	0.79	0.90	0.69
PECO	CAIDI	112	89	102	108	106	134	89	102	108	106
	SAIDI	138	68	88	103	106	198	68	88	103	106
	SAIFI	1.23	0.77	0.86	0.97	1.00	1.48	0.77	0.86	0.97	1.00
PPL	CAIDI	145	124	118	119	121	174	124	118	119	121
	SAIDI	142	92	85	95	94	205	92	85	95	94
	SAIFI	0.98	0.75	0.72	0.80	0.78	1.18	0.75	0.72	0.80	0.78
Met-Ed (FirstEnergy)	CAIDI	117	123	125	126	124	140	123	125	126	124
	SAIDI	135	164	166	178	178	194	164	166	178	178
	SAIFI	1.15	1.34	1.33	1.41	1.44	1.38	1.34	1.33	1.41	1.44
Penelec (FirstEnergy)	CAIDI	117	143	135	128	120	141	143	135	128	120
	SAIDI	148	192	175	183	171	213	192	175	183	171
	SAIFI	1.26	1.34	1.29	1.43	1.43	1.52	1.34	1.29	1.43	1.43
Penn Power (FirstEnergy)	CAIDI	101	102	96	111	95	121	102	96	111	95
	SAIDI	113	118	95	107	104	162	118	95	107	104
	SAIFI	1.12	1.16	0.99	0.97	1.09	1.34	1.16	0.99	0.97	1.09
West Penn (FirstEnergy)	CAIDI	170	157	144	147	147	204	157	144	147	147
	SAIDI	179	183	148	163	159	257	183	148	163	159
	SAIFI	1.05	1.16	1.03	1.11	1.08	1.26	1.16	1.03	1.11	1.08
Small EDCs											
Citizens'	CAIDI	105	93	105	111	108	141	93	105	111	108
	SAIDI	21	19	25	24	28	38	19	25	24	28
	SAIFI	0.20	0.20	0.23	0.22	0.26	0.27	0.20	0.23	0.22	0.26
Pike County	CAIDI	174	205	174	223	228	235	205	174	223	228
	SAIDI	106	75	71	95	87	194	75	71	95	87
	SAIFI	0.61	0.37	0.41	0.42	0.38	0.82	0.37	0.41	0.42	0.38
UGI	CAIDI	169	109	129	119	125	228	109	129	119	125
	SAIDI	140	71	73	84	78	256	71	73	84	78
	SAIFI	0.83	0.65	0.56	0.70	0.63	1.12	0.65	0.56	0.70	0.63
Wellsboro	CAIDI	124	77	92	97	94	167	77	92	97	94
	SAIDI	153	86	96	113	172	278	86	96	113	172
	SAIFI	1.23	1.12	1.05	1.16	1.84	1.66	1.12	1.05	1.16	1.84
¹ CAIDI (Customer Average Interruption Duration Index) - Measures average power restoration time (minutes) for every customer who lost power during this year. SAIDI (System Average Interruption Duration Index) - Measures average outage duration time (minutes) for every customer served during this year. SAIFI (System Average Interruption Frequency Index) - Measures average frequency of power interruptions for every customer served during this year. ² BM (Benchmark) - EDC's attained performance baseline score prior to electric restructuring. Calculated by averaging historical performance metrics over the five-year period directly prior to electric restructuring (1994 to 1998). ³ STD (Standard) - EDC's upper limit performance value. CAIDI STD & SAIFI STD is calculated by multiplying BM by 120% for large EDCs and 135% for small EDCs. SAIDI STD is calculated by multiplying CAIDI STD x SAIFI STD.											

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2015 EDC Performance Scorecard												
Metrics achieved		GREEN	Benchmark Metrics not achieved				YELLOW	Standard Metrics not achieved				RED
EDCs		Rolling 12-Month										
		Benchmark Score					Standard Score					
EDCs		¹ Metrics	² BM	Q1	Q2	Q3	Q4	³ STD	Q1	Q2	Q3	Q4
Large EDCs												
Duquesne Light	CAIDI	108	103	105	107	103	130	103	105	107	103	
	SAIDI	126	60	69	78	71	182	60	69	78	71	
	SAIFI	1.17	0.58	0.66	0.73	0.69	1.40	0.58	0.66	0.73	0.69	
PECO	CAIDI	112	92	90	86	84	134	92	90	86	84	
	SAIDI	138	73	69	63	61	198	73	69	63	61	
	SAIFI	1.23	0.80	0.76	0.73	0.72	1.48	0.80	0.76	0.73	0.72	
PPL	CAIDI	145	142	155	124	118	174	142	155	124	118	
	SAIDI	142	114	122	86	84	205	114	122	86	84	
	SAIFI	0.98	0.80	0.79	0.69	0.72	1.18	0.80	0.79	0.69	0.72	
Met-Ed (FirstEnergy)	CAIDI	117	122	126	128	113	140	122	126	128	113	
	SAIDI	135	133	158	158	136	194	133	158	158	136	
	SAIFI	1.15	1.09	1.25	1.23	1.19	1.38	1.09	1.25	1.23	1.19	
Penelec (FirstEnergy)	CAIDI	117	123	131	123	140	141	123	131	123	140	
	SAIDI	148	185	190	168	191	213	185	190	168	191	
	SAIFI	1.26	1.50	1.45	1.37	1.36	1.52	1.50	1.45	1.37	1.38	
Penn Power (FirstEnergy)	CAIDI	101	104	109	95	100	121	104	109	95	100	
	SAIDI	113	103	114	112	114	162	103	114	112	114	
	SAIFI	1.12	0.99	1.05	1.18	1.14	1.34	0.99	1.05	1.18	1.14	
West Penn (FirstEnergy)	CAIDI	170	135	148	149	154	204	135	148	149	154	
	SAIDI	179	138	168	175	179	257	138	168	175	179	
	SAIFI	1.05	1.02	1.13	1.17	1.17	1.26	1.02	1.13	1.17	1.17	
Small EDCs												
Citizens'	CAIDI	105	87	73	78	91	141	87	73	78	91	
	SAIDI	21	17	17	20	18	38	17	17	20	18	
	SAIFI	0.20	0.20	0.23	0.25	0.19	0.27	0.20	0.23	0.25	0.19	
Pike County	CAIDI	174	104	199	197	205	235	104	199	197	205	
	SAIDI	106	119	93	77	78	194	119	93	77	78	
	SAIFI	0.61	1.15	0.47	0.39	0.38	0.82	1.15	0.47	0.39	0.38	
UGI	CAIDI	169	153	122	113	103	228	153	122	113	103	
	SAIDI	140	59	52	47	41	256	59	52	47	41	
	SAIFI	0.83	0.38	0.43	0.41	0.40	1.12	0.38	0.43	0.41	0.40	
Wellsboro	CAIDI	124	75	82	72	76	167	75	82	72	76	
	SAIDI	153	54	80	82	81	278	54	80	82	81	
	SAIFI	1.23	0.72	0.97	1.14	1.06	1.66	0.72	0.97	1.14	1.06	
¹ CAIDI	(Customer Average Interruption Duration Index) - Measures average power restoration time (minutes) for every customer who lost power during this year.											
SAIDI	(System Average Interruption Duration Index) - Measures average outage duration time (minutes) for every customer served during this year.											
SAIFI	(System Average Interruption Frequency Index) - Measures average frequency of power interruptions for every customer served during this year.											
² BM	(Benchmark) - EDC's attained performance baseline score prior to electric restructuring. Calculated by averaging historical performance metrics over the five-year period directly prior to electric restructuring (1994 to 1998).											
³ STD	(Standard) - EDC's upper limit performance value. CAIDI STD & SAIFI STD is calculated by multiplying BM by 120% for large EDCs and 135% for small EDCs. SAIDI STD is calculated by multiplying CAIDI STD x SAIFI STD.											