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October 29, 2021

**VIA E-FILING ONLY**

Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street  
Harrisburg, Pennsylvania 17120

**Re: PECO 2021 Third Quarter Reliability Report PUC Docket No. M-2016-2522508**

Dear Secretary Chiavetta:

Enclosed is PECO's 2021 Quarterly Reliability Report for the period ending September 30, 2021 submitted pursuant to the Electric Service Reliability Regulations at 52 Pa. Code Chapter 57.

Because portions of the report contain sensitive and proprietary, PECO is filing two versions of the report, one public and one proprietary. PECO requests that the proprietary report, which has been separated and clearly marked with a "Confidential" header on each page, be kept confidential, pursuant to the Commission Order of March 20, 2006.

Due to the ongoing COVID-19 pandemic, PECO's office personnel are working remotely. Accordingly, PECO will not have its usual access to photocopying and U.S. mail, among other services. PECO requests that all communications with PECO be transmitted by email.

Thank you for your assistance in this matter and please direct any questions regarding the above to Richard Schlesinger, Manager, Retail Rates at (215) 841-5771 or via email: rich.schlesinger@peco-energy.com.

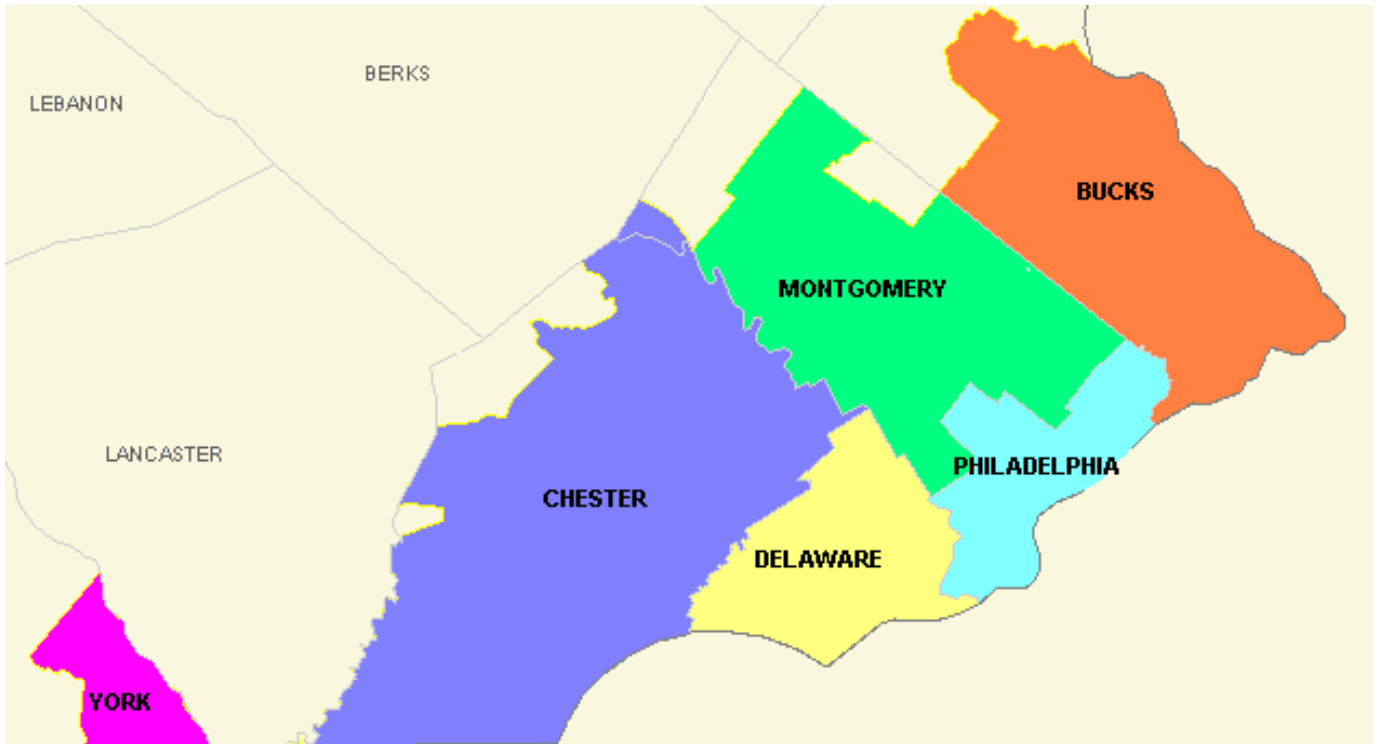
Sincerely,



Enclosure

Cc: John Van Zant (via email only)  
Dan Searfoorce (via email only)

# PECO Energy Company Quarterly Reliability Report For Period Ending September 30, 2021



**October 29, 2021**

**PECO Energy (“PECO”)**

**Quarterly Reliability Report for the Period Ending September 30, 2021 filed with the Pennsylvania Public Utility Commission.**

Submitted per Rulemaking Re: Amending Electric Service, Docket No. M-2016-2522508 Reliability Regulations at 52 Pa.Code Chapter 57

**Section 57.195(e)(1)** “A description of each major event that occurred during the preceding quarter, including the time and duration of the event, the number of customers affected, the cause of the event and any modified procedures adopted in order to avoid or minimize the impact of similar events in the future.”

In the third quarter of 2021, PECO experienced no events that qualified as major events under Pa. Code § 57.192, which specifies that a minimum of 10% of customers must be affected for the event to qualify. However, PECO’s service territory was substantially affected by remnants of Hurricane Ida, which caused downed tree limbs on power lines, tornados, and flooding which interrupted electric service to 164,989 customers (9.85% of PECO customers). There were five tornados confirmed that touched down in the service area, two of which were confirmed EF-2 and three confirmed EF-1. Significant flood levels breaking historical records caused damage, specifically along the Schuylkill River which had a 100-year flood level. Total damage to PECO’s system required 183 transformers, 290 poles, and 681 crossarms to support restoration, which is more material in each of these categories than was required for Tropical Storm Isaias (10% storm) restoration in August 2020. Exclusion of this event was not requested. PECO has installed thousands of reclosers over the last twenty years, which has significantly reduced the customers affected per outage event in storms (i.e., it is highly probable this event would have caused outages exceeding 10% of PECO customers had fewer reclosers been installed).

**Section 57.195(e)(2)** “Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the EDC’s service territory for the preceding quarter. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customer interruptions, the number of customers affected, and the customer minutes of interruption. If MAIFI values are provided, the report shall also include the number of customer momentary interruptions.”

PECO Customers	Sustained Customer Interruptions	Sustained Customer Hours	Momentary Customer Interruptions	Sustained Customer Minutes	SAIFI	CAIDI	SAIDI	MAIFI
1,676,469	1,570,883	5,189,610	1,493,196	311,376,622	0.94	198	186	0.89

Data reflects 12 months ending 09/30/2021.

PECO Benchmarks and Rolling 12-Month Standards				
	SAIFI	CAIDI	SAIDI	MAIFI
Benchmark	1.23	112	138	N/A
Rolling 12-Month Standard	1.48	134	198	N/A

SAIFI is below its Benchmark and Standard; CAIDI is above its Benchmark and Standard; SAIDI is above its Benchmark and below its Standard. Benchmarks and Standards were established on May 7, 2004. No Benchmark or Standard was established for MAIFI. Extended service restoration times caused by storms during the last twelve months, including the remnants of Hurricane Ida, led to high CAIDI and SAIDI.

The following table shows PECO’s reliability index values excluding the interruptions that occurred during the Hurricane Ida remnants. Apart from the effects of Ida, SAIFI and SAIDI would be under their respective Benchmarks and Standards, while CAIDI would be above its Standard by a smaller margin. Rolling 12-month CAIDI continues to be high due to elevated storm activity in the PECO service territory.

*Reliability Index Values, Excluding Hurricane Ida Remnants*

PECO Customers	Sustained Customer Interruptions	Sustained Customer Hours	Momentary Customer Interruptions	Sustained Customer Minutes	SAIFI	CAIDI	SAIDI	MAIFI
1,676,469	1,408,854	3,525,048	1,362,690	211,502,883	0.85	150	128	0.83

Data reflects 12 months ending 09/30/2021.

**Section 57.195(e)(3)** *“Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available, MAIFI) and other pertinent information such as customers served, number of interruptions, customer minutes interrupted, number of lockouts, and so forth, for the worst performing 5% of the circuits in the system. An explanation of how the EDC defines its worst performing circuits shall be included.”*

PECO’s worst performing 5% circuits were selected based on a weighted score combining customer interruptions, customer hours, SAIFI, SAIDI, and CEMI (Customers Experiencing Multiple Interruptions), due to outages on each circuit in a 12- month period and, to a lesser extent, in the prior 24 months. This measure is oriented toward contributions to system SAIFI, SAIDI and CAIDI, and local areas with high outage frequency or duration. In addition, circuits with a history of repeat appearance on worst performing lists were selectively included in the 5% list. Worst circuits and the rolling 12-month reliability index values requested are shown in Appendix A.

**Section 57.195(e)(4)** *“Specific remedial efforts taken and planned for the worst performing 5% of the circuits as identified in paragraph (3).”*

Remedial efforts taken or planned to date for PECO’s worst performing 5% of circuits are shown in Appendix B.

**Section 57.195(e)(5)** *“A Rolling 12-month breakdown and analysis of outage causes during the preceding quarter, including the number and percentage of service outages, the number of customers interrupted, and customer interruption minutes categorized by outage cause such as equipment failure, animal contact, tree related, and so forth. Proposed solutions to identified service problems shall be included.”*

12 Months Ending September 30, 2021					
Cause	Service Outages	% of Service Outages	Customer Interruptions	% of Customer Interruptions	Customer Minutes
Animal	1,018	7.7%	30,927	2.0%	1,974,647
Contact/Dig-In	158	1.2%	20,512	1.3%	1,794,808
Equipment Failure	5,299	40.2%	530,421	33.8%	62,832,181
Lightning	404	3.1%	46,660	3.0%	9,411,017
Other	614	4.7%	104,207	6.6%	28,948,282
T&S	20	0.2%	66,351	4.2%	23,614,233
Unknown	495	3.8%	63,831	4.1%	9,030,406
Vegetation-Broken/Uprooted	4,140	31.4%	586,753	37.4%	156,431,026
Vegetation-Ingrowth	574	4.4%	41,957	2.7%	11,393,317
Vehicles	445	3.4%	79,264	5.0%	5,946,705

\*The data supplied is the number of interrupted customers for each interruption event summed for all events, also known as customer interruptions. A customer interrupted by three separate trouble cases represents three customer interruptions, but only one customer interrupted.

The largest contributors to customer interruptions were equipment failure and tree-related interruptions. The leading groups within the equipment failure category were aerial equipment and underground equipment. Outages due to equipment and trees are being addressed through PECO’s Long-term Infrastructure Improvement Plans and other reliability programs. Most customer interruptions caused by trees came from broken branches and tree trunks or uprooted trees (37.4% of all customer interruptions), as opposed to ingrowth (2.7% of all outage customer interruptions). PECO continues to address ash tree failures caused by emerald ash borers (invasive insects that cause ash tree deaths) with a vegetation management program to mitigate the threat to its facilities and customer reliability. Note that Hurricane Ida remnants caused an increase in nearly all categories of customer interruption causes, particularly in vegetation and ‘other’ events. Tornado and flooding events are recorded in the ‘other’ category. (See table below for an outage cause breakdown without interruptions from Hurricane Ida remnants.)

*Outage Causes, Excluding Hurricane Ida Remnants*

12 Months Ending September 30, 2021					
Cause	Service Outages	% of Service Outages	Customer Interruptions	% of Customer Interruptions	Customer Minutes
Animal	1,010	8.2%	30,927	2.2%	1,974,647
Contact/Dig-In	158	1.3%	20,512	1.5%	1,794,808
Equipment Failure	5,132	41.6%	501,782	35.6%	52,408,489
Lightning	381	3.1%	40,568	2.9%	6,016,751
Other	484	3.9%	67,247	4.8%	7,262,476
T&S	20	0.2%	66,351	4.7%	23,614,233
Unknown	429	3.5%	61,009	4.3%	7,469,876
Vegetation-Broken/Uprooted	3,775	30.6%	505,168	35.9%	97,231,418
Vegetation-Ingrowth	514	4.2%	37,446	2.7%	7,814,656
Vehicles	442	3.6%	77,844	5.5%	5,915,529

**Section 57.195(e)(6).** *“Quarterly and year to date information on progress toward meeting transmission and distribution inspection and maintenance goals/objectives” (For First, Second and Third Quarter reports only).”*

Predictive and Preventive Maintenance Program – status as of 09/30/2021					
	3 <sup>rd</sup> Quarter Tasks		YTD Tasks		2021 Total Planned
	Planned	Complete	Planned	Complete	
Recloser Inspections (Number of reclosers inspected)	78	149	227	519	246
Circuit Patrol & Thermography (Number of circuits patrolled)	76	756	976	1,871	976
Pole Inspections (Number of poles visually inspected)	11,763	9,947	27,084	18,731	34,695
Padmount Transformers (Number of transformers visually inspected)	1,408	2,016	5,810	6,492	6,718
Below Ground Transformers (Number of transformers visually inspected)	350	516	1,350	1,366	1,563
Substations (Number of substations inspections performed (e.g. visual inspection, reading of currents, voltages, temperature etc.) for a variety of substation components)	339	354	1,017	1,059	1,360
Unit Substations (Number of unit substations inspections performed (e.g. visual inspection, reading of currents, voltages, temperature etc.) for a variety of substation components)	741	774	2,223	2,327	2,960

Vegetation Management Preventive Maintenance Program – status as of 09/30/21					
	3 <sup>rd</sup> Quarter Miles		YTD Miles		2021 Total Planned
	Planned	Complete	Planned	Complete	
Distribution Lift and Manual Trimming	576	519	1,728	2,229	2,304
Transmission Trimming and Removals	48	49	152	149	202

PECO is executing a plan to complete all predictive and preventive maintenance scheduled for 2021 by the end of the year.

**Section 57.195(e)(7).** *“Quarterly and year-to-date information on budgeted versus actual transmission and distribution operation and maintenance expenditures in total and detailed by the EDC’S own functional account code or FERC account code as available.” (For first, second and third quarter reports only.)*

\$Millions	Budgeted 3 <sup>rd</sup> Quarter	Actual 3 <sup>rd</sup> Quarter	Budgeted Year-to-Date	Actual Year-to-Date
New Business Connections	\$0.8	\$0.8	\$2.6	\$2.8
Capacity Expansion	\$0.1	\$0.1	\$0.4	\$0.6
System Performance	\$16.0	\$17.1	\$49.7	\$49.1
Facility Relocation	\$0.6	\$0.4	\$1.2	\$0.7
Maintenance	\$53.9	\$52.3	\$162.3	\$167.7
Total	\$71.4	\$70.7	\$216.2	\$220.9

**Section 57.195(e)(8).** *“Quarterly and year-to-date information on budgeted versus actual transmission and distribution capital expenditures in total and detailed by the EDC’S own functional account code or FERC account code as available.” (For first, second and third quarter reports only.)*

\$Millions	Budgeted 3 <sup>rd</sup> Quarter	Actual 3 <sup>rd</sup> Quarter	Budgeted Year-to-Date	Actual Year-to-Date
New Business Connections	\$16.5	\$21.7	\$55.4	\$55.8
Capacity Expansion	\$15.1	\$10.9	\$43.4	\$36.1
System Performance	\$120.6	\$116.5	\$328.5	\$313.4
Facility Relocation	\$7.7	\$3.7	\$16.0	\$7.5
Maintenance	\$40.1	\$40.6	\$120.9	\$130.1
Total	\$200.0	\$193.4	\$564.2	\$542.9

**Section 57.195(e)(9).** *“Dedicated staffing levels for transmission and distribution operation and maintenance at the end of the quarter, in total and by specific category (e.g., lineman, technician and electrician).”*

PECO’s full-time trade staff as of September 30, 2021 was as follows:

Aerial Lineman	423
Underground Lineman (Include UTS)	59
Transmission / Substation Mechanics, Operators	102
Energy Technicians	87
Aerial Foreman	73
Underground Foreman	16
Transmission / Substation Foreman	38
ET Foreman	8
Total	806

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**Appendix A**  
**Rolling 12- month reliability index values for 5% worst performing circuits**

CIRCUIT	CUSTOMERS ON CIRCUIT	12 Month Rolling Circuit SAIFI	12 Month Rolling Circuit CAIDI	12 Month Rolling Circuit SAIDI	12 Month Rolling Circuit MAIFI	12 Month Rolling Customers Interrupted	12 Month Rolling Customer Hours	12 Month Rolling Momentary Customers Interrupted
AIRY_133	2027	1.19	29	34	0.01	2413	1161	23
AQUE_000	230	7.75	209	1621	1.02	1783	6212	234
AVONDALE_002	160	0.6	27	16	0	96	43	0
BACTON_000	240	2.28	213	486	4.27	546	1942	1025
BALA_038	302	1.99	151	301	0.01	602	1514	4
BELLEVUE_002	613	3.33	256	852	0.07	2041	8705	40
BLUE_GRASS_133	1121	1.3	65	85	1.29	1457	1590	1447
BOOT_JACK_000	637	0.4	73	29	1.12	253	308	713
BRADFORD_341	1330	1.94	97	188	2.08	2586	4168	2770
BRADFORD_351	907	1.79	83	149	3.68	1623	2255	3338
BRADFORD_352	1020	2.41	99	239	3.25	2454	4058	3310
BRADFORD_353	2026	1.25	78	98	2.78	2523	3298	5636
BRYN_MAWR_134	423	1.4	425	597	0	594	4207	1
BUCKINGHAM_353	2044	1.68	46	77	0.52	3427	2640	1067
BUCKINGHAM_362	3305	1.97	85	167	0.4	6518	9186	1326
BYBERRY_137	1828	0.31	222	68	0.32	559	2067	593
BYBERRY_176	170	0.44	70	30	0	74	86	0
BYBERRY_184	981	0.63	667	420	0.45	618	6873	443
CALLOWHILL_134	1557	0.2	48	9	1.77	310	246	2754
CARMEL_003	842	3.08	418	1285	0.92	2590	18031	775
CARMEL_004	563	2.56	584	1497	7.59	1442	14045	4272
CEDARBROOK_132	675	0.2	111	23	0.07	138	254	46
CHALFONT_001	533	3.67	113	414	1.22	1954	3679	650
CHALFONT_004	289	1.92	191	365	1.06	554	1760	307
CLAY_341	831	1.85	55	103	1.04	1536	1420	862
CLAY_342	1953	2.03	111	226	2.25	3971	7353	4387
CLAY_343	1052	0.88	162	142	3.16	923	2493	3320
CORNOG_002	312	2.26	88	198	6.93	704	1028	2163
COUNTY_LINE_002	485	0.04	177	6	0	17	50	0
COUNTY_LINE_006	516	0.32	81	25	0	163	219	0
DALEVILLE_341	1588	0.54	79	43	3.09	857	1131	4902
DANBORO_000	573	4.24	69	291	0.05	2429	2782	31
DILTOWN_002	238	1.4	771	1079	1	333	4280	238
DOWNTOWN_003	956	1.98	622	1230	1.5	1890	19604	1435
DOWNTOWN_004	775	1.8	985	1769	2	1392	22852	1550
EAGLE_353	2243	3.08	104	321	4.42	6911	12006	9916
ELLIS_001	715	1.14	185	210	1.44	812	2501	1032
FALLS_011	295	1.99	26	51	5.02	586	251	1481
GARDENVILLE_000	306	4.74	121	572	2.16	1449	2916	660
GERMANTOWN_008	878	0.09	123	11	0	77	158	0
GERMANTOWN_022	586	3.06	67	206	0	1796	2016	0
GERMANTOWN_023	1072	2.83	62	177	0	3029	3154	0
GLADWYNE_132	517	4.31	297	1279	6.48	2227	11023	3352
GRAVEL_002	428	0.03	44	1	0	14	10	0
HAGYS_001	271	0.71	228	162	1	193	732	271
HARVEY_001	367	2.05	49	101	0	753	618	0
HEARTWOOD_003	524	2.67	109	291	4.7	1400	2540	2461
HEARTWOOD_007	511	0.18	685	126	3.09	94	1073	1581
HEATON_166	826	1.04	51	53	0	857	726	0

CIRCUIT	CUSTOMERS ON CIRCUIT	12 Month Rolling Circuit SAIFI	12 Month Rolling Circuit CAIDI	12 Month Rolling Circuit SAIDI	12 Month Rolling Circuit MAIFI	12 Month Rolling Customers Interrupted	12 Month Rolling Customer Hours	12 Month Rolling Momentary Customers Interrupted
HEATON_167	785	0.05	668	37	0	43	479	0
HEATON_169	1470	1.19	75	89	1.2	1744	2174	1762
JARRETT_141	1469	1.35	1807	2431	0.71	1976	59515	1040
KAOLIN_001	123	0.98	307	302	4.11	121	619	505
KENNETT_SQUAR_004	299	2.17	51	110	1.02	650	550	305
KLEYONA_004	319	1.28	82	105	0.08	409	557	24
KNOWLTON_004	636	0.1	149	15	2.99	64	159	1901
LANTERN_000	507	2.24	84	189	0.05	1137	1594	27
LENAPE_341	1145	0.71	74	52	3.08	812	1001	3523
LENAPE_352	1786	1.16	280	325	0.87	2077	9675	1558
LINE_161_00CO	1256	1.36	127	173	0.07	1713	3618	89
LINE_175_00CO	493	3.22	227	732	2.95	1588	6016	1455
LINE_2327	1485	1.14	502	571	0.75	1689	14144	1118
LINE_2352	875	1.43	251	359	1.56	1249	5235	1367
LONGSHORE_013	581	1.02	233	237	0	592	2297	0
LYNDELL_000	198	6.24	110	687	6.56	1236	2267	1298
MAPLE_HILL_000	622	2.98	395	1179	0	1855	12222	0
MARSHALLTON_002	409	3.44	149	511	0.15	1407	3482	63
MATTHEWS_000	361	3.91	67	261	0.16	1411	1573	59
MIDDLETOWN_133	1422	1.87	100	188	1.86	2663	4446	2648
MONROE_002	683	1.99	41	81	1.99	1360	926	1362
MORRISVILLE_011	675	2.38	55	130	0.99	1607	1461	669
NESHAMINY_162	813	0.5	226	112	0.03	405	1523	24
NEWLINVILLE_342	2040	1.77	66	117	6.46	3620	3968	13187
NEWLINVILLE_343	3242	2	110	221	5.7	6499	11947	18473
NEWLINVILLE_353	2926	1.11	104	116	2.11	3262	5633	6161
NEWLINVILLE_362	2723	3.63	202	734	2.98	9874	33289	8124
NEWTOWN_SQUAR_136	1540	0.78	103	81	2.29	1207	2067	3528
NEWTOWN_SQUAR_143	1014	0.06	809	45	0	56	756	1
NOLAN_001	910	1.03	19	20	0	941	302	0
NOLAN_004	750	2.26	176	399	5.62	1696	4985	4215
OAKMONT_003	226	1.01	42	43	0	229	160	0
OAKMONT_004	352	0.99	42	42	0	349	244	0
ORTHODOX_000	Retired	Retired	Retired	Retired	Retired	Retired	Retired	Retired
OVERBROOK_015	645	1.38	66	90	0	887	970	0
PENCOYD_013	611	3.01	88	266	0.07	1839	2704	44
PERKIOMEN_341	1559	1.9	464	882	2.53	2963	22913	3952
PERKIOMEN_354	2797	2.86	126	360	1.55	7990	16805	4326
PERKIOMEN_363	2492	3.09	699	2159	1.61	7692	89657	4004
PLANEBROOK_344	1815	3.47	284	985	3.5	6293	29797	6360
PLYMOUTH_136	576	3.98	443	1764	0.13	2293	16939	77
PLYMOUTH_146	1352	1.42	88	125	0.99	1926	2816	1340
PLYMOUTH_164	1337	1.2	333	398	0.66	1599	8865	887
PLYMOUTH_182	572	3.98	284	1128	0.28	2274	10754	159
ROXBOROUGH_136	1116	1.08	127	137	0.37	1207	2546	413
RUSHLAND_000	429	1.09	267	292	1.02	469	2087	437
STARKEY_000	390	3.88	86	335	3.06	1515	2180	1194
STONY_002	203	3.54	200	706	1.05	718	2390	214
STREET_000	318	2.26	282	638	6.7	720	3380	2132
TACONY_132	2976	0.08	256	19	0	225	961	0
TREDYFFRIN_341	619	3.09	255	788	0	1913	8127	0

CIRCUIT	CUSTOMERS ON CIRCUIT	12 Month Rolling Circuit SAIFI	12 Month Rolling Circuit CAIDI	12 Month Rolling Circuit SAIDI	12 Month Rolling Circuit MAIFI	12 Month Rolling Customers Interrupted	12 Month Rolling Customer Hours	12 Month Rolling Momentary Customers Interrupted
TREVOSE_136	1082	1.49	263	390	1.71	1607	7040	1854
TUNA_142	1078	0.21	44	9	1.81	227	166	1954
WEST_OAK_LANE_007	931	0.08	107	9	0	75	134	0
WEST_OAK_LANE_013	642	0	0	0	0	0	0	0
WESTGATE_000	206	0	0	0	0	0	0	0
WHITEMARSH_131	463	1.28	1565	2001	1.03	592	15443	477
WHITEMARSH_133	1702	1.5	661	991	2.5	2553	28111	4263
WHITEMARSH_161	1213	3.59	757	2716	0.34	4353	54903	411
WHITEMARSH_163	334	3.67	554	2033	1.37	1225	11318	459
WILLOWDALE_001	320	2.43	316	765	5.18	776	4083	1656
WOODBOURNE_000	269	0.13	639	86	0.01	36	384	3
WRIGHT_000	409	0.42	135	57	0.02	171	386	7
YARDLEY_002	426	0.52	110	58	0.21	222	409	89
YARDLEY_004	351	0.14	129	18	0	48	103	0

The data supplied is the number of interrupted customers for each interruption event summed for all events, also known as customer interruptions. If a customer is interrupted by three separate trouble cases, they represent three customer interruptions, but only one customer interrupted.

## Appendix B

Remedial efforts taken and planned for 5% worst performing circuits as of 09/30/21

### **AIRY\_133**

*Montgomery County*

#### **Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Install animal protection
- Install new fusing
- Remedial efforts completed

### **AQUE\_000**

*Bucks County*

#### **Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Remedial efforts completed

### **AVONDALE\_002**

*Chester County*

#### **Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Upgrade secondary
- Remedial efforts completed

### **BACTON\_000**

*Chester County*

#### **Completed:**

- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed

#### **Planned:**

- Perform regularly scheduled tree clearance

### **BALA\_038**

*Philadelphia County*

#### **Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Perform regularly scheduled tree clearance
- Remedial efforts completed

### **BELLEVUE\_002**

*Bucks County*

#### **Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Perform regularly scheduled tree clearance
- Remedial efforts completed

### **BLUE\_GRASS\_133**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Install animal protection  
Remedial efforts completed

**BOOT\_JACK\_000**

*Chester County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**BRADFORD\_341**

*Chester County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Upgrade fusing  
Remedial efforts completed

**BRADFORD\_351**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Remedial efforts completed

**BRADFORD\_352**

*Chester County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Remedial efforts completed

**BRADFORD\_353**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**BRYN\_MAWR\_134**

*Delaware County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Remedial efforts completed

**BUCKINGHAM\_353**

*Bucks County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**BUCKINGHAM\_362***Bucks County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Remedial efforts completed

**BYBERRY\_137***Philadelphia County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**BYBERRY\_176***Philadelphia County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Install animal protection
- Remedial efforts completed

**BYBERRY\_184***Bucks County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Remedial efforts completed

**CALLOWHILL\_134***Philadelphia County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**CARMEL\_003***Montgomery County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Install new recloser
- Remedial efforts completed

**CARMEL\_004***Montgomery County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**CEDARBROOK\_132***Philadelphia County*

**Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Install animal protection
- Remedial efforts completed

**CHALFONT\_001***Bucks County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**CHALFONT\_004***Bucks County***Completed:**

- Inspect circuit visually and with thermographic camera
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**CLAY\_341***Chester County***Completed:**

- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**CLAY\_342***Chester County***Completed:**

- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**CLAY\_343***Chester County***Completed:**

- Inspect circuit visually and with thermographic camera
- Install express main
- Upgrade fusing
- Remedial efforts completed

**CORNOG\_002***Chester County***Completed:**

- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Remedial efforts completed

**COUNTY\_LINE\_002***Bucks County***Completed:**

- Inspect circuit visually and with thermographic camera
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**COUNTY\_LINE\_006***Montgomery County***Completed:**

- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**DALEVILLE\_341***Chester County***Completed:**

- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**DANBORO\_000***Bucks County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Install tree resistant wire
- Remedial efforts completed

**DILTOWN\_002***Delaware County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**DOWNINGTOWN\_003***Chester County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**DOWNINGTOWN\_004***Chester County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**EAGLE\_353***Chester County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**ELLIS\_001***Chester County***Completed:**

- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed

Install new underground direction feed

**Planned:**

Perform regularly scheduled tree clearance

**FALLS\_011**

*Bucks County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Inspect selected areas of circuit for vegetation issues and correct as needed

Install tree resistant wire

**Planned:**

Perform regularly scheduled tree clearance

**GARDENVILLE\_000**

*Bucks County*

**Completed:**

Inspect circuit visually and with thermographic camera

Remedial efforts completed

**GERMANTOWN\_008**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Remedial efforts completed

**GERMANTOWN\_022**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Remedial efforts completed

**GERMANTOWN\_023**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Remedial efforts completed

**GLADWYNE\_132**

*Delaware County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Install new cut-out mounted recloser

Remedial efforts completed

**GRAVEL\_002**

*Bucks County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Inspect selected areas of circuit for vegetation issues and correct as needed

Remedial efforts completed

**HAGYS\_001***Delaware County***Completed:**

Inspect circuit visually and with thermographic camera

**Planned:**

Install cut-out mounted recloser

**HARVEY\_001***Delaware County***Completed:**

Inspect circuit visually and with thermographic camera

Install tree resistant wire

Remedial efforts completed

**HEARTWOOD\_003***Bucks County***Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Remedial efforts completed

**HEARTWOOD\_007***Bucks County***Completed:**

Inspect circuit visually and with thermographic camera

Inspect selected areas of circuit for vegetation issues and correct as needed

Remedial efforts completed

**HEATON\_166***Montgomery County***Completed:**

Inspect circuit visually and with thermographic camera

Remedial efforts completed

**HEATON\_167***Montgomery County***Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Install animal protection

Remedial efforts completed

**HEATON\_169***Montgomery County***Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Inspect selected areas of circuit for vegetation issues and correct as needed

Install animal protection

Remedial efforts completed

**JARRETT\_141***Montgomery County***Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**KAOLIN\_001**

*Chester County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Remedial efforts completed

**KENNETT\_SQUAR\_004**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**KLEYONA\_004**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Perform regularly scheduled tree clearance  
Remedial efforts completed

**KNOWLTON\_004**

*Delaware County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Install cut-out mounted recloser  
Remedial efforts completed

**LANTERN\_000**

*Montgomery County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Remedial efforts completed

**LENAPE\_341**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Install new fusing  
Install new recloser  
Remedial efforts completed

**LENAPE\_352**

*Chester County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**LINE\_161\_00CO**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**LINE\_175\_00CO**

*Chester County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**LINE\_2327**

*Philadelphia County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Install animal protection  
Perform regularly scheduled tree clearance  
Remedial efforts completed

**LINE\_2352**

*Philadelphia County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Install animal protection

**Planned:**

Perform regularly scheduled tree clearance

**LONGSHORE\_013**

*Philadelphia County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**LYNDELL\_000**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**MAPLE\_HILL\_000**

*Montgomery County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**MARSHALLTON\_002**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Install express main  
Install regulator  
Remedial efforts completed

**MATTHEWS\_000**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera

**Planned:**

Perform regularly scheduled tree clearance

**MIDDLETOWN\_133**

*Delaware County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Install tree resistant wire

Remedial efforts completed

**MONROE\_002**

*Delaware County*

**Completed:**

Inspect circuit visually and with thermographic camera

Remedial efforts completed

**MORRISVILLE\_011**

*Bucks County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Inspect selected areas of circuit for vegetation issues and correct as needed

**Planned:**

Perform regularly scheduled tree clearance

**NESHAMINY\_162**

*Bucks County*

**Completed:**

Inspect circuit visually and with thermographic camera

Install animal protection

Perform regularly scheduled tree clearance

Remedial efforts completed

**NEWLINVILLE\_342**

*Chester County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

Remedial efforts completed

**NEWLINVILLE\_343**

*Chester County*

**Completed:**

Complete corrective reliability work orders

Inspect circuit visually and with thermographic camera

**Planned:**

Install tree resistant wire

**NEWLINVILLE\_353**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera

Inspect selected areas of circuit for vegetation issues and correct as needed

Remedial efforts completed

**NEWLINVILLE\_362**

*Chester County*

**Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Install tree resistant wire
- Remedial efforts completed

**NEWTOWN\_SQUAR\_136**

*Delaware County*

**Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Install animal protection
- Install cut-out mounted recloser
- Remedial efforts completed

**NEWTOWN\_SQUAR\_143**

*Delaware County*

**Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**NOLAN\_001**

*Bucks County*

**Completed:**

- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed

**Planned:**

- Perform regularly scheduled tree clearance

**NOLAN\_004**

*Bucks County*

**Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed

**Planned:**

- Perform regularly scheduled tree clearance

**OAKMONT\_003**

*Delaware County*

**Completed:**

- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**OAKMONT\_004**

*Delaware County*

**Completed:**

- Inspect circuit visually and with thermographic camera
- Remedial efforts completed

**ORTHODOX\_000**

*Philadelphia County*

**Completed:**

Circuit retired

**OVERBROOK\_015**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera

**Planned:**

Perform regularly scheduled tree clearance

**PENCOYD\_013**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Perform regularly scheduled tree clearance  
Remedial efforts completed

**PERKIOMEN\_341**

*Montgomery County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Install new recloser  
Remedial efforts completed

**PERKIOMEN\_354**

*Montgomery County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**PERKIOMEN\_363**

*Montgomery County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Remedial efforts completed

**PLANE BROOK\_344**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera

**Planned:**

Perform regularly scheduled tree clearance

**PLYMOUTH\_136**

*Montgomery County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Install animal protection  
Remedial efforts completed

**PLYMOUTH\_146***Montgomery County***Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**PLYMOUTH\_164***Montgomery County***Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**PLYMOUTH\_182***Montgomery County***Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Install animal protection  
Upgrade transformer  
Remedial efforts completed

**ROXBOROUGH\_136***Philadelphia County***Completed:**

Inspect circuit visually and with thermographic camera  
Install animal protection  
Perform regularly scheduled tree clearance  
Remedial efforts completed

**RUSHLAND\_000***Bucks County***Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**STARKEY\_000***Bucks County***Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed

**Planned:**

Perform regularly scheduled tree clearance

**STONY\_002***Bucks County***Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Install animal protection  
Remedial efforts completed

**STREET\_000***Chester County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**TACONY\_132**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**TREDYFFRIN\_341**

*Chester County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**TREVOSE\_136**

*Bucks County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Remedial efforts completed

**TUNA\_142**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**WESTGATE\_000**

*Delaware County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**WEST\_OAK\_LANE\_007**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**WEST\_OAK\_LANE\_013**

*Philadelphia County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**WHITEMARSH\_131**

*Montgomery County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**WHITEMARSH\_133**

*Montgomery County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Install animal protection  
Remedial efforts completed

**WHITEMARSH\_161**

*Montgomery County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**WHITEMARSH\_163**

*Montgomery County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Remedial efforts completed

**WILLOWDALE\_001**

*Chester County*

**Completed:**

Inspect circuit visually and with thermographic camera  
Inspect selected areas of circuit for vegetation issues and correct as needed  
Remedial efforts completed

**WOODBOURNE\_000**

*Bucks County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Perform regularly scheduled tree clearance  
Remedial efforts completed

**WRIGHT\_000**

*Bucks County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Install new reclosers  
Remedial efforts completed

**YARDLEY\_002**

*Bucks County*

**Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Perform regularly scheduled tree clearance  
Remedial efforts completed

**YARDLEY\_004**

*Bucks County*

**Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed

**Planned:**

- Perform regularly scheduled tree clearance

## **Appendix C**

### **New Business Connections**

This work category includes all the facility work required to add a new customer or to increase the load to an existing customer. The facility work will include the facilities required to directly connect the customer to the system and the upgrade/replacement of any existing facility to serve the requested additional load.

### **Capacity Expansion**

This work category includes only capacity work generated by the system design engineer to prevent system failure and to assure the delivery of voltage as specified in the tariff. The addition of new substations and substation enlargements for future load growth will also be included in this project.

### **System Performance**

This work category includes projects designed to upgrade, modify or improve the performance of the distribution system. Also included in this category are indirect costs in support of all categories and one-time accounting adjustment items.

### **Facility Relocation**

This work category includes all requests for relocation of PECO facilities including municipal as well as customer related relocation requests.

### **Maintenance**

This work category includes work performed to repair and restore equipment to its normal state of operation, along with planned preventive maintenance work such as visual and thermographic inspections and tree trimming around transmission and distribution lines.

### **Storm Funds**

Incremental costs (primarily; overtime, contractors, mutual assistance, and meals) incurred while responding to major storms (storms that meet customer outage and duration criteria).