

**Richard G. Webster, Jr.**  
Vice President  
Regulatory Policy and Strategy  
  
PECO  
2301 Market Street  
518  
Philadelphia, PA 19103

Telephone 215.841.5777  
Fax 215.841.6208  
www.peco.com  
dick.webster@peco-energy.com

February 3, 2020

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

**Re: PECO 2019 Fourth Quarter Reliability Report PUC Docket No. M-2016-2522508**

Dear Secretary Chiavetta:

Enclosed is PECO's 2019 Quarterly Reliability Report for the period ending December 31, 2019 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.

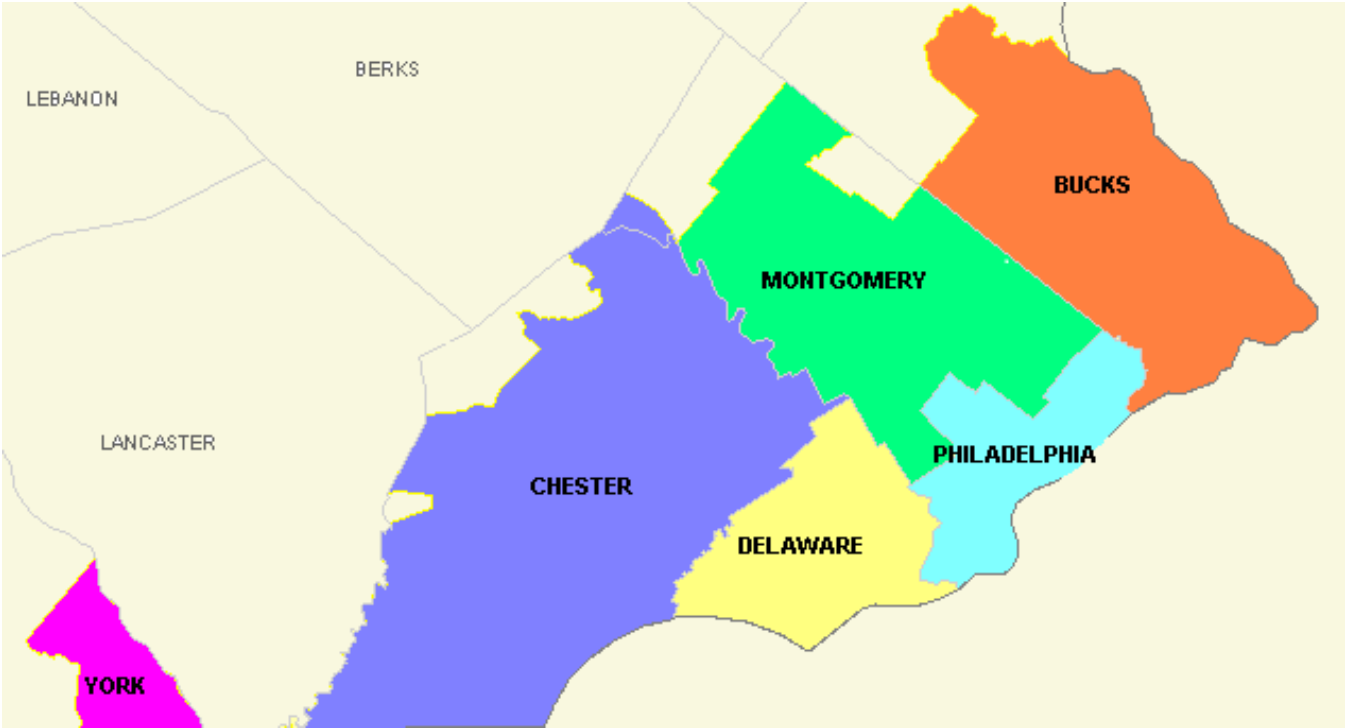
If you have any questions regarding this matter, please call me at 215-841-5777.

Sincerely,



Enclosure

**PECO Energy Company  
Quarterly Reliability Report  
For Period Ending December 31, 2019**



**February 1, 2020**

**PECO Energy (“PECO”)**

**Quarterly Report for the Period Ending December 31, 2019 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.”

PECO experienced no major events in the fourth quarter of 2019.

**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
1,662,121	1,802,311	5,684,011	1,509,449	341,040,677	1.08	189	205	0.91

Data reflects 12 months ending 12/31/2019

**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, while CAIDI and SAIDI are above their respective Standards established on May 7, 2004. No Benchmark or Standard was established for MAIFI. Extended service restoration times caused by several significant storms during the last twelve months drove the duration indices of rolling 12-month SAIDI and CAIDI higher. None of these storms met the major storm threshold for exclusion from reliability indices.

**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. 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 December 31, 2019

Cause	Service Outages	% of Service Outages	Customer Interruptions	% of Customer Interruptions	Customer Minutes
Animal	1,281.	8.2%	47,905.	2.7%	2,800,399
Contact/Dig-In	136.	0.9%	13,979.	0.8%	1,735,714
Equipment Failure	6,435.	41.4%	722,416.	40.1%	90,579,848
Lightning	434.	2.8%	55,028.	3.1%	15,156,299
Other	693.	4.5%	68,690.	3.8%	7,562,114
T&S	12.	0.1%	28,207.	1.6%	1,328,147
Unknown	259.	1.7%	11,742.	0.7%	3,681,847
Vegetation-Broken/Uprooted	4,637.	29.8%	663,235.	36.8%	186,493,786
Vegetation-Ingrowth	1,217.	7.8%	107,800.	6.0%	23,687,863
Vehicles	445.	2.9%	83,309.	4.6%	8,014,661

\* 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. Equipment is replaced based on observed trends under reliability programs and the System 2020 Long-term Infrastructure Improvement Plan. Most customer interruptions caused by trees came from broken branches and tree trunks or uprooted trees (36.8% of all customer interruptions), as opposed to ingrowth (6.0% of all customer interruptions). PECO has observed an increase in dead and declining ash trees near its electrical facilities. Emerald ash borers (invasive insects that cause ash tree deaths) are known to be concentrated in the eastern United States and have infested areas across the PECO territory. Limb and tree failures caused by emerald ash borers are expected to increase through this decade and into the next. PECO is addressing this issue with a vegetation management program to mitigate the threat to its facilities and customer reliability.

**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).”

No data required for fourth quarter report

**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.)

No data required for fourth quarter report

**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.)

No data required for fourth quarter report

**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 December 31, 2019	
Aerial Lineman	424
Underground Lineman (Include UTS)	69
Transmission / Substation Mechanics, Operators	109
Energy Technicians	88
Aerial Foreman	68
Underground Foreman	19
Transmission / Substation Foreman	32
ET Foreman	5
Distribution Mech Apprentice	0
Total	814

**Contact Persons:**

Steve Singh  
Vice President Technical Services  
(215) 841-4772  
[Steven.Singh@exeloncorp.com](mailto:Steven.Singh@exeloncorp.com)

Dick Webster  
Vice President Regulatory Policy & Strategy  
(215) 841-5777  
[Dick.Webster@peco-energy.com](mailto:Dick.Webster@peco-energy.com)

**Appendix A**

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
BLUE_GRASS_130	1,096	0.82	106	87	0.74	898	1,592	814
BLUE_GRASS_144	1,127	0.28	328	91	0.11	313	1,710	121
BLUE_GRASS_160	30	0.07	18	1	0.00	2	1	0
BRADFORD_341	1,230	3.74	83	312	4.05	4,602	6,394	4,985
BRADFORD_342	2,229	1.67	128	213	0.68	3,725	7,923	1,515
BRADFORD_344	2,605	1.88	119	223	3.47	4,891	9,675	9,039
BRADFORD_346	2,343	0.64	245	158	4.19	1,511	6,163	9,810
BRADFORD_351	909	2.84	258	733	3.31	2,581	11,108	3,008
BROOMALL_136	1,099	0.58	107	62	3.60	639	1,137	3,956
BRYN_MAWR_134	430	2.96	427	1,263	0.35	1,273	9,054	150
BUCKINGHAM_352	2,696	0.96	946	912	1.34	2,599	40,975	3,601
BUCKINGHAM_361	803	1.30	351	457	1.20	1,046	6,110	961
BUCKINGHAM_362	3,385	1.28	168	215	0.30	4,335	12,138	1,009
BYBERRY_137	1,824	3.51	73	257	0.70	6,411	7,823	1,279
BYBERRY_144	1,214	3.04	115	351	1.55	3,696	7,096	1,878
BYBERRY_147	1,037	0.21	103	22	0.00	222	381	0
BYBERRY_163	1,582	0.52	296	155	0.84	828	4,087	1,332
BYBERRY_173	1,625	0.21	410	88	0.20	349	2,387	321
BYBERRY_184	971	4.71	206	970	4.19	4,576	15,694	4,065
CALLOWHILL_138	1,429	0.96	26	25	0.00	1,375	590	1
CEDARBROOK_134	2,151	0.70	72	51	1.36	1,506	1,816	2,930
CHALFONT_001	531	3.31	50	166	2.00	1,756	1,473	1,060
CLAY_341	795	3.06	97	296	1.62	2,436	3,923	1,287
CLAY_343	1,050	3.49	133	464	10.31	3,666	8,113	10,826
COUNTY_LINE_004	571	2.06	388	800	0.99	1,179	7,617	567
CRESCENTVILLE_135	1,914	2.47	52	129	0.63	4,719	4,127	1,211
CRESCENTVILLE_136	2,634	2.22	26	58	1.36	5,844	2,567	3,577
CROYDON_142	616	3.08	73	226	1.04	1,897	2,319	638
CRUSHER_000	755	2.94	1,047	3,083	1.71	2,222	38,791	1,290
DALEVILLE_341	1,577	1.72	130	224	2.83	2,718	5,893	4,465
DANBORO_000	572	3.06	60	185	0.00	1,750	1,762	2
DILTOWN_005	346	1.68	573	962	0.00	581	5,546	0
DURHAM_003	563	0.62	521	324	0.02	350	3,040	11
EAGLE_352	2,023	1.12	218	244	2.30	2,259	8,213	4,662
EDDINGTON_138	762	1.10	335	367	0.87	835	4,660	664
EDGELY_003	453	2.11	194	409	2.96	956	3,091	1,343
ELKINS_PARK_004	511	1.59	121	192	0.00	814	1,638	0
FLINT_141	826	2.63	284	748	0.58	2,173	10,300	482
FLINT_146	1,124	2.28	76	173	1.16	2,560	3,233	1,306
FOULK_143	1,131	0.46	429	198	0.79	522	3,734	899
GLADWYNE_001	184	2.84	309	877	10.26	522	2,691	1,887
GLADWYNE_132	517	2.33	347	810	6.67	1,205	6,976	3,449
HANOVER_001	1,046	1.10	93	103	2.02	1,151	1,790	2,115
HARMONY_005	1,056	3.29	121	399	0.87	3,477	7,017	920
HAYES_000	371	3.02	218	659	0.00	1,121	4,078	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_136	1,419	0.79	175	139	1.07	1,126	3,286	1,520
HIGHLAND_000	320	3.29	203	668	3.16	1,053	3,563	1,010
HOLMESBURG_139	1,048	0.22	88	19	0.00	226	332	0
JARRETT_141	1,472	1.94	643	1,248	0.54	2,857	30,608	788
JENKINTOWN_134	1,823	1.02	46	47	0.87	1,858	1,439	1,579
JENKINTOWN_137	1,617	0.81	201	163	2.38	1,312	4,401	3,855
JENKINTOWN_142	1,911	0.26	90	23	0.62	497	747	1,188
JENKINTOWN_144	1,854	1.33	343	456	1.04	2,465	14,083	1,937
LENAPE_000	437	1.21	327	397	1.06	530	2,892	465
LINE_131_00WO	582	0.33	191	63	0.46	192	612	269
LINE_136_00	1,351	2.23	399	888	0.00	3,006	19,992	0
LINE_189_00EM	971	4.85	102	494	1.63	4,713	8,000	1,584
LINE_2200CR	751	1.67	97	162	0.66	1,252	2,026	494
LINE_2507	1,969	0.16	463	72	0.01	306	2,363	19
LINE_3307NT	2,180	1.61	117	188	1.36	3,499	6,836	2,954
LINE_534	1,168	3.93	47	183	0.30	4,593	3,572	354
LINE_7200WH	222	0.76	409	309	0.00	168	1,144	0
LINE_7500PB	2,967	0.73	317	231	0.44	2,166	11,437	1,318
LINTON_352	3,657	0.77	179	138	1.59	2,804	8,388	5,832
LLANERCH_146	1,797	0.49	88	43	0.04	876	1,287	66
LLANERCH_163	1,477	0.42	271	113	0.04	615	2,783	64
LLANERCH_166	1,542	0.82	56	45	0.30	1,257	1,168	463
MASTER_131	3,352	0.08	169	13	0.46	259	728	1,538
MATSON_131	767	2.61	434	1,134	3.76	2,003	14,499	2,884
MATTHEWS_000	379	0.12	278	33	1.99	45	208	753
MEDIA_011	583	4.24	192	813	2.27	2,470	7,904	1,321
MIDDLETOWN_133	1,435	4.28	230	984	2.09	6,138	23,545	2,996
MONROE_002	676	6.12	139	850	0.52	4,137	9,580	353
MORRISVILLE_011	679	3.75	493	1,845	1.97	2,543	20,882	1,335
MOSER_013	990	1.06	113	120	0.00	1,054	1,977	0
NEWLINVILLE_344	2,654	0.94	156	146	0.91	2,483	6,473	2,427
NEWLINVILLE_353	2,868	3.60	107	384	7.19	10,336	18,362	20,621
NEWLINVILLE_362	2,634	2.45	142	347	3.98	6,456	15,226	10,486
NEWTOWN_SQUAR_136	1,366	4.61	73	338	2.76	6,294	7,703	3,768
NOLAN_004	889	3.37	180	606	2.88	2,994	8,978	2,560
NORTH_WALES_354	1,203	0.47	61	29	1.57	565	573	1,891
NORTH_WALES_361	1,877	0.07	161	11	0.00	126	339	0
NORTH_WALES_362	2,014	1.56	61	95	0.81	3,147	3,197	1,623
NORTH_WALES_363	3,510	1.07	107	114	0.60	3,744	6,678	2,102
NOTTINGHAM_011	250	0.36	364	131	0.04	90	547	9
OAKMONT_002	616	1.30	211	273	1.07	798	2,801	662
PAGE_000	864	1.46	132	193	5.93	1,260	2,780	5,120
PARRISH_136	3,104	1.20	56	67	0.68	3,730	3,481	2,111
PERKIOMEN_354	2,773	2.83	107	304	0.50	7,846	14,040	1,386
PERKIOMEN_363	2,614	2.29	695	1,589	1.10	5,977	69,222	2,886
PLANEBROOK_344	1,860	1.61	111	179	1.38	3,000	5,555	2,562
PLYMOUTH_135	590	2.61	311	809	1.49	1,537	7,957	882

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
PLYMOUTH_160	784	0.46	702	323	0.41	361	4,227	325
PLYMOUTH_172	2,050	0.26	46	12	0.00	528	407	0
PULASKI_134	2,887	0.84	70	59	0.12	2,424	2,838	350
PULASKI_136	1,926	0.07	70	5	0.00	137	160	0
SADSBURY_000	613	1.12	64	72	3.98	688	736	2,440
SAVILLE_131	1,070	1.80	61	109	0.02	1,930	1,951	18
SCHWENKSVILLE_001	530	1.85	219	405	0.20	981	3,580	107
SNOWDEN_000	571	0.88	276	244	1.00	505	2,321	571
STARKEY_000	386	3.37	523	1,762	2.41	1,301	11,334	930
TACONY_134	1,951	0.24	98	23	0.44	462	756	855
TREDYFFRIN_131	1,272	0.51	187	94	0.07	643	2,000	91
TREVOSE_136	1,364	4.72	100	472	7.45	6,443	10,740	10,159
TROOPER_002	658	0.03	36	1	0.00	22	13	0
UPPER_DARBY_134	1,995	0.30	290	86	0.00	589	2,848	0
UPPER_DARBY_141	1,386	1.26	27	34	0.00	1,741	788	0
WARMINSTER_161	1,498	0.48	192	93	0.00	725	2,319	0
WARRINGTON_362	2,291	1.45	677	980	1.37	3,315	37,426	3,139
WEST_GROVE_002	424	0.65	200	130	4.44	275	915	1,882
WESTMORELAND_132	1,372	1.13	39	45	0.43	1,556	1,023	590
WHITEMARSH_133	689	2.88	390	1,124	0.55	1,986	12,903	381
WHITEMARSH_161	1,219	1.88	382	717	0.90	2,286	14,568	1,098
WHITEMARSH_163	337	3.75	318	1,191	2.63	1,263	6,687	886

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

**BLUE\_GRASS\_130**

*Philadelphia County*

**Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Install animal protection
- Install cutout-mounted recloser
- Perform regularly scheduled tree clearance
- Upgrade fusing
- Upgrade secondary wire
- Remedial efforts completed

**BLUE\_GRASS\_144**

*Philadelphia County*

**Completed:**

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

**BLUE\_GRASS\_160**

*Philadelphia County*

**Completed:**

- Replace underground cable
- Remedial efforts completed

**BRADFORD\_341**

*Chester County*

**Completed:**

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

**BRADFORD\_342**

*Chester County*

**Completed:**

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

**BRADFORD\_344**

*Chester County*

**Completed:**

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

**BRADFORD\_346***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\_351***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

**BROOMALL\_136***Delaware County***Completed:**

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

**BRYN\_MAWR\_134***Delaware 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  
Perform regularly scheduled tree clearance  
Remedial efforts completed

**BUCKINGHAM\_352***Bucks County***Completed:**

Complete corrective reliability work orders  
Inspect circuit visually and with thermographic camera  
Replace transformer  
Upgrade switches  
Remedial efforts completed

**BUCKINGHAM\_361***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

**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
- Install tree-resistant wire
- Remedial efforts completed

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

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

**BYBERRY\_144***Montgomery County***Completed:**

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

**BYBERRY\_147***Philadelphia County***Completed:**

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

**BYBERRY\_163***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
- Install cutout-mounted recloser
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**BYBERRY\_173***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
- Perform regularly scheduled tree clearance
- Replace transformer
- Upgrade secondary wire
- Remedial efforts completed

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

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

**CALLOWHILL\_138***Philadelphia County***Completed:**

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

**CEDARBROOK\_134***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
- Replace transformer
- 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
- Remedial efforts completed

**CLAY\_341***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

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

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

**COUNTY\_LINE\_004***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  
Upgrade secondary wire  
Remedial efforts completed

**CRESCENTVILLE\_135***Philadelphia County***Completed:**

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

**CRESCENTVILLE\_136***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

**CROYDON\_142***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  
Upgrade secondary wire  
Remedial efforts completed

**CRUSHER\_000***Montgomery County***Completed:**

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

**DALEVILLE\_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  
Remedial efforts completed

**DANBORO\_000***Bucks 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

**DILTOWN\_005***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

**DURHAM\_003***Bucks County***Completed:**

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

**EAGLE\_352***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

**EDDINGTON\_138***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

**EDGELY\_003***Bucks County***Completed:**

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

**ELKINS\_PARK\_004***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 tree-resistant wire
- Remedial efforts completed

**FLINT\_141***Montgomery County***Completed:**

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

**FLINT\_146***Montgomery County***Completed:**

- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Install tree-resistant wire
- Upgrade fusing
- Upgrade secondary wire
- Remedial efforts completed

**FOULK\_143***Delaware 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

**GLADWYNE\_001***Delaware 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

**GLADWYNE\_132***Delaware 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

**HANOVER\_001***Montgomery County***Completed:**

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

**HARMONY\_005***Chester 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

**HAYES\_000***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
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**HEATON\_136***Montgomery County***Completed:**

- Complete corrective reliability work orders
- Extend circuit and install switches
- Inspect circuit visually and with thermographic camera
- Install animal protection
- Install tree-resistant wire
- Upgrade fusing
- Remedial efforts completed

**HIGHLAND\_000***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

**HOLMESBURG\_139***Philadelphia County***Completed:**

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

**JARRETT\_141***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  
Remedial efforts completed

**JENKINTOWN\_134***Montgomery County***Completed:**

Inspect circuit visually and with thermographic camera  
Upgrade secondary wire  
Remedial efforts completed

**JENKINTOWN\_137***Montgomery County***Completed:**

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

**JENKINTOWN\_142***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

**JENKINTOWN\_144***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  
Upgrade secondary wire  
Remedial efforts completed

**LENAPE\_000***Chester County***Completed:**

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

**LINE\_131\_00WO***Bucks County***Completed:**

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

**LINE\_136\_00***Bucks County***Completed:**

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

**LINE\_189\_00EM***Bucks County***Completed:**

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

**LINE\_2200CR***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

**LINE\_2507***Delaware County***Completed:**

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

**LINE\_3307NT***Chester County***Completed:**

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

**LINE\_534***Philadelphia County***Completed:**

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

**LINE\_7200WH***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  
Remedial efforts completed

**LINE\_7500PB***Chester County***Completed:**

Inspect circuit visually and with thermographic camera  
Replace recloser  
Remedial efforts completed

**LINTON\_352***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

**LLANERCH\_146***Delaware County***Completed:**

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

**LLANERCH\_163***Delaware County***Completed:**

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

**LLANERCH\_166***Delaware County***Completed:**

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

**MASTER\_131***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  
Remedial efforts completed

**MATSON\_131***Delaware County***Completed:**

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

**MATTHEWS\_000***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
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**MEDIA\_011***Delaware County***Completed:**

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

**MIDDLETOWN\_133***Delaware 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

**MONROE\_002***Delaware County***Completed:**

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

**MOSER\_013***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

**NEWLINVILLE\_344***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

**NEWLINVILLE\_353***Chester County***Completed:**

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

**NEWLINVILLE\_362***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
- Install recloser
- Remedial efforts completed

**NEWTOWN\_SQUAR\_136***Delaware County***Completed:**

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

**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
- Remedial efforts completed

**NORTH\_WALES\_354***Montgomery County***Completed:**

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

**NORTH\_WALES\_361***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
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**NORTH\_WALES\_362***Montgomery County***Completed:**

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

**NORTH\_WALES\_363***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
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**NOTTINGHAM\_011***Chester County***Completed:**

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

**OAKMONT\_002***Delaware 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

**PAGE\_000***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
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**PARRISH\_136***Philadelphia County***Completed:**

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

**PERKIOMEN\_354***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
- Perform regularly scheduled tree clearance
- Remedial efforts completed

**PERKIOMEN\_363***Montgomery County***Completed:**

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

**PLANEBROOK\_344***Chester County***Completed:**

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

**PLYMOUTH\_135***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
- Upgrade secondary wire
- Remedial efforts completed

**PLYMOUTH\_160***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
- Upgrade secondary wire
- Remedial efforts completed

**PLYMOUTH\_172***Montgomery County***Completed:**

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

**PULASKI\_134***Philadelphia County***Completed:**

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

**PULASKI\_136***Philadelphia County***Completed:**

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

**SADSBURY\_000***Chester 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
- Upgrade secondary wire
- Remedial efforts completed

**SAVILLE\_131***Delaware County***Completed:**

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

**SCHWENKSVILLE\_001***Montgomery County***Completed:**

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

**SNOWDEN\_000***Chester County***Completed:**

- Inspect circuit visually and with thermographic camera
- Inspect selected areas of circuit for vegetation issues and correct as needed
- Install recloser
- Replace poles and cross arms
- 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
- Upgrade secondary wire
- Remedial efforts completed

**TACONY\_134***Philadelphia County***Completed:**

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

**TREDYFFRIN\_131***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

**TREVOSE\_136***Bucks 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
- Upgrade secondary wire
- Remedial efforts completed

**TROOPER\_002***Montgomery County***Completed:**

- Complete corrective reliability work orders
- Inspect circuit visually and with thermographic camera
- Install tree-resistant wire
- Perform regularly scheduled tree clearance
- Replace cable
- Upgrade secondary wire
- Remedial efforts completed

**UPPER\_DARBY\_134***Delaware 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 recloser
- Install single-phase recloser
- Upgrade fusing
- Remedial efforts completed

**UPPER\_DARBY\_141***Delaware 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 recloser
- Remedial efforts completed

**WARMINSTER\_161***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
- Replace transformer
- Upgrade fusing
- Upgrade secondary wire
- Remedial efforts completed

**WARRINGTON\_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

**WESTMORELAND\_132***Philadelphia County***Completed:**

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

**WEST\_GROVE\_002***Chester County***Completed:**

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

**WHITEMARSH\_133***Montgomery County***Completed:**

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

**WHITEMARSH\_161***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

**WHITEMARSH\_163***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 tree-resistant wire  
Upgrade secondary wire  
Remedial efforts completed

## 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).