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FEDERAL EXPRESS

July 30, 2012

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

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JUL 30 2012

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

**Re: PPL Electric Utilities Corporation
Quarterly Reliability Report for the
Period Ended June 30, 2012
Docket No. L-00030161**

Dear Ms. Chiavetta:

Enclosed for filing on behalf of PPL Electric Utilities Corporation ("PPL Electric") are an original and five (5) copies of PPL Electric's Quarterly Reliability Report for the Period Ended June 30, 2012. Also enclosed, in a sealed envelope, is a copy of the report containing competitively sensitive and proprietary information. The Company hereby requests that the Commission treat that information, and the report containing the information, as privileged and confidential. The report is being filed pursuant to the Commission's Final Rulemaking Order adopted May 7, 2004 in the above-captioned docket.

Pursuant to 52 Pa. Code § 1.11, the enclosed document is to be deemed filed on July 30, 2012, which is the date it was deposited with an overnight express delivery service as shown on the delivery receipt attached to the mailing envelope.

In addition, please date and time-stamp the enclosed extra copy of this letter and return it to me in the envelope provided.

If you have any questions regarding this document, please call me or Joseph M. Kleha, PPL Electric's Manager-Regulatory Compliance and Rates at (610) 774-4486.

Very truly yours,


Paul E. Russell

Enclosures

cc: Mr. Darren Gill
Mr. Daniel Searfoorce
Ms. Yasmin Snowberger

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PPL Electric Utilities

PPL Electric Utilities Corporation
Quarterly Reliability Report
to the
Pennsylvania Public Utility Commission

July 2012

- 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.*

There were no major events during the second quarter ended June 30, 2012.

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- 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.*

The following table provides data for the 12 months ended June 30, 2012¹.

SAIFI (Benchmark = 0.98; Rolling 12-month Std. = 1.18)	0.944
CAIDI (Benchmark = 145; Rolling 12-month Std. = 174)	141
SAIDI (Benchmark = 142; Rolling 12-month Std. = 205)	133
MAIFI²	4.11
Average Number of Customers Served³	1,390,106
Number of Sustained Customer Interruptions (Trouble Cases)	15,914
Number of Customers Affected⁴	1,312,120
Customer Minutes of Interruptions	185,307,890
Number of Customer Momentary Interruptions	5,711,571

During the 2nd quarter there were no PUC major events, two (2) PUC Reportable storms, and eight (8) other storms that required the opening of one or more area emergency centers to manage restoration efforts.

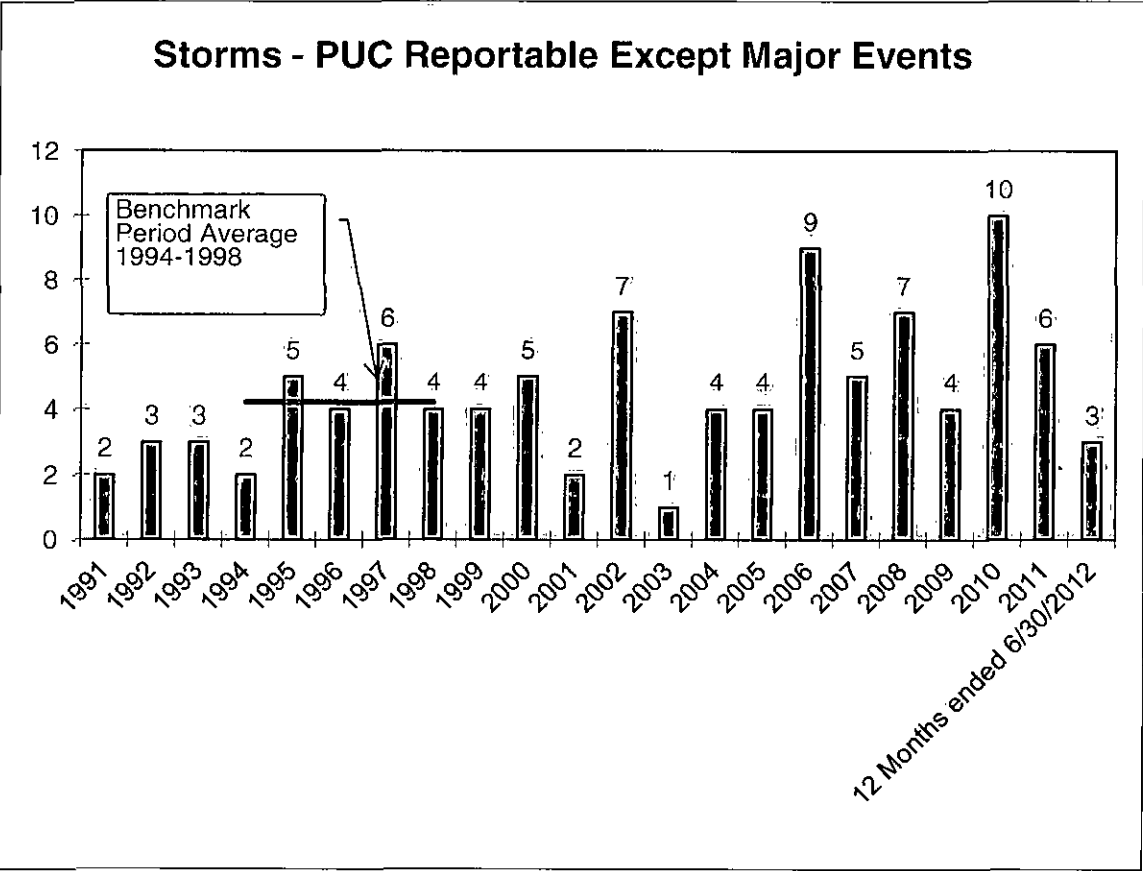
¹ Non-PPL Electric problems are excluded here, but may be found in Item 5.

² MAIFI data is obtained at the substation breaker and does not include momentary interruptions at lower level devices.

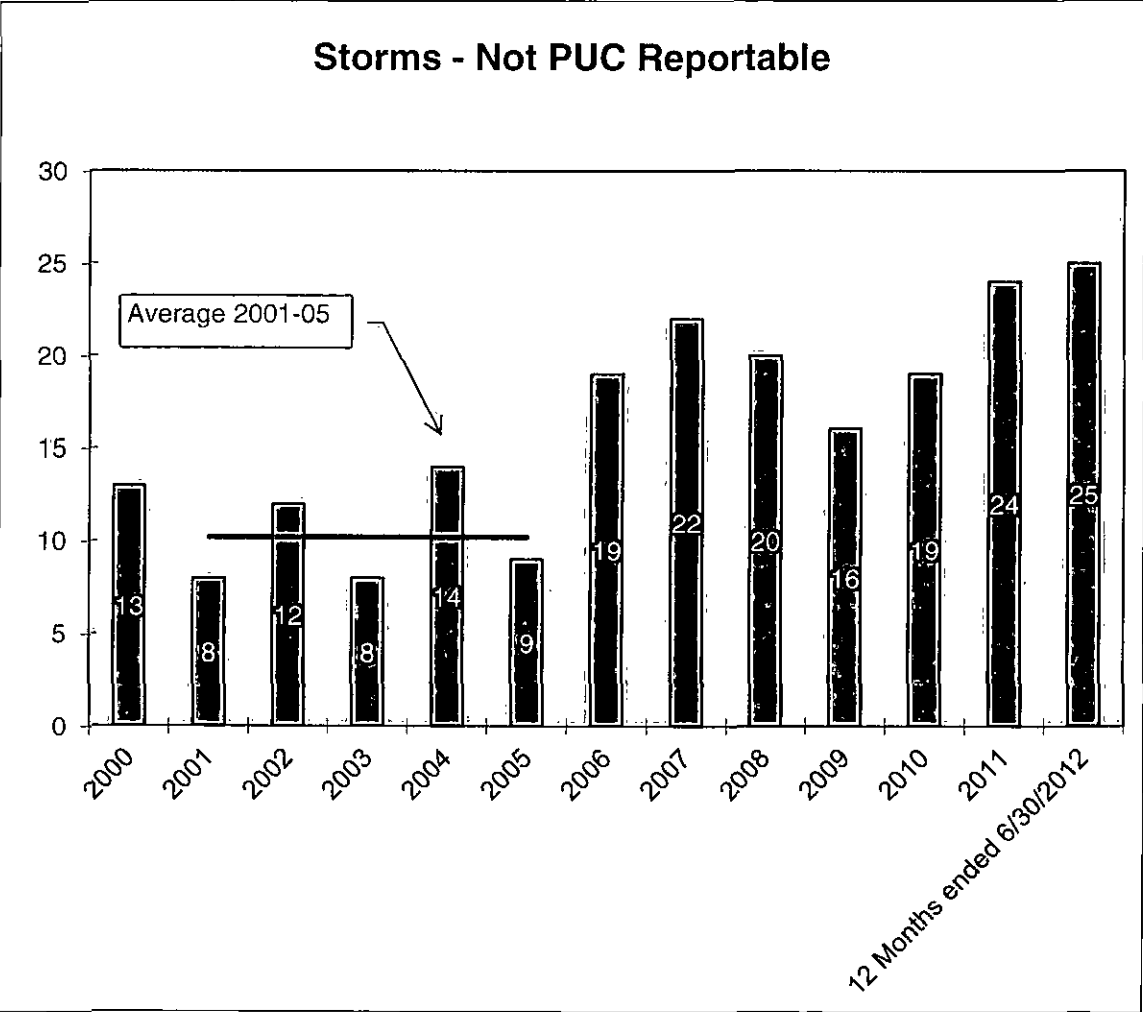
³ PPL Electric calculates the annual indices using customers served at the end of the period. This is consistent with the method used to calculate PPL Electric's benchmarks.

⁴ The data reflects the number of customers interrupted for each interruption event summed for all events, also known as customer interruptions. If a customer is affected by three separate cases of trouble, that customer represents three customer interruptions, but only one customer interrupted.

Specifically, during the 12-month reporting period, there were two (2) PUC major events and three (3) PUC-reportable storms ($\geq 2,500$ customers interrupted for ≥ 6 hours) other than major events.



In addition, there were twenty-five (25) storms that were not reportable, but which did require the opening of one or more area emergency centers to manage restoration efforts.



- 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.*

The following table provides reliability index values for the worst performing 5% of the circuits in the system for the 12 months ended at the current quarter. An explanation of how PPL Electric defines its worst performing circuits is included in Appendix A.

WPC Rank	Feeder ID	SAIFI	CAIDI	SAIDI	MAIFI ⁵	Customers	Cases of Trouble ⁶	Customer Minutes Interrupted	CPI
1	47701	2.454	1415.8	3,474.1	3.04	487	6	1691919	1259
2	47707	1.346	2527.7	3,403.4	7.27	1934	57	6582244	1180
3	47703	2.267	1168.4	2,648.9	9.01	1374	43	3639627	1111
4	46602	5.160	195.72	1,009.8	0.00	1555	61	1570293	1032
5	60603	13.726	115.91	1,591.0	6.18	266	15	423214	933
6	43401	2.470	826.46	2,041.5	1.00	991	30	2023198	925
7	12305	5.301	117.27	621.73	8.03	883	43	548985	917
8	57403	6.791	69.197	469.89	8.07	1461	31	686506	899
9	47704	4.530	494.60	2,240.5	12.01	736	22	1649025	898
10	44802	1.166	2095.5	2,443.1	1.28	1453	27	3549903	898
11	52002	4.666	93.682	437.09	7.96	1642	16	717705	895
12	55401	4.340	202.37	878.24	2.14	2078	20	1824991	876
13	13704	6.649	158.15	1,051.6	7.72	1579	41	1660510	863
14	13902	6.409	82.866	531.13	17.83	1976	26	1049503	858
15	13702	5.560	81.583	453.59	6.01	711	25	322501	828
16	23401	5.907	123.46	729.32	3.04	1740	50	1269011	819
17	43302	6.557	248.28	1,627.9	3.05	176	7	286525	755
18	53601	5.480	93.796	513.97	5.03	1128	41	579755	745
19	11502	4.832	67.903	328.08	3.01	2470	21	810364	737
20	21603	12.989	81.197	1,054.6	0.00	182	4	191952	730
21	44703	3.013	428.30	1,290.5	12.09	1752	21	2261021	707
22	51002	1.737	1072.6	1,862.7	1.00	1700	11	3166599	704
23	52401	3.278	214.16	702.00	2.08	1425	61	1000348	690
24	44701	2.290	632.12	1,447.2	6.97	1074	26	1554391	678
25	13302	4.054	85.847	348.01	4.95	1431	14	498001	676
26	10803	2.983	475.49	1,418.2	1.03	58	2	82260	670
27	55502	3.847	163.54	629.14	3.08	1580	33	994042	638
28	43102	2.965	208.45	618.08	2.00	975	24	602629	632

⁵ MAIFI data is obtained at the substation breaker and does not include momentary interruptions at lower level devices.

⁶ Cases of trouble are the number of sustained customer service interruptions.

WPC Rank	Feeder ID	SAIFI	CAIDI	SAIDI	MAIFI ⁵	Customers	Cases of Trouble ⁶	Customer Minutes Interrupted	CPI
29	27101	3.407	157.34	536.15	1.64	1880	65	1007961	606
30	56802	4.953	101.81	504.27	8.04	1403	38	707486	573
31	12301	3.414	191.11	652.42	0.00	1235	43	805735	558
32	52402	3.473	165.99	576.41	7.05	1634	71	941852	555
33	28704	0.657	192.28	126.30	0.00	679	6	85761	553
34	13904	3.041	67.862	206.38	2.01	1506	7	310810	552
35	45402	4.484	74.589	334.46	4.13	1599	58	534803	550
36	22001	2.869	253.49	727.37	0.00	2282	52	1659867	536
37	28302	3.705	97.147	359.93	4.02	2814	97	1012856	502
38	28701	3.724	95.216	354.61	3.08	816	17	289362	501
39	43105	2.607	172.62	449.97	2.02	628	8	282580	495
40	11001	3.322	116.27	386.24	5.43	867	44	334869	482
41	53602	3.508	90.561	317.67	3.38	2174	62	690623	480
42	41601	2.066	381.75	788.54	9.16	412	14	324877	479
43	47705	1.016	890.90	905.38	0.99	1292	5	1169754	464
44	43501	5.500	176.92	973.11	425.63	16	6	15570	462
45	53803	3.583	103.40	370.44	8.11	436	26	161511	449
46	44601	2.517	162.76	409.72	1.01	754	27	308932	448
47	22802	1.048	858.14	899.08	7.97	566	8	508882	446
48	47502	3.032	160.83	487.57	2.00	793	31	386640	444
49	14801	3.393	174.56	592.28	0.61	1797	28	1064330	442
50	51003	2.208	460.39	1,016.5	0.99	1711	13	1739355	434
51	43101	2.552	307.46	784.57	2.99	1430	27	1121939	432
52	44904	8.690	54.593	474.43	9.73	71	6	33684	421
53	24901	2.829	144.22	407.96	2.01	2264	46	923615	411
54	26105	1.000	745.85	745.85	0.00	1	1	746	402
55	54505	3.253	140.57	457.27	4.00	1226	8	560612	401
56	54603	3.107	41.003	127.41	6.09	1594	19	203089	394
57	60502	2.921	128.07	374.15	9.10	1896	26	709382	394
58	46206	1.777	351.60	624.70	12.94	1769	51	1105103	393

PPL Electric's Circuit Performance Index ("CPI") is derived from the frequency and duration of service interruptions that occurred during the specified time period. Improving a circuit's CPI depends upon reducing either the service interruption frequency or the duration of interruptions, or both. When a new circuit appears among the 5% worst performing, the first step undertaken is to perform a "circuit outage data analysis." This consists of analyzing the actual service interruptions, which occurred during the time span, to determine whether there are causal patterns or geographic patterns for which corrective actions are feasible that would improve the circuit's CPI.

PPL Electric currently is evaluating improvements to its Worst Performing Circuit program.

3) *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 reported.*

The following table shows a breakdown of service interruption causes for the 12 months ended at the current quarter. The top three causes (Equipment Failures, Trees–Not Trimming Related, and Animals), which are based on the percent of cases of trouble, are highlighted in the table. Service interruption definitions are provided in Appendix B. PPL Electric’s maintenance programs focus on corrective actions to address controllable service interruptions (e.g., trees and equipment failure).

Cause Description	Trouble Cases ⁷	Percent of Trouble Cases	Customer Interruptions ⁸	Percent of Customer Interruptions	Customer Minutes	Percent of Customer Minutes
Animals	2,953	18.56%	56,134	4.28%	4,957,492	2.68%
Contact/Dig-In	158	0.99%	25,579	1.95%	2,173,719	1.17%
Directed by Non-PPL Authority	223	1.40%	11,865	0.90%	3,975,623	2.15%
Equipment Failures	5,505	34.59%	440,047	33.54%	53,101,453	28.66%
Improper Design	2	0.01%	1,580	0.12%	44,438	0.02%
Improper Installation	1	0.01%	1	0.00%	121	0.00%
Improper Operation	23	0.14%	20,960	1.60%	793,905	0.43%
Nothing Found	1,394	8.76%	120,030	9.15%	7,533,769	4.07%
Other-Controllable	94	0.59%	19,414	1.48%	6,717,067	3.62%
Other-Non Control	431	2.71%	66,471	5.07%	12,025,258	6.49%
Other-Public	76	0.48%	9,337	0.71%	1,123,047	0.61%
Trees-Not Trimming	3,682	23.14%	349,614	26.64%	66,865,209	36.08%
Trees-Trimming	672	4.22%	36,683	2.80%	8,900,865	4.80%
Vehicles	700	4.40%	154,405	11.77%	17,095,923	9.23%
Total	15,914	100.00%	1,312,120	100.00%	185,307,890	100.00%

⁷ Cases of trouble are the number of sustained customer service interruptions (i.e., service outages).

⁸ The data reflects the number of customers interrupted for each interruption event summed for all events, also known as customer interruptions. If a customer is affected by three separate cases of trouble, that customer represents three customer interruptions, but only one customer interrupted.

Analysis of causes contributing to the majority of service interruptions:

Weather Conditions: PPL Electric records weather conditions, such as wind or lightning, as contributing factors to service interruptions, but does not code them as direct interruption causes. Therefore, some fluctuations in cause categories, especially tree- and equipment-related causes, are attributable to weather variations. PPL Electric has experienced an elevated level of both reportable and non-reportable storms during this reporting period.

Trees – Trimming Related: On January 1, 2010, PPL Electric initiated a prescriptive tree trimming program that moved maintenance trimming cycles to five years for all circuits in the northern portion of its service area and four years for all circuits in the southern portion of its service area. These cycles are inclusive of both urban and rural circuits, and will shorten the overall average trimming cycle for the system. Several more years will be required for the program to reach its full effectiveness on all circuits

Trees – Not Trimming Related: Although their effect on reliability is significant, tree outages not related to trimming generally are caused by trees falling from outside of PPL Electric's rights-of-way, and generally are not controllable.

Animals: Animals accounted for about 18.5% of PPL Electric's cases of trouble. Although this represents a significant number of cases, the effect on SAIFI and CAIDI is small because nearly 80% of the number of cases of trouble was associated with individual distribution transformers. However, when animal contacts affect substation equipment, the effect may be widespread and potentially can interrupt thousands of customers on multiple circuits. In addition to guarding new distribution transformers and substations, in 2009, PPL Electric initiated distribution and substation animal guarding programs to focus systematically on protecting existing facilities most at risk of incurring animal-caused interruptions.

Vehicles: Although vehicles cause a small percentage of the number of cases of trouble, they accounted for a large percentage of customer interruptions and customer minutes, because main distribution lines generally are located along major thoroughfares with higher traffic densities. In addition, vehicle-related cases often result in extended repair times to replace broken poles. Service interruptions due to vehicles are on the rise as a result of an increasing number of drivers and vehicles on the road. PPL Electric has a program to identify and relocate poles that are subject to multiple vehicle hits.

Equipment Failure: Equipment failure is one of the largest single contributors to the number of cases of trouble, customer interruptions and customer minutes. However, approximately 48% of the cases of trouble, 46% of the customer interruptions and 56% of the customer minutes attributed to equipment failure were weather-related and, as such, are not considered to be indicators of equipment condition or performance. In 2009, to help reduce the risk of incurring interruptions due to equipment failures, PPL Electric initiated an Asset Optimization Strategy project to assess equipment health and generate a long-term plan for proactive infrastructure replacement and enhanced maintenance practices. It is anticipated that, over time, this strategy will improve reliability performance as it pertains to PPL Electric's distribution, substation and transmission assets.

Nothing Found: This description is recorded when the responding crew can find no cause for the interruption. That is, when there is no evidence of equipment failure, damage, or contact after a line patrol is completed. For example, during heavy thunderstorms, when a line fuse blows or a single-phase OCR locks open and when closed for test, the fuse holds, or the OCR remains closed, and a patrol reveals nothing.

(4) Specific remedial efforts taken and planned for the worst performing 5% of the circuits identified in paragraph (3).

Rank	Action	Status	Due/Complete	Result
1	Circuit ID: 47701 BLOOMSBURG 77-01			Location: Sunbury
				CPI: 1259
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WPC meeting on 12/1/11. The Bloomsburg substation and customers served by this circuit were subjected to major flood conditions. The flooding was caused by record setting rainfalls from Tropical Storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding and some of our customer's services were under water. This circuit has not been on the WPC list before. PPL will continue to monitor this circuit's performance.
2	Circuit ID: 47707 BLOOMSBURG 77-07			Location: Sunbury
				CPI: 1180
	3/12/2008: Install tie. Construct Tie between East Danville #2 and Bloomsburg #7 along Rte 11. This project is currently being engineered.	Scheduled for	9/28/2012	
	4/14/2009: Reconductor line. Replace conduit and river crossing on SR 42 Bridge to Catawissa.	Completed	5/14/2011	Reduced customer count affected by each outage.
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	The contribution of customers with greater than 3 outages was 42% of the CPI score. The largest outage affected all of the customers on the feeder and was caused by a tree falling on the lines just outside of the substation. This incident was storm related not due to lack of trimming. The third largest outage was an intentional outage due to a fire. PPL was asked by local officials to de-energize the line.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
3	Circuit ID: 47703 BLOOMSBURG 77-03			Location: Sunbury
				CPI: 1111
	8/26/2010: Install tie. A project was placed into the budget to create a tie between Bloomsburg 47703 and Bloomsburg 47704. This will enhance the reliability of both Bloomsburg circuits by providing additional operating flexibility through use of remotely operated interrupting and switching devices.	Scheduled for	11/30/2014	
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list. This line will be inspected for vegetation encroachment and potential equipment failure risks.	Completed	11/11/2010	The Bloomsburg 77-03 circuit was reviewed at Susquehanna Region's Q3 2010 WPC meeting on November 11, 2010. This circuit is classified as a worst-performer due to the number of customers experiencing multiple outages. Over the last 4 quarters, the substation breaker was interrupted three times, twice due to off-right-of-way trees contacting the line. Based on the performance of this line in the last 2 quarters, this circuit will likely remain a WPC for 2 - 3 more quarters.
	11/11/2010: Line inspection-equipment.	Completed	5/2/2011	Reduced outage risk. The line inspection revealed the following problems: 2 blown lightning arrestors, broken strands on the primary, 1 broken wire tie, Broken Insulators and broken guy wires. The following Work Requests were completed to fix the problems identified by the inspection: WR 641020 & WR 641068.
	7/23/2012: Raise the control panel for the normally open ROCS device that ties the 47703 to the 47707 circuit. The control panel was under water in the aftermath of Tropical Storm Lee.	Completed	9/30/2011	The control panel for the normally open ROCS device was raised above flood level.
4	Circuit ID: 46602 LARRYS CREEK 66-02			Location: Susquehanna
				CPI: 1032
	7/6/2010: Install fuse(s).	Completed	3/1/2011	Reduced customer count affected by each outage. Installed fusing to reduce outage exposure. WR 556905 - Install 5 fuses WR 556906 - Install 1 fuse WR 556915 - Install 1 fuse WR 556903 - Install 1 fuse WR 556899 - Install 1 fuse on Pine Run Rd WR 535701 - Install 1 fuse along Spook Hollow Rd WR 556898 - Install 2 fuses on Youngs Rd WR 556897 - Install 1 fuse on Level Corners Rd
	7/7/2010: Relocate inaccessible line.	Scheduled for	3/14/2013	WR 556910 - Relocate Inaccessible Line along Tombs Run Rd.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
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5 Circuit ID: 60603 NORTH COLUMBIA 06-03

Location: Lancaster

CPI: 933

1/4/2010: Expanded Operational Review. Reliability Analysis Completed 3/10/10	Completed	12/31/2010	Reduced outage duration.
10/11/2010: Improve sectionalizing capability. Build Red Front substation and tie it into the North Columbia 6-3 line.	Completed	3/29/2012	Reduced outage duration. The new Red Front substation greatly improves the sectionalizing capabilities on the west side of the Susquehanna River. It also reduced the number of customers as well as the line length of the North Columbia 6-3 line. The customer count went from about 1,900 to 300 and the line length went from about 80 to 30 miles. The new Red Front substation will greatly reduce CMI, SAIDI, SAIFI and CAIDI on the NCOL 6-3 as well as the NCOL 6-5 lines.
1/5/2011: Improve sectionalizing capability. Installed fault indicators on 2 underground dips	Completed	3/23/2011	Reduced outage duration.
1/5/2011: Improve sectionalizing capability. Install fault indicators before and after inaccessible line.	Completed	4/11/2011	Reduced outage duration.
4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/6/2011	SAIDI was the greatest contributor (55%) to the CPI. This was due to one tree trimming related outage that accounted for over 2.2 million of the 2.86 million total customer minutes interrupted.
6/14/2011: Tree trimming.	Completed	6/30/2011	Reduced outage risk.

6 Circuit ID: 43401 BENTON 34-01

Location: Sunbury

CPI: 925

8/26/2010: Install tie. A project was placed into the budget to create a tie between Benton 34-1 and Millville 32-2, and a 12 kV tie between Millville 32-2 and Hughesville 70-1. This will enhance the reliability of all three circuits by providing additional operating flexibility through use of remotely operated interrupting and switching devices. The project expects to save approximately 0.3 system SAIDI minutes.	Scheduled for	5/31/2013	
4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2011	The largest contributor to the CPI Index was SAIDI. Three circuit breaker interruptions accounted for more than 60% of the customer minutes lost. The longest outage was due to a tree taking down the lines causing the circuit breaker to open. The other two breaker interruptions were due to equipment failures.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
7	Circuit ID: 12305 LANARK 23-05			Location: Lehigh
				CPI: 917
	1/9/2011: Circuit patrolled by a line maintenance inspector.	Completed	11/15/2011	Reduced outage risk.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2012	Customer with greater than three outages was the largest contributor to this circuits for poor CPI. Trees from outside the right of way caused several circuit breaker outages as well as a few other smaller OCR outages.
	1/9/2012: Adding fault indicators to a remote controlled switch. WR 648355. This will improve fault location time.	Completed	6/6/2012	Increased ability to locate faults.
	1/9/2012: Tree trimming the circuit.	Scheduled for	12/9/2012	
	7/23/2012: Install 3 phase OCR(s). Currently under review to determine if a recloser can be coordinated with other existing devices on the line.	Scheduled for	9/30/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
8	Circuit ID: 57403 SPANGLER 74-03			Location: West Shore
				CPI: 899
	10/1/2010: Reconductor line. Reconductor part of the three phase line along Fishing Creek Road. This will improve the transfer capabilities of a tie between the Spangler 74-1 and 74-3 lines.	Scheduled for	12/31/2013	
	10/1/2010: Install automation devices. Add several automation devices to tie points along the Spangler 74-3 circuit. This will improve restoration times.	Completed	6/1/2011	Reduced outage duration.
	1/26/2011: Expanded Operational Review.	Completed	3/28/2011	Inconclusive. Monitor future performance.
	1/26/2011: Thermographic inspection-OH line.	Completed	2/28/2011	Inconclusive. Monitor future performance.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/21/2011	The Spangler 74-03 line is a long radial distribution circuit at the southern edge of PPL territory. The feeder has approximately 1,500 customers across 58 circuit miles. The largest CPI contributor has been the percentage of customers with greater than 3 outages. The circuit breaker experienced three interruptions in the past year. Nothing was found for two of the interruptions, and the CB held for test when closed back in. Both outages occurred during storm weather, so it is suspected that a tree limb may have made extended contact. The third breaker outage was caused by an equipment failure on a downstream OCR.
				In addition to the three breaker outages, an OCR serving 1,050 customers also experienced three interruptions in the past year. The causes include a tree from outside the trimming right of way, a vehicle pole hit, and nothing found. A failed circuit board has since been replaced in the OCR.
	11/21/2011: Relocate a normally open point on a single phase CEMI tap. This will transfer approximately 40 customers to a source closer to the substation.	Completed	4/2/2012	Reduced outage risk.
	11/21/2011: Tree trimming. Trim the Spangler 74-03 line as part of its four year vegetation management cycle.	Completed	5/1/2012	Reduced outage risk.
	11/21/2011: Install remote operator controlled switch. Install a new normally open remote operator controlled switch on the Spangler 74-3 in order to transfer approximately 100 customers to a more reliable source at Mount Allen Substation.	Scheduled for	12/31/2012	
	3/12/2012: Load balancing. Extend second phase to alleviate cold load pickup & operator response.	Scheduled for	12/31/2012	
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Inconclusive. Monitor future performance.
	5/22/2012: Install 3 phase OCR(s). Install a new three phase telemetric recloser to protect a heavily wooded section along Fishing Creek Road.	Scheduled for	12/31/2012	
	7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
9	Circuit ID: 47704 BLOOMSBURG 77-04			Location: Sunbury	CPI: 898
	4/30/2008: Install 3 phase OCR(s). Replace existing OCR with single pole tripping recloser at grid 35204N31678. WR number is 420353.	Completed	8/31/2010	Reduced customer count affected by each outage.	
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/19/2010	Inconclusive. Monitor future performance. The Bloomsburg #4 circuit was discussed at Susquehanna Region's Q2 2010 WPC meeting on 8/19/10. This circuit is categorized as a WPC due to storm outages during a May 2010 weather event. This storm resulted in downed trees contacting power lines and causing significant damage.	
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WPC meeting on 12/1/11. The Bloomsburg substation and customers served by this circuit were subjected to major flood conditions. The flooding was caused by record setting rainfalls from tropical storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding and some of our customer's services were under water. No short term plan is required at this time. PPL will continue to monitor this circuit's performance.	
	12/30/2011: Install tie. SP 15410 Relieve the Bloomsburg 77-03 Line RIS 11/2014: This project will add a new ROCS device that will allow system operators to remotely transfer customers from the BLOO 47704 to the BLOO 47703 circuit.	Scheduled for	11/30/2014		
10	Circuit ID: 44802 EAST DANVILLE 48-02			Location: Sunbury	CPI: 898
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WPC meeting on 12/1/11. The Danville area and customers served by this circuit were subjected to major flood conditions. The flooding was caused by record setting rainfalls from Tropical Storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding and some of our customer's services were under water. This circuit was not previously on the WPC list. PPL will continue to monitor this circuit's performance.	
11	Circuit ID: 52002 LINGLESTOWN 20-02			Location: Harrisburg	CPI: 895
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.	
	7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012		
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
12	Circuit ID: 55401 SOUTH HERSHEY 54-01			Location: Harrisburg
				CPI: 876
	1/26/2011: Thermographic inspection-OH line.	Completed	2/28/2011	Inconclusive. Monitor future performance.
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/12/2012	The South Hershey 54-01 line is a nonstandard 13 kV distribution circuit. The feeder has approximately 2,200 customers across 54 circuit miles. The largest CPI contributors have been the percentage of customers with greater than 3 outages. A three phase recloser serving over 1,600 customers experienced four interruptions in the past year. The outage causes include load shedding due to a substation transformer overload during maintenance, flooding during Tropical Storm Lee, failure of a downstream capacitor bank, and nothing found.
	3/12/2012: Install 3 phase OCR(s). Install 3 phase recloser. Install a new telemetered three phase recloser downstream of existing problematic recloser. The new device will allow for a system operator to remotely transfer approximately 1,000 customers in the event of an outage on an upstream device.	Scheduled for	12/31/2013	
	5/22/2012: Construct a new 69-13.2 kV West Hershey Substation to increase transfer capacity in the area as well as reduce customer counts and circuit miles on the South Hershey 54-01 line.	Scheduled for	5/30/2014	
	5/22/2012: Improve sectionalizing capability. Investigate improving sectionalizing capability by reconfiguring the circuit around the triangle of Rt 39 (Hershey Rd), N Hanover St, and E Canal St.	Scheduled for	10/1/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
13	Circuit ID: 13704 SCHNECKSVILLE 37-04			Location: Lehigh
				CPI: 863
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2010	The aerial cable getaway for the Schnecksville 37-04 line failed twice in the past year. The getaway has since been replaced. Two additional OCR outages, due to vehicle contact and trees from outside the right of way, interrupted approximately 600 customers.
	4/20/2011: Circuit outage data analysis.	Completed	4/20/2011	The outage history for Schnecksville 37-04 has been reviewed for the period ending with Q1 2011. The circuit experienced four major outages in the past year. A transmission outage of unknown cause interrupted the substation during a Q1 2011 storm. The transmission line held when reclosed for test. The three remaining outages were due to equipment failures in Q4 2010. Two of which occurred on the same day when the operating bus disconnect failed in Schnecksville Substation. A separate outage occurred when an overhead switch failed while customers were transferred to the adjacent Schnecksville 37-01 line for repairs. The abnormal circuit configuration and repairs under construction delayed customer restoration. Many of the major contributors to the CPI have been equipment failures that have since been mitigated. Performance will continue to be monitored to determine if any proactive steps may be taken to prevent similar interruptions
	5/18/2011: Protection coordination review.	Completed	5/18/2011	The protection scheme on this circuit is well laid out. No adjustments are needed at this time.
	4/23/2012: Tree trimming.	Scheduled for	12/23/2014	
	4/23/2012: Line inspection-equipment. Perform line walkdown to identify possible trouble spots for trimming and potential projects.	Completed	6/1/2012	Identified potential fuse locations to limit exposure and reduce number of customers experiencing outages.
	4/23/2012: Install fault indications on a remotely operated control switch. WR 667699.	Completed	4/13/2012	Reduced outage duration.
	6/6/2012: Replaced last compression style splices with newer automatic splices. The compression style splices have been causes for outages historically.	Completed	6/1/2012	Reduced outage risk.
	6/6/2012: Install fuse(s). Install fuses at new locations to reduce number of customers experiencing outages. 56771S48902 and 573-S-501.	Scheduled for	12/1/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
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14 Circuit ID: 13902 SEIDERSVILLE 39-02

Location: Bethlehem

CPI: 858

7/5/2012: Expanded Operational Review.	Completed	7/1/2012	Developed 7 Work Requests to reduce outage risk and improve circuit performance.
7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	
7/23/2012: Install fuse(s). WO#'s 42075448, 42075446, 42075790, 42075787, 420,75789, 42075788.	Scheduled for	6/30/2013	
7/23/2012: Install LBAS(s). WO# 65537s47000. Installing Remote controlled switch to reduce restoration times.	Scheduled for	12/31/2012	
7/23/2012: Transferring 110 customers to a more reliable, adjacent circuit.	Scheduled for	12/31/2012	
WO# 42073599			
7/23/2012: Install fuse(s). WO#'s 42075448, 42075446, 42075790, 42075787, 420,75789, 42075788. Fuses to isolate exposed single and 3 phase taps from tripping breaker.	Scheduled for	6/30/2013	

19

15 Circuit ID: 13702 SCHNECKSVILLE 37-02

Location: Lehigh

CPI: 828

6/29/2010: Load balancing.	Canceled	9/11/2010	WR 450607 cancelled.
4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	9/30/2012	

16 Circuit ID: 23401 HONESDALE 34-01

Location: Pocono

CPI: 819

7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	10/18/2011	Several outages occurred over the rolling four quarters as a result of non trimming related tree contacts. Of these outages, the three that accounted for the largest customer minutes interrupted values occurred in the past four months. On 6/9/11, a tree from outside the right of way contacted the primary wire and caused an outage for 1,805 customers and netted a CMI value of 596,296. Then on 7/29/11, a tree from outside the right of way caused an OCR to trip to lockout. This caused an outage for 751 PPL customers and resulted in a value of 431,575 CMI. On 9/5/11 the same OCR tripped to lockout due to a tree falling on the primary line from outside the right of way. This caused an outage for 751 PPL customers and totaled 166,122 CMI.
10/17/2011: Evaluate potential ties.	In progress	6/29/2012	PPL is inspecting the capability of the tie line that connects the HONE 34-1 line to the TINK 44-1 line. If the tie line is nearing its capability to transfer in the next few years or reliability could be improved in any way, it is imperative that a project is planned to improve the reliability for the customers on these circuits.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
17 Circuit ID: 43302 WATSON 33-02				Location: Sunbury	CPI: 755
	1/4/2010: Expanded Operational Review.	Completed	12/31/2010	No problems were found. PPL will continue to monitor this circuit's performance.	
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WPC meeting on 12/1/11. On April 28, 2011 all of the customers on this circuit as well as 97 customers that are normally served by the NECO 47502 circuit experienced an outage. This outage was caused by trees taking down wires and breaking cross arms. Customers from the NECO 47502 were temporarily transferred to the WATS 43302 since a helicopter crash took down the river crossing on July 19, 2010. Until repairs were made to the NECO 47502 this circuit had increased exposure to trees and load could not be sectionalized and transferred to the NECO 47502. This circuit was never on the WPC list before. PPL will continue to monitor this circuit's performance.	
18 Circuit ID: 53601 DALMATIA 36-01				Location: Harrisburg	CPI: 745
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/21/2011	The Dalmatia 36-1 line is a long distribution circuit in a rural section of PPL territory. The feeder has approximately 1,150 customers across 102 circuit miles. The largest CPI contributors have been the percentage of customers with greater than 3 interruptions. The circuit breaker experienced a single outage on 3/07/11 due to a failed insulator on the main three phase line. In addition to the circuit breaker interruption, an OCR serving 330 customers experienced four interruptions in the past year. The causes include trees trimming related, a vehicle pole hit, and two trees not trimming related. The circuit is currently being trimmed.	
	11/21/2011: Tree trimming. Trim the Dalmatia 36-01 line as part of its four year vegetation management cycle.	Completed	12/30/2011	Reduced outage risk.	
	12/31/2011: Tree trimming-selected line segments only (hot spots). Trim section of problematic evergreen trees just outside of right of way.	Completed	12/31/2011	Reduced outage risk.	
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Inconclusive. Monitor future performance.	
	7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012		
19 Circuit ID: 11502 FREEMANSBURG 15-02				Location: Bethlehem	CPI: 737
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2012	Customers with greater than 3 outages was the largest contributor to the poor CPI. Trees falling from outside the right of way as well as an equipment failure caused nearly 1,700 customers to experience 5 outages.	
	1/9/2012: Install a telemetric recloser and remove a switch at 67019S48446. Reduce the number of customers that will see an outage.	Scheduled for	12/9/2013		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
20	Circuit ID: 21603 EYNON 16-03			Location: Scranton CPI: 730
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	
21	Circuit ID: 44703 MUNCY 47-03			Location: Susquehanna CPI: 707
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2011	The number of customers experiencing more than 3 outages contributed to 34% of the CPI score for this circuit. Two outages that affected all of the customers accounted for 40% of the total customer minutes lost. One of these outages was due to a 69kV line outage, and the other was due to a tree taking down the lines during a wet snow storm.
	10/17/2011: Relocate inaccessible line. Relocate a 0.8 mile section of the main feeder that currently runs through an area prone to flooding. The proposed relocation circumvents the flood prone area, eliminates two underground dips, and provides a more direct feed to the Muncy Hospital and 1700 customers in Muncy Borough.	Scheduled for	11/29/2013	
22	Circuit ID: 51002 NO HARRISBURG 10-02			Location: Harrisburg CPI: 704
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/21/2011	The North Harrisburg 10-2 line is a short urban circuit in downtown Harrisburg. The feeder has approximately 1,700 customers across 18 circuit miles. The largest CPI contributor was circuit SAIDI. This can be attributed to a single outage during the Tropical Storm Lee flooding. Under the direction of the city of Harrisburg, PPL crews cut power to a neighborhood of approximately 1,000 customers due to flooding concerns. As the waters receded, customers were reenergized block by block. The circuit has never experienced a history of poor reliability. The flooding of Tropical Storm Lee is considered to be a one hundred year flood. Circuit performance will continue to be monitored to determine whether further action is required.
	3/14/2012: Thermographic inspection-OH line. Inspect all 2 and 3 phase primary lines with infrared camera.	Completed	4/2/2012	Reduced outage risk.
	7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012	
	7/16/2012: Circuit outage data analysis.	Completed	7/16/2012	The North Harrisburg 10-2 line remains on the WPC list after four consecutive quarters. The largest contributor to the CPI continues to be the extended outage during Tropical Storm Lee flooding. The circuit has performed well since and is expected to drop off the WPC list next quarter once the outage falls out of the CPI calculation.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
23	Circuit ID: 52401 GREEN PARK 24-01			Location: West Shore
				CPI: 690
	9/10/2010: Evaluate potential ties. Evaluate project to create a tie with the Green Park 24-03 line.	Completed	9/10/2010	Inconclusive. Monitor future performance. Extensive tree removal was completed on this circuit. It is no longer on the WPC list. Project will be documented and reevaluated should circuit performance degrade.
	1/26/2011: Expanded Operational Review.	Completed	3/15/2011	Inconclusive. Monitor future performance.
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/25/2011	The Green Park 24-01 line is a long radial distribution circuit at the western edge of PPL territory. The feeder has approximately 1,440 customers across 144 circuit miles. The largest CPI contributors have been the percentage of customers with >3 interruptions and SAIDI. Two of the largest interruptions occurred when a failed insulator on the Green Park 69kV tap interrupted the JUNI-SDLE 69kV line. The single distribution tie to New Bloomfield Substation limited the number of customers on Green Park Substation that could be restored while repairs were being made.
	5/25/2011: Evaluate potential ties. Evaluate potential tie between the Green Park 24-01 and Green Park 24-03 lines.	Completed	10/17/2011	A project to construct a 4.5 mile three phase tie between the Green Park 24-1 and Green Park 24-3 has been developed and submitted into the five year Upgrade System Facilities capital budget.
	8/24/2011: Investigate protection scheme. Review protection device placement and determine optimum locations for three phase reclosers.	Completed	11/8/2011	Inconclusive. Monitor future performance. Field Services conducted a patrol of the Green Park 24-1 line to review three phase protection device location. Tree exposure as well as customer count distributions limit the number of alternative device locations. It was determined that there would be no net benefit in relocating any three phase devices at this time.
	8/24/2011: Repair the failed circuit breaker on the Juniata-Shermansdale 69kV line. This line serves approximately 7,500 customers at Benvenue, Green Park, New Bloomfield, Shermansdale, and South Shermansdale substations.	Completed	8/24/2011	Reduced outage risk.
	11/21/2011: Install tie. Construct a new 4.5 mile three phase tie between the Green Park 24-1 and Green Park 24-3 circuits. This project will create an automated tie for approximately 1,650 radial customers between the two circuits.	Scheduled for	11/30/2014	
	3/12/2012: Tree trimming. Trim circuit as part of its four year vegetation management cycle.	Scheduled for	12/31/2013	
	3/12/2012: Tree trimming. Trim 9 mile Green Park 69 kV transmission tap as part of its vegetation management cycle.	Scheduled for	12/31/2012	
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Inconclusive. Monitor future performance.
	7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
24 Circuit ID: 44701 MUNCY 47-01				
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	9/19/2011	This circuit was reviewed at the Susquehanna WPC meeting on 9/19/11. The largest contributor to the circuit performance index was customers with greater than 3 outages, with a contribution of 61.08%. On March 18, 2011 all of the customers on this circuit were interrupted due to a 69kV outage. All of the customers experienced a second outage on June 10, 2011 due to the 12kV circuit breaker opening. The aforementioned 12kV breaker outage and most of the other outages were caused by trees outside of the right of way falling on conductors.
				Location: Susquehanna CPI: 678
25 Circuit ID: 13302 ORVILLA 33-02				
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2011	The largest CPI contributor has been the percentage of customers with greater than 3 interruptions. There have been 5 breaker outages this year that have affected the entire Orvilla circuit. Two of the outages were caused by transmission, 1 outage was caused by a circuit breaker failing to reclose, 1 outage was due to trees not trimming related, and a final outage was required to complete a tie line.
	4/25/2012: Install three phase disconnect switch. WR 653704.	Completed	4/30/2012	Improve sectionalizing capability. Restore customers quicker when an outage occurs.
	4/25/2012: Install three phase disconnect switch. WR 645899.	Completed	4/27/2012	Increase transfer capabilities.
				Location: Bethlehem CPI: 676
26 Circuit ID: 10803 CHERRY HILL 08-03				
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2010	This circuit had several long duration outages. However, all events on this circuit in the past year have affected under 100 customers. Outages have been due to tree related issues and equipment failures. The circuit was last trimmed in 2009.
	11/30/2010: Install tie. A project has been placed into the budget to create a 5 mile tie between the Cherry Hill 08-03 line and a new area substation, Factoryville.	Scheduled for	12/31/2013	
	1/9/2011: Install three single phase voltage regulators near the Cherry Hill 8-3 Met-Ed tie.	Completed	12/20/2011	These voltage regulators will provide a balance of voltage between the three phases on the main line to improve the power quality of the circuit.
	1/9/2012: A project has been placed into the budget to install a new area substation, Factoryville. This will improve the reliability of the Cherry Hill 8-3 and the Mt Bethel 29-2 area.	Scheduled for	12/31/2013	
	1/9/2012: Install a remotely operated control switch on the three phase line just before the three customers at the beginning of the circuit. WR 680982.	Scheduled for	6/1/2013	
				Location: Bethlehem CPI: 670
27 Circuit ID: 55502 HERSHEY 55-02				
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.
				Location: Harrisburg CPI: 638

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
28	Circuit ID: 43102 SOUTH MILTON 31-02			Location: Sunbury	CPI: 632
	1/28/2009: Install LBAS(s). Install new Air Break with motor operator and Telemetrics control for remote operation.	Completed	8/17/2010	Reduced customer count affected by each outage.	
29	Circuit ID: 27101 GREENFIELD 71-01			Location: Scranton	CPI: 606
	12/1/2010: Tree trimming.	Completed	12/30/2010	Reduced outage risk. This line was completely trimmed in 2010.	
	12/8/2010: Improve sectionalizing capability. Install equipment to allow remote operation of switches and OCRs	Completed	12/17/2010	Reduced outage duration. All three phase switches and OCRs were upgraded to allow remote operation.	
	1/28/2011: Install tie. A tie for 1,350 radial customers is currently being engineered by the field personnel.	Completed	6/30/2011	The tie line was engineered. Construction postponed due to budget constraints.	
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list. In response to these major outages, a project is currently being reviewed by PPL which would build a tie line with the East Carbondale 12-6 line.	Scheduled for	5/30/2012	Customers on the Greenfield 71-1 12 kV line experienced several circuit breaker and OCR outages. During the July 7th PUC-recordable storm, the substation breaker opened due to equipment failure. PPL crews responded promptly and restored all 2000 customers in 50 minutes which resulted in a CMI of 98,150. On June 22nd approximately 1400 customers on the 71-1 line experienced an outage lasting approximately 3 hours with 182,033 CMI. In response to these major outages, a project is currently being reviewed by PPL which would build a tie line with the East Carbondale 12-6 line. Field engineers, along with Distribution Planning engineers will monitor future performance on this line.	
	7/24/2012: Install tie. A tie line for 1,350 radial customers was engineered by field personnel. Project was not constructed due to budget constraints. Distribution Planning will review the justification and place the project into the ISR budget.	In progress	9/30/2012		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
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30 Circuit ID: 56802 BENVENUE 68-02

Location: West Shore

CPI: 573

4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/25/2011	The largest CPI contributor has been the percentage of customers with greater than 3 interruptions. The Benvenue 68-02 line experienced two circuit breaker interruptions when a failed insulator on the Green Park 69kV tap interrupted the JUNI-SDLE 69kV line. In addition, there have been two long duration vehicle pole hits affecting 930 customers. Restoration times were delayed due to traffic caused by the vehicle accidents. The pole that was hit is behind a guard rail and down a steep embankment away from the road. The two accidents are considered to be by chance. Relocating the pole does not provide any clear reliability benefit.
5/15/2011: Improve sectionalizing capability. Automate tie with the Rockville 65-04 circuit.	Completed	5/20/2011	Reduced outage duration. A telemetric VCR and ROCS device were installed to automate the potential transfer of 750 customers at the end of the Benvenue 68-02 line.
8/24/2011: Repair the failed circuit breaker on the Juniata-Shermansdale 69kV line. This line serves approximately 7,500 customers at Benvenue, Green Park, New Bloomfield, Shermansdale, and South Shermansdale substations.	Completed	8/24/2011	Reduced outage risk.
11/21/2011: Extend single phase approximately 600 feet to serve a development of CEMI customers from a source closer to the substation.	Scheduled for	12/30/2012	
3/12/2012: Tree trimming. Trim circuit as part of its four year vegetation management cycle.	Scheduled for	12/31/2012	
7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012	
7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	

31 Circuit ID: 12301 LANARK 23-01

Location: Lehigh

CPI: 558

1/9/2010: Tree trimmed circuit.	Completed	12/9/2010	Reduced outage risk.
6/29/2011: Monitor future performance.	Completed	6/29/2011	Intelligent switching scheme has been turned off and will be removed entirely to be replaced with traditional recloser controls. Monitor future performance for improvement.
10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2012	Customers with greather than 3 Outages was the largest contributor to the poor CPI. Trees falling from outside the right of way, conductor failure, and misoperation of SISRS devices caused a large number of outages as well as long restoration times.
1/9/2012: Replacing old circuit automation controls. Improve fault location, restoration time, and communication with devices.	Scheduled for	12/9/2014	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
32	Circuit ID: 52402 GREEN PARK 24-02			Location: West Shore
				CPI: 555
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/25/2011	The Green Park 24-02 line is a long radial distribution circuit at the western edge of PPL territory. The feeder has approximately 1,645 customers across 139 circuit miles. The largest CPI contributors have been the percentage of customers with greater than 3 interruptions and SAIDI. Two of the largest interruptions occurred when a failed insulator on the Green Park 69kV tap interrupted the JUNI-SDLE 69kV line. The single distribution tie to New Bloomfield Substation limited the number of customers on Green Park Substation that could be restored while repairs were being made. Local areas of the circuit were also heavily hit during the 02/02/11 ice storm.
	5/25/2011: Improve sectionalizing capability. Install automated ROCS devices between the Green Park 24-02 and Green Park 24-03 circuits to allow for faster sectionalizing.	Completed	6/8/2012	Reduced outage duration.
	5/25/2011: Install fuse(s). Install additional fusing on a CEMI tap to reduce the exposure seen by customers.	Completed	1/6/2012	Reduced outage risk.
	5/25/2011: Install 1 phase OCR(s). Replace a single phase 1004H recloser at to a 140V4h recloser for increased reliability and better coordination.	Completed	3/29/2012	Reduced outage risk.
	5/25/2011: Reconductor line. Reconductor approximately 8,500 feet of single phase CWC to 1/0 ACSR XLP or equivalent.	Scheduled for	12/31/2012	
	8/24/2011: Repair the failed circuit breaker on the Juniata-Shermansdale 69kV line. This line serves approximately 7,500 customers at Benvenue, Green Park, New Bloomfield, Shermansdale, and South Shermansdale substations.	Completed	8/24/2011	Reduced outage.risk.
	3/12/2012: Tree trimming. Trim 9 mile Green Park 69 kV transmission tap as part of its vegetation management cycle.	Scheduled for	12/31/2012	
	3/12/2012: Tree trimming. Trim circuit as part of its four year vegetation management cycle.	Scheduled for	12/31/2012	
	7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012	
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	
33	Circuit ID: 28704 HAMLIN 87-04			Location: Pocono
				CPI: 553
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	7/24/2012	Inconclusive. Monitor future performance. The Hamlin 87-4 12kV line was completed on November 2011. Since its completion, this line experienced 9 total outages which included one OCR outage on April 9, 2012. This outage occurred when a tree from outside PPL's right of way came in contact with the primary conductor and resulted with 320 PPL customers out of power. The outage totaled 69,747 CMI. The remaining 8 outages were a result of fuse and transformer outages due to trees from outside of PPL's right of way and animal contacts. All animal outages resulted in animal guarding to prevent future outages at the same location. This circuit will be monitored for future performance.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
34	Circuit ID: 13904 SEIDERSVILLE 39-04			Location: Bethlehem
				CPI: 552
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	
35	Circuit ID: 45402 WEST BLOOMSBURG 54-02			Location: Sunbury
				CPI: 550
	11/13/2007: Install 3 phase OCR(s). Replace OCR 37694N30236 with telemetric OCR.	Completed	7/29/2011	Reduced outage duration.
	5/15/2008: Perform line maintenance identified by line inspection. Eliminate exposure of unused 3 phase line by Rte 487 bridge.	Completed	7/29/2011	Reduced outage risk.
	11/26/2008: Install 3 phase OCR(s). Upgrade OCR 38029N29537 with Telemetric VCR.	Completed	7/29/2011	Reduced outage duration.
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	6/14/2012	On February 20, 2012 all of the customers on this circuit were out of service when two conductors came down and contacted the ground at 36113N30401. Restoration was delayed due to switching problems caused by cold load pick-up. On September 15, 2012 and September 27, 2012 the WBLO 54-2 Sect VCR at 37624N30209 tripped and did not reclose due to a Temporarily Cleared Green Tag Permit. There are 748 customers downstream from this device. This Green tag permit was likely taken out during construction of the WBLO 54-2 to WBER 53-3 tie. On May 27, 2011 a transmission outage left all of the customers on this circuit out of service for 4.5 hours.
36	Circuit ID: 22001 BOHEMIA 20-01			Location: Pocono
				CPI: 536
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/15/2012	Inconclusive. Monitor future performance. This circuit was reviewed at the Northeast WPC meeting on 3/12/2012. The circuit experienced a total of four circuit breaker outages within the past four quarters with a primary outage cause of trees from outside of PPL's right of way. There were also a total of six OCR outages with the primary outage cause of trees. Progressive solutions to these issues include a new 12 kV line construction at the Bohemia substation. This new line will add tie capabilities along with a new source which will help to mitigate both outage durations and customer exposure to outages in the future. Since this line has not been a consistent bad performer, future performance will be closely monitored.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
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37 Circuit ID: 28302 NEWFOUNDLAND 83-02

Location: Pocono

CPI: 502

10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.

Scheduled for 11/30/2010

10/21/2010: Tree trimming.

Completed 10/21/2010

Reduced outage risk. Circuit recently trimmed. A new 3 phase tie line between Tafton 80-1 and Newfoundland 83-2 is currently being engineered and is expected to be completed by the end of 2011. The new tie will allow greater operational flexibility, reduce outage exposure, and increase ability to remotely isolate and restore customers.

7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.

Scheduled for 7/24/2012

Inconclusive. Monitor future performance. This circuit has not been on the WPC list for several quarters. On May 4, 2012 approximately 2800 PPL experienced an outage due to a substation relay malfunction. PPL crews addressed the problem with the relay and restored all affected customers. The outage resulted in a total CMI of 272,000. On March 3, 2012 OCR at grid number 66457N41772 tripped open due to a downstream vehicle accident. The outage affected 430 customers and had a total CMI of 207,000. A new tie line is currently in engineering that will mitigate customer exposure to these outages. PPL field engineers along with PPL's Distribution Planning department will continue to monitor future performance on the line.

38 Circuit ID: 28701 HAMLIN 87-01

Location: Pocono

CPI: 501

7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.

Scheduled for 8/31/2012

39 Circuit ID: 43105 SOUTH MILTON 31-05

Location: Sunbury

CPI: 495

7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.

Scheduled for 8/31/2012

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
40	Circuit ID: 11001 EAST GREENVILLE 10-01			Location: Bethlehem
				CPI: 482
	4/9/2009: Improve sectionalizing capability. Project being developed to resectionalize trouble spots and add better fusing scheme to limit customer exposure. Inaccessible portion of the line will be re-fed from a new single phase section.	Canceled	2/24/2011	
	4/9/2009: Reconductor line. Reconductor and relocate 20 spans to the road.	Completed	11/30/2010	Reduced outage risk. Line relocated to reduce risk of outage for customers
	4/9/2009: Improve sectionalizing capability. Install new OCR, replace existing OCR with telemetric OCR.	Completed	8/20/2010	Reduced outage risk.
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/30/2010	Customers experiencing greater than three outages was the greatest contributor to the CPI. This was due to several tree related outages (due to non-tree trimming related outages) and one instance of equipment failure on the line. Tree trimming is planned for the line in 2011.
	8/20/2010: Line Inspection and Maintenance	Completed	12/31/2011	Two new projects have been identified and are currently being engineered.
	4/18/2011: Tree trimming. Trim East Greenville 10-01 circuit as part of 4 year vegetation management cycle. Efforts are being made to ensure circuit is at the top of the spring 2011 trim priority.	Completed	12/30/2011	Reduced outage risk.
	5/17/2011: Quarterly WPC Meeting	Completed	5/17/2011	Discussed reliability options and the idea of a new substation to improve reliability in the area. Verified that a new remote controlled switch was installed at 62085S42120.
	6/17/2011: Install telemetric recloser at 62160S41744. WR608684. Improve sectionalizing and add fault detection.	Scheduled for	12/17/2012	
	6/17/2011: Install new remotely operated control switch near 61799S42443. Improve sectionalizing and fault detection. WR 500785	Completed	5/1/2012	Reduced outage duration.
	6/17/2011: Install new substation near the end of the feeder.	Scheduled for	11/30/2015	
	1/9/2012: Reconfigure circuit by removing a single phase recloser and installing two new ones down stream. WR 603059. Improve reliability by reducing the number of customers that experience an outage.	Scheduled for	5/1/2013	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
41	Circuit ID: 53602 DALMATIA 36-02			Location: Harrisburg	CPI: 480
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	5/22/2012	Inconclusive. Monitor future performance.	
	7/16/2012: Construct a new 69-12 kV substation in the Meiserville area to reduce customer counts and circuit miles on the Dalmatia 36-02 12kV line. The new substation will also increase transfer capability by providing a new source in the area with remote operator controlled devices. The substation was originally intended to go into service in November 2012 but has been delayed by land acquisitions and condemnation proceedings. If a successful resolution can be reached with outstanding property owners by the end of 2012, the new substation will be scheduled for completion by second quarter 2014.	Scheduled for	5/30/2014		
	7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012		
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012		
42	Circuit ID: 41601 CLEVELAND 16-01			Location: Central	CPI: 479
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2011	This feeder had multiple tree outages caused by a storm on 6/10/11 that resulted in a total of 203,000 customer minutes interrupted. Since the beginning of 2011, 23 customers have experienced 6 outages on this feeder. Distribution Planning will analyze a project to reduce the number of outages seen by this group of customers. This feeder has not been trimmed for 6 years and is planned for trimming in 2012.	
	9/29/2011: Circuit outage data analysis. Between January 2011 to September 2011, 23 customers have experienced 6 outages on this feeder. Distribution Planning will analyze projects to mitigate the number of outages seen by these customers.	Completed	12/1/2011	A project was identified to install a recloser to improve sectionalizing. With the recloser installed, the 23 customers that had 6 outages would have experienced 3 less outages in 2011.	
	1/4/2012: Improve sectionalizing capability. Install a sectionalizer to reduce the exposure to customers experiencing multiple interruptions.	Completed	5/16/2012	A 400 amp sectionalizer was installed under WO# 42018137. Also, fault indicators at two locations were installed on this line to help detect the fault location during outages and expedite the restoration time.	
43	Circuit ID: 47705 BLOOMSBURG 77-05			Location: Sunbury	CPI: 464
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	6/14/2012	The Bloomsburg substation and customers served by this circuit were subjected to historical flood conditions. The flooding was caused by record setting rainfalls from tropical storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding and some of our customers services were under water. No long term plan is required at this time. PPL will continue to monitor this circuit's performance.	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
44	Circuit ID: 53803 MILLERSBURG 38-03			Location: Harrisburg CPI: 449
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.
	7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012	
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	
45	Circuit ID: 44601 SALEM 46-01			Location: Sunbury CPI: 448
	1/11/2010: Expanded Operational Review.	Completed	12/31/2010	Reduced outage risk.
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/19/2012	This circuit was reviewed at the Susquehanna WPC meeting on 3/19/12. The Shickshinny area and customers served by this circuit were subjected to historical flood conditions. The flooding was caused by record setting rainfalls from tropical storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding and some of our customer's services were under water. On December 7, 2011 all of the customers on this circuit experienced an outage due to the circuit breaker operating to lockout. A defective OCR that protects the tap to the SSES Nuclear Power plant in Berwick was found to be the cause of the outage. This customer owned OCR has been removed and replaced.
	4/13/2012: Tree trimming-selected line segments only (hot spots).	Completed	3/20/2012	Reduced outage risk. Removed hazard tree west of pole # 44103N35809
	4/13/2012: Line inspection-equipment.	Completed	5/10/2012	Reduced outage risk. The line was patrolled by a Line Maintenance Inspector. Damaged dead end insulators were identified. The insulators were replaced.
46	Circuit ID: 22802 HAUTO 28-02			Location: Central CPI: 446
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/29/2012	This circuit became a WPC this quarter due to one large tree outage in July, 2011 that lasted nearly two days. This feeder is currently radial, having 564 customers without the ability to transfer during outage situations. Planning will analyze building a new tie to improve sectionalizing capability.
	4/12/2012: Planning to analyze building a new tie to improve sectionalizing capability.	Completed	7/23/2012	Planning analyzed the creation of a tie to improve sectionalizing capability. Analysis indicates that construction of a new tie would not contribute to improved reliability. One significant outage due to a tornado is the driver for this circuit appearing on the WPC list.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
47	Circuit ID: 47502 NEW COLUMBIA 75-02			Location: Sunbury CPI: 444
	1/6/2011: Expanded Operational Review. EOR Planned for 2011	Completed	12/31/2011	Reduced outage risk. A crimp in the secondary was discovered on 2/9/11 during Thermographic Inspection. Repairs were made on 5/18/11 under WR 641824.
	1/6/2011: Thermographic inspection-OH line. Thermovision Inspection of 2 and 3 phase sections to be completed early 2011.	Completed	2/8/2011	Reduced outage risk. Completed 2/9/2011 - All necessary repairs completed.
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	9/19/2011	This circuit was reviewed at the Susquehanna WPC meeting on 9/19/11. The largest contributor to the circuit performance index was a SAIDI contribution of 42.8%. On April 28, 2011 a microburst took down several spans of three phase circuit which caused the circuit breaker to open. Due to the extensive damage all of the customers on this line were out of service for 1,945 minutes. PPL will continue to monitor this circuit's future performance.
48	Circuit ID: 14801 TREICHLERS 48-01			Location: Lehigh CPI: 442
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	
49	Circuit ID: 51003 NO HARRISBURG 10-03			Location: Harrisburg CPI: 434
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/12/2012	The North Harrisburg 10-3 line is a short urban circuit in downtown Harrisburg. The feeder has approximately 1,700 customers across 19 circuit miles. The largest CPI contributor was circuit SAIDI. This can be attributed to a single outage during the Tropical Storm Lee flooding. Under the direction of the city of Harrisburg, PPL crews cut power to the entire circuit due to flooding concerns. As the waters receded, customers were reenergized. The circuit has never experienced a history of poor reliability. The flooding of Tropical Storm Lee is considered to be a one in a hundred year flood. Circuit performance will continue to be monitored to determine whether further action is required.
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Inconclusive. Monitor future performance.
	7/16/2012: Circuit outage data analysis.	Completed	7/16/2012	The North Harrisburg 10-3 line remains on the WPC list after three consecutive quarters. The largest contributor to the CPI continues to be the extended outage during Tropical Storm Lee flooding. The circuit has performed well since and is expected to drop off the WPC list next quarter once the outage falls out of the CPI calculation.
50	Circuit ID: 43101 SOUTH MILTON 31-01			Location: Sunbury CPI: 432
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
51	Circuit ID: 44904 SCOTT 49-04			Location: Sunbury CPI: 421
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	
52	Circuit ID: 24901 WHITE HAVEN 49-01			Location: Wilkes-Barre CPI: 411
	7/2/2010: Expanded Operational Review.	Completed	12/31/2010	Inconclusive. Monitor future performance.
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	
53	Circuit ID: 26105 THROOP 61-05			Location: Scranton CPI: 402
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	9/30/2012	
54	Circuit ID: 54505 ENOLA 45-05			Location: West Shore CPI: 401
	1/26/2011: Expanded Operational Review.	Completed	3/31/2011	Inconclusive. Monitor future performance.
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	
55	Circuit ID: 54603 SUMMERDALE 46-03			Location: West Shore CPI: 394
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Inconclusive. Monitor future performance.
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/22/2012	The Summerdale 46-03 line has never experienced a history of poor reliability. 2012 Q1 is the first time the circuit has appeared on the WPC list. The line has approximately 1,600 customers across 60 circuit miles. The circuit breaker experienced two interruptions in the past year due to the ground relay tripping during a period of high load imbalance. The System Operator temporarily disabled the relay on the second trip.
				In addition to the breaker outage, a recloser serving approximately 800 customers experience two interruptions in the past year. Both interruptions were tied to a single equipment failure.
	5/22/2012: Install new line and terminal. Construct a new line and terminal out of Wertzville substation to reduce the loading, customer counts, and circuit miles of the Summerdale 46-03 line.	Scheduled for	5/30/2017	
	5/22/2012: Load balancing. Extend a second phase to a large underground residential development to better balance loading.	Scheduled for	5/30/2013	
	7/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
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56 Circuit ID: 60502 NORTH MANHEIM 05-02

Location: Lancaster

CPI: 394

2/4/2011: Thermographic inspection-OH line.	Completed	2/4/2011	Reduced outage risk.
2/4/2011: Line inspection-equipment. Line Inspection on 2 & 3 phase equipment - 15.6 miles	Completed	2/23/2011	Reduced outage risk.
7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	

57 Circuit ID: 46206 DANVILLE 62-06

Location: Sunbury

CPI: 393

10/25/2007: Relocate inaccessible line.	Completed	10/28/2010	Reduced outage risk. Relocated inaccessible portion of Pine Swamp Hollow Tap on Danville 62-06.
10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WPC meeting on 12/1/11. The Danville area and customers served by this circuit were subjected to historical flood conditions. The flooding was caused by record setting rainfalls from tropical storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding. This circuit was not on the WPC list before. PPL will continue to monitor this circuit's performance.
7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	8/31/2012	

58 Circuit ID: 47501 NEW COLUMBIA 75-01

Location: Sunbury

CPI: 384

1/6/2011: Thermographic inspection-OH line. Thermovision inspection of 2 and 3 phase sections to be completed early 2011.	Completed	2/9/2011	Reduced outage risk. All necessary repairs completed.
1/6/2011: Expanded Operational Review. EOR Planned for 2011.	Completed	12/31/2011	No problems were identified.
7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	9/19/2011	This circuit was reviewed at the Susquehanna WPC meeting on 9/19/11. The largest contributor to the circuit performance index was a SAIDI contribution of 64.25%. On April 28, 2011 a microburst took down several spans of three phase circuit which caused the circuit breaker to open. Due to the extensive damage all of the customers on this line were out of service for 2,077 minutes. PPL will continue to monitor this circuit's future performance.

- 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 reported.*

The following table shows a breakdown of service interruption causes for the 12 months ended at the current quarter. The top three causes (Equipment Failures, Trees--Not Trimming Related, and Animals), which are based on the percent of cases of trouble, are highlighted in the table. Service interruption definitions are provided in Appendix B. PPL Electric's maintenance programs focus on corrective actions to address controllable service interruptions (e.g., trees and equipment failure).

Cause Description	Trouble Cases ⁹	Percent of Trouble Cases	Customer Interruptions ¹⁰	Percent of Customer Interruptions	Customer Minutes	Percent of Customer Minutes
Animals	2,953	18.56%	56,134	4.28%	4,957,492	2.68%
Contact/Dig-In	158	0.99%	25,579	1.95%	2,173,719	1.17%
Directed by Non-PPL Authority	223	1.40%	11,865	0.90%	3,975,623	2.15%
Equipment Failures	5,505	34.59%	440,047	33.54%	53,101,453	28.66%
Improper Design	2	0.01%	1,580	0.12%	44,438	0.02%
Improper Installation	1	0.01%	1	0.00%	121	0.00%
Improper Operation	23	0.14%	20,960	1.60%	793,905	0.43%
Nothing Found	1,394	8.76%	120,030	9.15%	7,533,769	4.07%
Other-Controllable	94	0.59%	19,414	1.48%	6,717,067	3.62%
Other-Non Control	431	2.71%	66,471	5.07%	12,025,258	6.49%
Other-Public	76	0.48%	9,337	0.71%	1,123,047	0.61%
Trees-Not Trimming	3,682	23.14%	349,614	26.64%	66,865,209	36.08%
Trees-Trimming	672	4.22%	36,683	2.80%	8,900,865	4.80%
Vehicles	700	4.40%	154,405	11.77%	17,095,923	9.23%
Total	15,914	100.00%	1,312,120	100.00%	185,307,890	100.00%

⁹ Cases of trouble are the number of sustained customer service interruptions (i.e., service outages).

¹⁰ The data reflects the number of customers interrupted for each interruption event summed for all events, also known as customer interruptions. If a customer is affected by three separate cases of trouble, that customer represents three customer interruptions, but only one customer interrupted.

Analysis of causes contributing to the majority of service interruptions:

Weather Conditions: PPL Electric records weather conditions, such as wind or lightning, as contributing factors to service interruptions, but does not code them as direct interruption causes. Therefore, some fluctuations in cause categories, especially tree- and equipment-related causes, are attributable to weather variations. PPL Electric has experienced an elevated level of both reportable and non-reportable storms during this reporting period.

Trees – Trimming Related: On January 1, 2010, PPL Electric initiated a prescriptive tree trimming program that moved maintenance trimming cycles to five years for all circuits in the northern portion of its service area and four years for all circuits in the southern portion of its service area. These cycles are inclusive of both urban and rural circuits, and will shorten the overall average trimming cycle for the system. Several more years will be required for the program to reach its full effectiveness on all circuits

Trees – Not Trimming Related: Although their effect on reliability is significant, tree outages not related to trimming generally are caused by trees falling from outside of PPL Electric's rights-of-way, and generally are not controllable.

Animals: Animals accounted for about 18.5% of PPL Electric's cases of trouble. Although this represents a significant number of cases, the effect on SAIFI and CAIDI is small because nearly 80% of the number of cases of trouble was associated with individual distribution transformers. However, when animal contacts affect substation equipment, the effect may be widespread and potentially can interrupt thousands of customers on multiple circuits. In addition to guarding new distribution transformers and substations, in 2009, PPL Electric initiated distribution and substation animal guarding programs to focus systematically on protecting existing facilities most at risk of incurring animal-caused interruptions.

Vehicles: Although vehicles cause a small percentage of the number of cases of trouble, they accounted for a large percentage of customer interruptions and customer minutes, because main distribution lines generally are located along major thoroughfares with higher traffic densities. In addition, vehicle-related cases often result in extended repair times to replace broken poles. Service interruptions due to vehicles are on the rise as a result of an increasing number of drivers and vehicles on the road. PPL Electric has a program to identify and relocate poles that are subject to multiple vehicle hits.

Equipment Failure: Equipment failure is one of the largest single contributors to the number of cases of trouble, customer interruptions and customer minutes. However, approximately 48% of the cases of trouble, 46% of the customer interruptions and 56% of the customer minutes attributed to equipment failure were weather-related and, as such, are not considered to be indicators of equipment condition or performance. In 2009, to help reduce the risk of incurring interruptions due to equipment failures, PPL Electric initiated an Asset Optimization Strategy project to assess equipment health and generate a long-term plan for proactive infrastructure replacement and enhanced maintenance practices. It is anticipated that, over time, this strategy will improve reliability performance as it pertains to PPL Electric's distribution, substation and transmission assets.

Nothing Found: This description is recorded when the responding crew can find no cause for the interruption. That is, when there is no evidence of equipment failure, damage, or contact after a line patrol is completed. For example, during heavy thunderstorms, when a line fuse blows or a single-phase OCR locks open and when closed for test, the fuse holds, or the OCR remains closed, and a patrol reveals nothing.

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.)*

Inspection & Maintenance Goals/Objectives	Annual Budget	2nd Quarter		Year-to-date	
		Budget	Actual	Budget	Actual
Transmission					
Transmission C-tag poles (# of poles)	240	38	46	102	103
Transmission arm replacements (# of sets)	50	23	7	36	22
Transmission air break switch inspections (# of switches)	64	21	7	26	10
Transmission lightning arrester installations (# of sets)	0	0	0	0	1
Transmission pole inspections (# of poles)	0	0	0	0	0
Transmission tree side trim-Bulk Power (linear feet)	N/A				
Transmission herbicide-Bulk Power (# of acres)	N/A				
Transmission reclearing (# of miles) BES Only	637.34	296.17	206.66	616.00	629.54
Transmission reclearing (# of miles) 69 kv	865.95	101.36	133.28	116.63	149.97
Transmission reclearing (# of miles) 138 kv	296.60	21.63	19.3	21.63	19.3
Transmission danger tree removals-Bulk Power (# of trees)	N/A				
Substation					
Substation batteries (# of activities)	885	127	100	600	610
Circuit breakers (# of activities)	1495	289	277	593	548
Substation inspections (# of activities)	5227	1237	1229	2689	2721
Transformer maintenance (# of activities)	2186	644	582	1186	1131
Distribution					
Distribution C-tag poles replaced (# of poles)	2,126	753	564	1,295	1,263
C-truss distribution poles (# of poles)	6,092	1,900	1,637	3,600	2,531
Capacitor (# of Work Requests)	80	29	27	61	56
OCR replacements (# of)	644	189	151	431	413
Distribution pole inspections (# of poles)	90,000	31,505	23,203	45,015	57,026
Distribution line inspections (# of miles)	5,040	1,512	1,415	2,016	2,412
Group re-lamping (# of lamps)	26,869	12,000	11,968	15,000	15,631
Test sections of underground distribution cable	493	126	55	243	155
Distribution tree trimming (# of miles)	7087.50	1768.00	1671.00	3264.00	3696.00
Distribution herbicide (# of acres)	N/A				
Distribution >18" removals within R/W (# of trees)	N/A				
Distribution hazard tree removals outside R/W (# of trees)	N/A				

Inspection & Maintenance Goals/Objectives	Annual Budget	2nd Quarter		Year-to-date	
		Budget	Actual	Budget	Actual
LTN manhole inspections (# of)	132	37	52	92	93
LTN vault inspections (# of)	774	162	155	366	335
LTN network protector overhauls (# of)	71	17	7	28	23
LTN reverse power trip testing (# of)	141	35	29	71	53

- 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.)*

The following table provides the operation and maintenance expenses for PPL Electric, as a whole, which includes the work identified in response to Item (6).

Activity	2nd Quarter		Year-to-date	
	Budget (\$000)	Actual (\$000)	Budget (\$000)	Actual (\$000)
Provide Electric Service	2,402	2,629	4,344	5,403
Vegetation Management	10,779	12,934	21,821	22,678
Customer Response	15,708	16,977	28,658	27,600
Reliability & Maintenance	17,419	15,985	33,422	32,150
System Upgrade	461	385	715	609
Customer Services/Accounts	29,311	29,569	59,007	59,413
Others	15,534	15,440	31,593	31,230
Total O&M Expenses	91,614	93,919	179,560	179,083

- 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.)*

The following table provides the capital expenditures for PPL Electric, as a whole, which includes transmission and distribution ("T&D") activities.

	2ndt Quarter		Year-to-date	
	Budget (\$000)	Actual (\$000)	Budget (\$000)	Actual (\$000)
New Service/Revenue	19,461	18,136	35,942	38,926
System Upgrade	56,997	47,219	115,836	83,885
Reliability & Maintenance	58,391	49,877	107,711	91,560
Customer Response	1,956	-2,229	3,904	991
Other	4,650	3,184	10,742	8,117
Total	141,455	116,187	274,135	223,479

- 9) *Dedicated staffing levels for transmission and distribution operation and maintenance at the end of the quarter, in total and by specific category (for example, linemen, technician and electrician).*

The following table shows the dedicated staffing levels as of the end of the quarter. Job descriptions are provided in Appendix C.

Transmission and Distribution (T&D)	
Lineman Leader	75
Journeyman Lineman	185
Journeyman Lineman-Trainee	118
Helper	24
Groundhand	4
Troubleman	53
T&D Total	459
Electrical	
Elect Leaders-UG	6
Elect Leaders-Net	10
Elect Leaders-Sub	23
Journeyman Elect-UG	30
Journeyman Elect-Net	13
Journeyman Elect-Sub	60
Journeyman Elect Trainee-UG	1
Journeyman Elect Trainee-Net	13
Journeyman Elect Trainee	21
Helper	16
Laborer-Network	0
Laborer-Substation	0
Electrical Total	193
Overall Total	652

***PPL Electric Utilities Corporation
Worst Performing Circuit Definition***

PPL Electric uses a Circuit Performance Index (CPI) to define the worst performing circuits on its system. The CPI covers about 1,100 feeders across the PPL Electric service area.

The CPI is derived using the following statistics and weighting factors:

- SAIDI - 35%
- SAIFI - 30%
- Fraction of customers interrupted more than three times - 20%
- Fraction of customers with an interruption over four hours - 15%

Major Events, momentary interruptions, and planned prearranged jobs are excluded.

The CPI values are obtained by multiplying the individual feeder statistics by coefficients based on the 5-year period, 2001-2005. Average values over this period were:

- SAIDI – 121.9 per customer per year
- SAIFI – 0.929 per customer per year
- Fraction of customers interrupted more than three times - 4% per feeder per year
- Fraction of customers with an interruption over four hours - 10% per feeder per year

A hypothetical feeder with the values of SAIDI, SAIFI, and the fraction of customers interrupted more than three times, and the fraction of customers with an interruption over four hours, equal to the 5-year averages would have a CPI value of 100. Any variations in the values of the above criteria would affect the CPI values in accordance with the weighting factors.

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***PPL Electric Utilities Corporation
Service Interruption Definitions***

Trouble Definitions: After field investigations and repairs are complete, PPL Electric linemen report the cause of each case of trouble. This information is electronically recorded as a “cause code” number when the job record is closed. PPL Electric cause codes are subdivided into four general classifications: Controllable, Non-Controllable, Public and Non-PPL Electric. The definitions of the cause codes are:

10 – Improper Design	Controllable	<ul style="list-style-type: none">• When an employee or agent of PPL Electric is responsible for an error of commission or omission in the engineering or design of the distribution system. (Facility Records personnel use only)
11 – Improper Installation	Controllable	<ul style="list-style-type: none">• When an employee or agent of PPL Electric is responsible for an error of commission or omission in the construction or installation of the distribution system. (Facility Records personnel use only)
12 – Improper Operation	Controllable	<ul style="list-style-type: none">• When an employee or agent of PPL Electric is responsible for an error of commission or omission in the operation or maintenance of the distribution system. (Facility Records personnel use only)
30 – Trees – Trimming Related ¹¹	Controllable	<ul style="list-style-type: none">• Outages resulting from conductors contacted by tree growth within the clearance zone defined by the current trimming specification (within the Rights-of-Way).
35 – Trees – Not Trimming Related	Non-Controllable	<ul style="list-style-type: none">• Outages due to trees, but not related to lack of proper tree trimming maintenance. This includes danger timber blown into PPL Electric facilities, and trees or limbs felled by the public.
40 – Animals	Controllable	<ul style="list-style-type: none">• Any outage caused by an animal directly or indirectly coming in contact with PPL Electric facilities. This includes birds, squirrels, raccoons, snakes, cows, etc.
41 – Vehicles	Public	<ul style="list-style-type: none">• When cars, trucks or other types of vehicles or their cargoes strike facilities causing a problem.

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¹¹ The title and description of this code have been revised for clarity. The purpose and application of the code have not changed.

Appendix B

51 – Contact/Dig-in	Public	<ul style="list-style-type: none"> • When work in the vicinity of energized overhead facilities results in interruptions due to accidental contact by cranes, shovels, TV antennas, construction equipment (lumber, siding, ladders, scaffolding, roofing, etc.). • When contact is made by a non-employee with an underground facility causing interruption.
60 – Equipment Failure	Controllable	<ul style="list-style-type: none"> • Outages resulting from equipment failures caused by corrosion or contamination from build-up of materials, such as cement dust or other pollutants. • Outages resulting from a component wearing out due to age or exposure, including fuse tearing or breaking. • Outages resulting from a component or substance comprising a piece of equipment failing to perform its intended function. • Outages resulting from a failure that appears to be the result of a manufacturer’s defect or can not be described by any other code indicating the specific type of failure.
77 – Non-PPL Electric Problem – Other	Non-PPL Electric	<ul style="list-style-type: none"> • Where no PPL Electric or customer facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
78 – Non-PPL Electric Problem – Customer Facility	Non-PPL Electric	<ul style="list-style-type: none"> • Where no PPL Electric facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
80 – Scheduled Outage ¹²	Controllable	<ul style="list-style-type: none"> • Interruptions under the control of a PPL Electric switchman or direction of a PPL Electric System Operator for the purpose of performing <u>scheduled</u> maintenance, repairs and capacity replacements for the safety of personnel and the protection of equipment. • Includes requests from customers for interruption of PPL Electric facilities.

¹² Interruptions under the control of a PPL Electric switchman or the direction of a PPL Electric System Operator for the purpose of isolating damaged facilities to make repairs are reported using the initial cause of the damage when the interruption is taken immediately, but are reported as a scheduled outage when the interruption is postponed.

Appendix B

85 – Directed by Non-PPL Electric Authority	Non-Controllable	<ul style="list-style-type: none"> • Interruptions under the control of a PPL Electric switchman or direction of a PPL Electric System Operator for the purpose of dropping load or isolating facilities upon request during emergency situations. • Interruptions which cannot be postponed or scheduled for a later time, and include situations like load curtailment during system emergencies, and requests of civil authorities such as fire departments, police departments, civil defense, etc. for interruption of PPL Electric facilities.
90 – Other – Controllable (Lineman provides explanation)	Controllable	<ul style="list-style-type: none"> • Interruptions caused by phase to phase or phase to neutral contacts, resulting from sleet or ice dropping off conductors, galloping conductors, or any other phase to phase or phase to neutral contact where weather is a factor. • Interruptions resulting from excessive load that cause that facility to fail. • When restoration of service to a facility, which had been interrupted for repairs or other reasons, causes an additional interruption to another facility which had not been involved in the initial interruptions. • Controllable interruptions or Power Service Problems whose cause is not described by one of the previous controllable cause codes.
96 – Nothing Found	Non-Controllable	<ul style="list-style-type: none"> • When no cause for the interruption can be found. • When there is no evidence of equipment failure, damage or contact after line patrol is completed. This could be the case during a period of heavy thunder and lightning, when a line fuse blows or a single phase OCR locks open. • When closed for test, the fuse holds or the OCR remains closed. A patrol of the tap reveals nothing.
98 – Other Public (Lineman provides explanation)	Public	<ul style="list-style-type: none"> • All outages resulting from gunfire, civil disorder, objects thrown, or any other act intentionally committed for the purpose of disrupting service or damaging company facilities.

Appendix B

99 – Other – Non-Controllable (Lineman provides explanation)	Non-Controllable	<ul style="list-style-type: none">• Any outage occurring because of a fire, flood or a situation that develops as a result of a fire or flood. Do not use when facilities are de-energized at the request of civil authorities.• When an interruption is caused by objects other than trees, such as kites, balls, model airplanes, roofing material, or fences, being accidentally blown or thrown into overhead facilities.• All problems caused by contact of energized equipment with facilities of other attached companies or by trouble on customer owned equipment.• Interruptions or power service problems whose cause is not described by one of the previous non-controllable cause codes, but is not affected by a PPL Electric employee's decisions.
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***PPL Electric Utilities Corporation
Job Descriptions***

Transmission and Distribution

Groundhand	<ul style="list-style-type: none">• Performs manual labor and assists employees in higher job classifications.
Helper	<ul style="list-style-type: none">• Performs semi-skilled labor at any work location on de-energized overhead and underground transmission, and distribution facilities to prepare the employee for entrance into the Journeyman Lineman Apprenticeship Program.
Journeyman Lineman	<ul style="list-style-type: none">• Works by himself or as part of a crew on the maintenance, operation, and construction activities of the transmission and distribution systems associated with, but not limited to, PPL Electric facilities.
Journeyman Lineman-Trainee	<ul style="list-style-type: none">• Works by himself or as part of a crew on the maintenance, operation, and construction activities of the transmission and distribution systems associated with, but not limited to, PPL Electric facilities.
Lineman Leader	<ul style="list-style-type: none">• Responsible for completing assigned work by directing one or multiple groups of employees involved in the maintenance, operation, and construction activities of the transmission and distribution systems associated with, but not limited to, PPL Electric facilities.• Engage in and perform work along with providing the necessary leadership, all-around knowledge, initiative, judgment, and experience to produce a quality job.• Performs all the direct duties of the Journeyman Lineman when not acting as a Lineman Leader.
Troubleman	<ul style="list-style-type: none">• Investigates and resolves trouble calls, voltage abnormalities on transmission and distribution systems associated with, but not limited to, PPL Electric facilities.

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Electrical

<p>Electrician Leader</p> <ul style="list-style-type: none">- Substation- Network- Underground	<ul style="list-style-type: none">• Responsible for completing assigned work by directing one or multiple groups of employees involved in the construction and maintenance activities of the transmission and distribution systems associated with, but not limited to, PPL Electric facilities.• Engage in and perform work along with providing the necessary leadership, all-around knowledge, initiative, judgment, and experience to produce a quality job.• Performs all direct duties of the Journeyman Electrician when not acting as a leader.
<p>Helper</p> <ul style="list-style-type: none">- Substation- Network- Underground	<ul style="list-style-type: none">• Performs manual labor at any work location including those areas containing non-exposed energized electrical equipment, and to prepare the employee for entrance into the Apprenticeship Program.
<p>Laborer</p> <ul style="list-style-type: none">- Substation- Network- Underground	<ul style="list-style-type: none">• Performs manual labor and assists employees in higher job classifications.
<p>Journeyman Electrician</p> <ul style="list-style-type: none">- Substation- Network- Underground	<ul style="list-style-type: none">• Normally under limited supervision performs and is responsible for work associated with, but not limited to, PPL Electric facilities involving the highest degree of skill in construction and maintenance work associated with substations, LTN or underground distribution and transmission.• Uses microprocessor based equipment for troubleshooting and revising relay logic and its control systems related to the Field Services electrical discipline.
<p>Journeyman Electrician - Trainee</p> <ul style="list-style-type: none">- Substation- Network- Underground	<ul style="list-style-type: none">• Normally under limited supervision performs and is responsible for work associated with, but not limited to, PPL Electric facilities involving the highest degree of skill in construction and maintenance work associated with substations, LTN or underground distribution and transmission.• Uses microprocessor based equipment for troubleshooting and revising relay logic and its control systems related to the Field Services electrical discipline.

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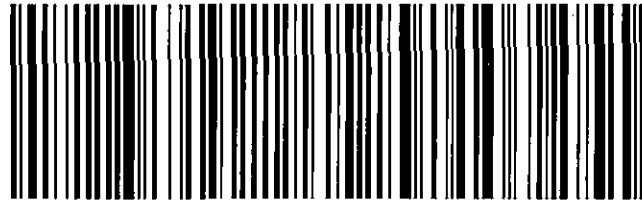
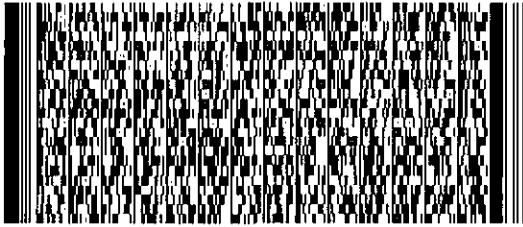
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