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**FEDERAL EXPRESS**

April 29, 2011

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

**RECEIVED**  
APR 29 2011  
PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

**Re: PPL Electric Utilities Corporation  
Quarterly Reliability Report for the  
Period Ended March 31, 2011  
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 March 31, 2011. 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 April 29, 2011, 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.

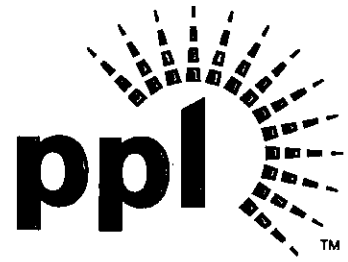
If you have any questions regarding this document, please call me or Joseph M. Kleha, PPL Electric's Manager-Regulatory Compliance and Rates at (610) 774-4486.

Very truly yours,

Paul E. Russell

Enclosures

cc: Mr. Darren Gill  
Mr. Daniel Searfoorce



**PPL Electric Utilities**

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

*April 2011*

**RECEIVED**

APR 29 2011

PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

- 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 events during this quarter that met the criteria for a major event.

- 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 March 31, 2011.

<b>SAIFI (Benchmark = 0.98; Rolling 12-month Std. = 1.18)</b>	1.162
<b>CAIDI (Benchmark = 145; Rolling 12-month Std. = 174)</b>	131
<b>SAIDI (Benchmark = 142; Rolling 12-month Std. = 205)</b>	153
<b>MAIFI<sup>1</sup></b>	4.757
<b>Average Number of Customers Served<sup>2</sup></b>	1,388,780
<b>Number of Sustained Customer Interruptions (Trouble Cases)</b>	20,427
<b>Number of Customers Affected<sup>3</sup></b>	1,613,627
<b>Customer Minutes of Interruptions</b>	211,987,506
<b>Number of Customer Momentary Interruptions</b>	6,607,005

During the 1st quarter, there were three (3) PUC-reportable storms ( $\geq 2,500$  customers interrupted for  $\geq 6$  hours) and three (3) other storms that required the opening of one or more area emergency centers to manage restoration efforts. Current storm experience remains high compared to historical norms.

Specifically, during the 12-month reporting period, there were eleven (11) PUC-reportable storms ( $\geq 2,500$  customers interrupted for  $\geq 6$  hours) other than major events.

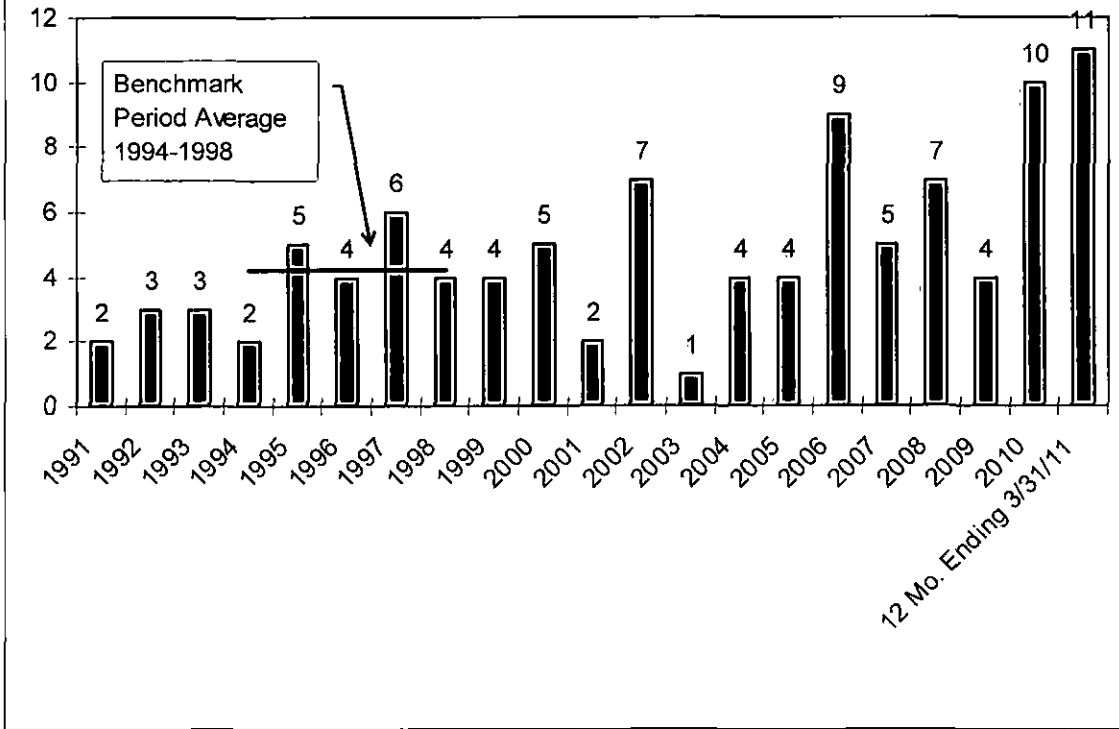
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<sup>1</sup> MAIFI data is obtained at the substation breaker and does not include momentary interruptions at lower level devices.

<sup>2</sup> 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.

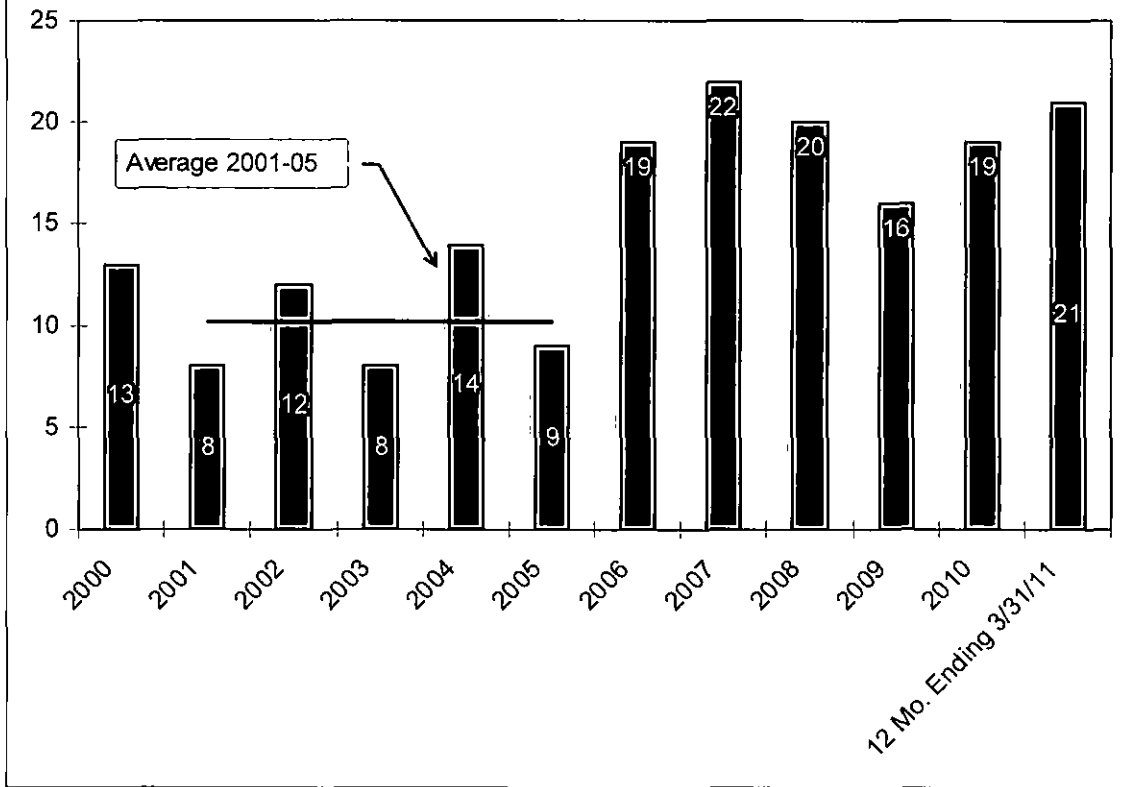
<sup>3</sup> The data reflects the number of customers interrupted for each interruption event summed for all events, also known as customer interruptions. If a customer is affected by three separate cases of trouble, that customer represents three customer interruptions, but only one customer interrupted.

### Storms - PUC Reportable Except Major Events



In addition, there were twenty-one (21) storms that were not reportable, but which did require the opening of one or more area emergency centers to manage restoration efforts. This is 106% higher than the average of 10.2 storms per year for the five years from 2001 through 2005.

### Storms - Not PUC Reportable



- 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 <sup>4</sup>	Customers	Cases of Trouble <sup>5</sup>	Customer Minutes Interrupted	CPI
1	10803	12.37	231	2861	10.00	62	10	177,409	1888
2	43202	10.20	334	3401	0.00	1158	70	3,938,464	1836
3	26801	38.25	7	286	0.00	8	2	2,285	1332
4	22002	5.10	308	1569	0.00	1386	81	2,174,915	1234
5	22602	7.18	187	1345	7.03	1528	65	2,055,281	1228
6	12701	4.93	228	1126	10.01	1522	66	1,713,472	1119
7	60904	5.05	152	768	2.92	1909	18	1,466,308	978
8	28102	4.79	136	652	0.00	1710	86	1,115,390	973
9	13704	6.59	96	633	4.09	1578	58	999,363	943
10	12302	5.62	128	719	8.88	1952	28	1,404,240	918
11	57702	4.86	124	602	16.99	1080	25	650,427	913
12	66002	6.53	104	676	0.00	588	16	397,469	912
13	54701	6.37	88	558	9.70	1855	65	1,035,661	899
14	13701	6.31	86	543	4.89	1610	22	874,769	863
15	14404	5.38	97	523	8.08	1540	38	806,157	817
16	65802	4.40	131	578	11.93	1902	31	1,098,588	796
17	11001	7.12	126	896	6.52	868	53	777,471	795
18	60603	3.00	503	1510	2.01	1906	24	2,877,737	790
19	17902	5.75	50	290	4.03	988	42	286,817	762
20	22901	6.17	35	218	5.03	2217	16	483,556	755
21	58001	3.75	142	532	9.04	675	16	359,294	751
22	27101	4.50	124	557	1.05	2695	77	1,500,392	739
23	42302	3.85	141	542	1.00	1930	17	1,046,571	737
24	43401	4.77	170	809	0.00	988	61	798,939	727
25	11504	5.59	90	501	6.05	2473	23	1,238,844	715
26	52402	4.55	177	807	6.70	1645	58	1,327,391	708
27	28001	3.66	137	502	3.02	1772	91	889,434	685
28	18502	5.03	76	381	1.06	1832	102	698,655	685

<sup>4</sup> MAIFI data is obtained at the substation breaker and does not include momentary interruptions at lower level devices.

<sup>5</sup> Cases of trouble are the number of sustained customer service interruptions.

WPC Rank	Feeder ID	SAIFI	CAIDI	SAIDI	MAIFI <sup>4</sup>	Customers	Cases of Trouble <sup>5</sup>	Customer Minutes Interrupted	CPI
29	40802	9.41	137	1293	5.04	979	6	1,265,985	683
30	58003	4.13	93	383	12.97	1006	23	385,057	674
31	13602	4.45	106	473	5.87	1702	38	804,454	655
32	56802	4.42	104	460	7.98	1407	41	647,039	653
33	10805	4.07	61	249	5.99	1197	18	298,632	650
34	13102	3.96	131	519	3.99	2028	49	1,051,633	646
35	57006	3.27	277	906	8.00	1365	25	1,236,558	640
36	63201	2.88	397	1145	11.38	1634	32	1,871,022	635
37	67605	4.25	95	405	26.10	1926	33	780,806	626
38	26001	3.59	198	708	0.00	1333	62	944,426	604
39	64802	3.32	175	582	2.00	1278	49	743,860	589
40	13905	3.85	142	545	3.91	1559	41	849,690	583
41	47703	4.05	81	329	8.97	1369	50	450,143	583
42	64701	1.66	748	1239	4.09	1544	6	1,913,428	568
43	60604	3.95	148	584	3.95	337	12	196,894	568
44	47704	2.53	332	841	6.01	727	38	611,207	566
45	24401	3.79	119	449	21.37	2029	64	911,473	566
46	58102	3.91	63	245	10.04	898	25	219,970	556
47	10901	2.63	346	911	9.99	682	33	621,521	555
48	43201	0.06	119	7	0.00	946	5	6,440	552
49	60803	3.50	95	332	11.16	1998	30	663,995	548
50	11104	2.92	124	363	3.02	1541	31	559,779	535
51	52401	3.63	132	481	1.00	1437	66	690,650	534
52	41503	3.73	258	965	4.44	1280	13	1,234,581	531
53	46702	2.05	223	456	2.01	1276	48	582,385	529
54	47801	2.05	112	229	4.00	1579	7	361,588	525
55	46701	3.44	230	791	3.02	702	18	555,441	524
56	44703	3.22	185	595	10.00	1747	37	1,038,746	515
57	67402	3.15	193	608	29.41	1324	59	805,226	512

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 if there are causal patterns or geographic patterns for which corrective actions are feasible that would improve the circuit's CPI.

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

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>1</b>	<b>Circuit ID: 10803 CHERRY HILL 08-03</b>			<b>Location: Bethlehem</b>
				<b>CPI: 1888</b>
	4/13/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2009	The SAIDI component was the greatest contributor to the CPI. The circuit experienced several long-duration tree outages. This circuit is on the edge of the PPL service territory which leads to a long response time due to the distance crews must travel to get to the outage.
	7/9/2009: Line inspection-equipment. Inspect line and make repairs.	Completed	12/31/2009	Crews replaced several cut outs and lightning arrestors, reducing outage risk.
	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 Substation will help improve the reliability of Cherry Hill 08-03 and Mt Bethel 29-02 by providing an alternate source in the radial edge of PPL territory. Both projects are expected to be placed in service in late 2012.	Scheduled for	11/30/2012	



<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>2 Circuit ID: 43202 MILLVILLE 32-02</b>				<b>Location: Sunbury</b>
				<b>CPI: 1836</b>
	1/16/2009: Expanded Operational Review.	Completed	12/31/2009	No longer among 5% worst performing circuits. EOR complete
	6/1/2010: As a result of high customer outages 32-2 CB was maintained.	Completed	6/7/2010	Reduced outage duration.
	6/1/2010: Perform line maintenance identified by line inspection.	Completed	6/7/2010	Reduced outage risk. Two work requests have been taken out by Distribution Operations to improve the Mardonsville Tap along Rhodemoyer Road and Hogs Back Road. Engineering is complete on these WRs and the project is on track for 12/31/2010 in-service.
	6/7/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	6/7/2010	Inconclusive. Monitor future performance. This circuit was reviewed at Susquehanna Region's WPC meeting on 6/7/10. This circuit is categorized as a worst performer due to the number of customers experiencing more than 3 outages within the 12 month period. The causes of each of the high customer outages have been mitigated (off right of way tree, customer equipment, and substation CB maintenance). The line will be monitored for future issues.
	6/7/2010: Install 1 phase OCR(s).	Scheduled for	7/31/2011	
	6/7/2010: Tree trimming-selected line segments only (hot spots).	Completed	6/10/2010	Reduced outage risk.
	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	5/31/2012	Reduced outage duration.
	4/18/2011: Install new line and terminal. Reconductor sections of the circuit to 3 phase 477 AL and install ROCS devices.	Scheduled for	11/30/2011	
<b>3 Circuit ID: 26801 JACK FROST 68-01</b>				<b>Location: Wilkes-Barre</b>
				<b>CPI: 1332</b>
	4/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
<b>4</b>	<b>Circuit ID: 22002 BOHEMIA 20-02</b>			<b>Location: Pocono</b>	<b>CPI: 1234</b>
	1/15/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2010	A tree outage on 12/3/09, not related to trimming, locked out A phase OCR affecting 89 customers. An outage on 12/29/09 caused by a failed switch on the transmission source (Blooming Grove-West Damascus line) to Bohemia resulted in 1389 Bohemia customers being interrupted for 1 to 4 hours. Long term plan is the install a new tie and split the line to reduce customer count	
	4/26/2010: Install tie. SP 33608 build tie from Bohemia 20-2 to Twin Lakes 81-2. This will create a tie for 1,150 radial customers. Remotely operated devices will be installed.	Scheduled for	11/30/2012		
	4/21/2011: Install new line and terminal. SP33607 A new line and terminal at Bohemia will relieve the 20-2 line and reduce the customer count from 1400 to 750.	Scheduled for	11/30/2012		
<b>5</b>	<b>Circuit ID: 22602 KIMBLES 26-02</b>			<b>Location: Pocono</b>	<b>CPI: 1228</b>
	1/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2010	High CPI of this circuit is because of 2 large OCR outages caused by trees outside of the right-of-way and a transmission outage due to a failed switch (the switch was replaced).	
	10/15/2010: Improve sectionalizing capability.	Scheduled for	8/31/2011		
	10/15/2010: Circuit outage data analysis. Problematic areas identified and line patrol scheduled.	Completed	12/31/2010	Reduced outage risk. Tree problems identified and tree trimming was completed.	
<b>6</b>	<b>Circuit ID: 12701 MACUNGIE 27-01</b>			<b>Location: Lehigh</b>	<b>CPI: 1119</b>
	2/28/2008: Build tie to split single phase load on Zionsville tap.	Completed	6/29/2009	Reduced outage risk.	
	2/28/2008: Relocate inaccessible line. A section along Churchview Road is to be relocated along the road.	Scheduled for	5/31/2011		
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	All the customers on the Macungie 27-1 line experienced four outages in the past year. Two of the four outages were due to substation getaway failures, which were repaired at the time of the interruption. A separate action item has been taken out for the replacement. One outage was due to animal contact and another outage was due to the circuit breaker failing to reclose.	
	4/20/2011: Replace UG getaway. Due to recent performance issues, the Macungie 27-01 UG getaway has been identified for replacement as part of the 2011 Asset Optimization Strategy (AOS) plan.	Scheduled for	12/30/2011		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
<b>7</b>	<b>Circuit ID: 60904 DONEGAL 09-04</b>			<b>Location: Lancaster</b>	<b>CPI: 978</b>
	5/7/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	7/9/2010	Inconclusive. Monitor future performance. SAIDI was 35% of the CPI score. The majority of the outages were due to trees, not trimming related. The circuit was last trimmed in 2008. A severe wind storm on 6/24/10 caused trees to fall into the primary electric lines. The CMI for that one outage was 490,871, or 63% of the total over the last 12 months.	
	5/7/2010: Line inspection-equipment. Line Inspection to be performed on 2 & 3 phase line sections	Completed	5/19/2010	Multiple WR's initiated for follow-up work	
	7/23/2010: Perform line maintenance identified by line inspection. WR's 584318 (Pole), 584319 (Arms) and 584322 (Minor Maint) Initiated as a result of Line Inspection	Completed	10/13/2010	Reduced outage risk.	
	7/23/2010: Reconductor line. WR 587967 initiated to reconductor/rebuild existing double circuit section of Donegal 09-2 & 09-4.	Scheduled for	6/29/2012	The work request for this project is at status 50. The engineering and design have been completed. The reason this project was given a June 29, 2012 required in-service date is due to the current resource restraints. PPL is looking at ways to advance this project.	
	4/1/2011: Line inspection-equipment. Perform Line Inspection on 2 & 3 phase line sections	Completed	4/7/2011	The inspection identified a failed pole, several failed crossarms, and some additional minor maintenance items. WR's will be written to make the needed repairs. These will be tracked under a separate WPC action item.	
<b>8</b>	<b>Circuit ID: 28102 TWIN LAKES 81-02</b>			<b>Location: Pocono</b>	<b>CPI: 973</b>
	5/31/2006: Install animal guard(s). Install as outages are seen on the line	Ongoing		Installing animal guards will prevent future outages on the line due to animal contact	
	7/14/2009: Monitor future performance.	Ongoing		Reduced outage risk. Circuit performance has improved substantially in Q1, Q2, and Q3 of 2009.	
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
	4/21/2011: Improve sectionalizing capability. Replace existing air break with a new telemetric recloser. This will isolate a section of line from the breaker. With the new recloser outages on this section of line will only affect 550 customers instead of 1800.	Scheduled for	6/30/2011		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>9</b>	<b>Circuit ID: 13704 SCHNECKSVILLE 37-04</b>			<b>Location: Lehigh</b>
				<b>CPI: 943</b>
	5/14/2008: Load balancing.	Completed	9/30/2009	Reduced outage risk.
	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
<b>10</b>	<b>Circuit ID: 12302 LANARK 23-02</b>			<b>Location: Lehigh</b>
				<b>CPI: 918</b>
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011	
<b>11</b>	<b>Circuit ID: 57702 PAXTON 77-02</b>			<b>Location: Harrisburg</b>
				<b>CPI: 913</b>
	1/26/2011: Thermographic inspection-OH line.	In progress		
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>12</b>	<b>Circuit ID: 66002 RHEEMS 60-02</b>			<b>Location: Lancaster</b>
				<b>CPI: 912</b>
	5/7/2010: Line inspection-equipment. Perform Line Inspection on 2 and 3 Phase Line Sections - 5.8 miles	Completed	5/21/2010	Reduced outage risk.
	12/1/2010: Perform line maintenance identified by line inspection. WR 584932, 584933, 584934, 585935	Completed	12/31/2010	The line maintenance work that was identified and completed included the replacement of 4 failed crossarms, the moving of a pole to a less vulnerable location, the replacement of a damaged pole and the repairs to a service entrance cable. These repairs should reduce future outage risks.
	12/8/2010: Expanded Operational Review. Reliability Analysis Completed 5/19/10. Reliability work requests under field review	Completed	12/31/2010	Reduced outage duration.
	1/5/2011: Improve sectionalizing capability. Add remote operating control capability to an existing switch	Scheduled for	6/29/2012	The work request for this project is at status 50. The engineering and design have been completed. The reason this project was given a June 29, 2012 required in-service date is due to the current resource restraints. PPL is looking at ways to advance this project.
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	4/14/2011	Customers experiencing greater than three outages was the greatest contributor (52%) to the CPI. This was mainly due to several tree related outages (due to non-tree trimming related outages). Tree trimming is planned for the line in 2011.
<b>13</b>	<b>Circuit ID: 54701 NEW BLOOMFIELD 47-01</b>			<b>Location: West Shore</b>
				<b>CPI: 899</b>
	5/31/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2010	This is a new 12 kV distribution line from a new substation. The major contributing outage occurred when the substation recloser failed shortly after being put in service. If it weren't for the premature failure of new equipment, the circuit would not be on the WPC list. Future performance will be monitored to determine whether additional action items are warranted.
	7/1/2010: Improve sectionalizing capability. Automate existing tie to the Newport 50-1 line with ROCS devices.	Completed	7/30/2010	ROCS device will allow for faster sectionalizing for approximately 300 customers.
	7/1/2010: Line inspection-equipment. Repair insulators on New Buffalo State Park tap.	Completed	7/7/2010	Reduced outage risk.
	10/1/2010: Install 3 phase OCR(s). Replace existing 3 phase hydraulic recloser with a new electronic recloser near Enchanted Springs Drive for better coordination.	Completed	10/1/2010	Reduced outage risk.
	10/5/2010: Tree trimming-selected line segments only (hot spots). Trim hazard trees on sections of the main three phase line.	Completed	10/31/2010	Reduced outage risk. Reduced exposure to vegetation related outages.
	11/12/2010: Investigate 3 phase OCR(s). Investigate the mis-operation of recloser. Check settings and swap contols.	Completed	2/10/2011	Reduced outage risk. Existing three phase hydraulic recloser was replaced with a new electronic model model.
	11/12/2010: Tree trimming. Trim circuit as part of 4 year cycle.	Scheduled for	12/31/2011	
	1/26/2011: Expanded Operational Review.	EOR planned	12/31/2011	
	4/20/2011: Tree trimming. Trim New Bloomfield 47-01 circuit as part of 4 year vegetation management cycle.	Scheduled for	12/30/2011	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>14</b>	<b>Circuit ID: 13701 SCHNECKSVILLE 37-01</b>			<b>Location: Lehigh</b>
				<b>CPI: 863</b>
	10/8/2008: Load balancing.	Canceled	9/15/2010	
	4/15/2009: Install animal guard(s).	Completed	5/15/2009	Reduced outage risk.
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	<p>The Schnecksville 37-01 line experienced five major outages. The first outage occurred when a tree from outside the right of way interrupted the circuit breaker. A transmission outage of unknown cause interrupted the substation during a Q1 2011 storm. The transmission line held when reclosed for test.</p> <p>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 from the adjacent Schnecksville 37-04 line were being carried by the 37-01 line for repairs. The abnormal circuit configuration and repairs under construction delayed customer restoration.</p> <p>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 in the future.</p>
<b>15</b>	<b>Circuit ID: 14404 SO SLATINGTON 44-04</b>			<b>Location: Lehigh</b>
				<b>CPI: 817</b>
	7/6/2009: Install animal guard(s).	Completed	7/11/2009	Reduced outage risk.
	10/11/2010: Load balancing.	Canceled	1/1/2011	Determined that rebalancing was not needed.
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2010	This circuit had four circuit breaker outages over the past year. Two were due to animal contact. Animal guarding has been done at the substation as a result. Due to these outages, all the customers on the 44-4 line saw 4 outages. The greater than 3 outages contribution was 58% of the CPI.
	4/20/2011: Circuit outage data analysis.	Completed	4/20/2011	The outage history for SO Slatington 44-04 has been reviewed for the period ending with Q1 2011. The circuit's reliability has improved since the three breaker interruptions in early Q3 2010. All three of which have been mitigated with the installation of animal guarding as well as the replacement of failed equipment. The circuit is expected to drop from the WPC list once these outages fall off. Until then, the circuit's performance will continue to be monitored to determine if additional action items are warranted.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>16</b>	<b>Circuit ID: 65802 ROHRERSTOWN 58-02</b>			<b>Location: Lancaster</b>
				<b>CPI: 796</b>
	4/13/2009: Line inspection-equipment. LMI Inspection performed on 2 phase and 3 phase line - 4 miles total	Completed	12/31/2009	Reduced outage risk.
	6/24/2009: Install fuse(s). Install 1 new tap fuse at 39901S26394	Completed	7/24/2009	Reduced customer count affected by each outage.
	10/5/2009: Improve sectionalizing capability. Hang Fault Indicators on 2 normally closed air breaks.	Completed	10/30/2009	Reduced outage duration.
	1/4/2010: Install animal guard(s). Animal Guard 3 locations	Completed	1/11/2010	Reduced outage risk.
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/6/2011	Customers experiencing greater than three outages was the greatest contributor (56%) to the CPI. This was mainly due to several outages caused by trees -- both trimming and not trimming related. The circuit is scheduled for tree trimming in 2014. This circuit will be reviewed in more detail at the upcoming worst performing circuit meeting scheduled for 5/6/11.
<b>17</b>	<b>Circuit ID: 11001 EAST GREENVILLE 10-01</b>			<b>Location: Bethlehem</b>
				<b>CPI: 795</b>
	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: Improve sectionalizing capability. Install new OCR, replace existing OCR with telemetric OCR and install motorized switch at East Greenville 10-1/Macungie 27-1 tie.	Completed	8/20/2010	Reduced outage risk.
	4/9/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2009	The SAIDI component was the greatest contributor to the CPI. A load imbalance during switching caused a long-duration outage in February when several loops burned open. A second long-duration outage occurred in July when trees interrupted 378 customers for 1,386 minutes.
	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
	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	Scheduled for	12/31/2011	
	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.	Scheduled for	12/30/2011	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>18</b>	<b>Circuit ID: 60603 NORTH COLUMBIA 06-03</b>			<b>Location: Lancaster</b>
				<b>CPI: 790</b>
	5/22/2009: Perform line maintenance identified by line inspection.	Completed	12/31/2009	Reduced outage risk.
	1/4/2010: Expanded Operational Review. Reliability Analysis Completed 3/10/10	Completed	12/31/2010	Reduced outage duration.
	1/5/2011: Improve sectionalizing capability. Install fault indicators before and after inaccessible line.	Completed	4/11/2011	Reduced outage duration.
	1/5/2011: Improve sectionalizing capability. Installed fault indicators on 2 under ground dips	Completed	3/23/2011	Reduced outage duration.
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	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. Tree trimming is planned for the line in 2011. This circuit will be reviewed in more detail at the worst performing circuit meeting that is scheduled for May 6, 2011.
<b>19</b>	<b>Circuit ID: 17902 BARTONSVILLE 79-02</b>			<b>Location: Pocono</b>
				<b>CPI: 762</b>
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2010	Five circuit breaker outages contributed to the high CPI of this circuit. Two were caused by transmission outages, one was a tree from outside the ROW, one pole hit, and one animal contact.
	4/20/2011: Improve sectionalizing capability. This circuit will be automated as part of the second phase of the PPL Smart Grid Project. This will allow automatic isolation and restoration of customers during outage conditions.	Scheduled for	12/31/2012	
	4/20/2011: Reconductor line. Project SP51313 will reconductor a quarter mile of 2 phase line to 3 phase. This will allow a poor performing section of line to be bypassed and isolated.	Scheduled for	11/30/2011	
<b>20</b>	<b>Circuit ID: 22901 HARWOOD 29-01</b>			<b>Location: Central</b>
				<b>CPI: 755</b>
	7/13/2010: Expanded Operational Review. Completed voltage profile and field review.	Completed	12/31/2010	Inconclusive. Monitor future performance.
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list. Determined that outages were caused by multiple acts of vandalism. Planned action to install a VCR in order to isolate the interruptions to a limited amount of customers until further actions could be planned.	Completed	11/30/2010	A VCR was installed at a location that isolated the vandal prone section of line. There are further plans to move line out of inaccessible area.
	11/16/2010: Line inspection-equipment. Inspect anchor guys.	Completed	12/31/2010	Reduced outage risk. Identified at risk anchor guys and replaced them.
	4/20/2011: Relocate inaccessible line. Will remove section of line where vandal cases have occurred repeatedly. Scheduled as part of PPL's program to mitigate outages for "Customers Experiencing Multiple Outages (CEMI)".	Scheduled for	12/31/2012	



<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
<b>21</b>	<b>Circuit ID: 58001 WEST CARLISLE 80-01</b>			<b>Location: West Shore</b>	<b>CPI: 751</b>
	1/26/2011: Expanded Operational Review.	EOR planned	12/31/2011		
	1/26/2011: Thermographic inspection-OH line.	In progress			
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
<b>22</b>	<b>Circuit ID: 27101 GREENFIELD 71-01</b>			<b>Location: Scranton</b>	<b>CPI: 739</b>
	4/9/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2009	Inconclusive. Monitor future performance. A breaker outage occurred in Q3 2009 due to an animal contact at the substation. There have been 3 large OCR outages, 2 of which were caused by trees outside the ROW and one of which was caused by a failed insulator.	
	1/14/2010: Relocate inaccessible line. Investigate relocating inaccessible 3 phase section of line.	Canceled	3/31/2010	Could not justify project due to lack of outages on the section of inaccessible line.	
	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 1350 radial customers is currently being engineered by the field personnel.	Scheduled for	6/30/2011		
<b>23</b>	<b>Circuit ID: 42302 MOWRY 23-02</b>			<b>Location: Central</b>	<b>CPI: 737</b>
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
<b>24</b>	<b>Circuit ID: 43401 BENTON 34-01</b>			<b>Location: Sunbury</b>	<b>CPI: 727</b>
	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. This project is scheduled to go in service in 5/2013.	Scheduled for	5/31/2013		
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
<b>25</b>	<b>Circuit ID: 11504 FREEMANSBURG 15-04</b>			<b>Location: Bethlehem</b>	<b>CPI: 715</b>
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>26</b>	<b>Circuit ID: 52402 GREEN PARK 24-02</b>			<b>Location: West Shore</b>
				<b>CPI: 708</b>
	3/17/2009: Expanded Operational Review. Reliability Review Completed 7/30/09. Voltage Profile Completed 7/02/09. Field Work Request Review in Progress.	EOR initiated	12/31/2009	Inconclusive. Monitor future performance.
	11/11/2009: Install fuse(s). Install 9 tap fuses	Completed	7/6/2010	Reduced customer count affected by each outage.
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011	
<b>27</b>	<b>Circuit ID: 28001 TAFTON 80-01</b>			<b>Location: Pocono</b>
				<b>CPI: 685</b>
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2010	This circuit experienced a long duration breaker outage due to trees - not trimming related December 2010 during a stormy/windy day. A variety of issues have contributed to outages on this circuit ei; wind, transmission misoperation, and animal guards, etc. have been listed as contributors to the frequency of outages.
	4/20/2011: Install tie. 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.	Scheduled for	12/31/2011	
<b>28</b>	<b>Circuit ID: 18502 CANADENSIS 85-02</b>			<b>Location: Pocono</b>
				<b>CPI: 685</b>
	Monitor future performance.	Ongoing		
	7/10/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2009	Inconclusive. Monitor future performance. Several small long duration outages during the October 2008 snowstorm and a long duration breaker outage during a windstorm in February significantly contributed to the CPI for this circuit.
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2010	Two circuit breaker outages and three large OCR outages contributed to the high CPI of this circuit. Two outages were caused by equipment failure, two were caused by trees from outside the ROW, and one was a vehicle hit.
	4/20/2011: Improve sectionalizing capability. This circuit will be automated as part of the second phase of the PPL Smart Grid Project. This will allow automatic isolation and restoration of customers during outage conditions.	Scheduled for	12/31/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>29 Circuit ID: 40802 EXCHANGE 08-02</b>				<b>Location: Central</b>
				<b>CPI: 683</b>
	2/13/2009: Expanded Operational Review.	Completed	6/15/2009	Initiated work to install 5 tap fuses and fault indicators at an existing sectionalizing air break.
	6/15/2009: Install fault indicators on sectionalizing air break.	Completed	10/23/2009	Improved troubleshooting and restoration times.
	6/15/2009: Install fuse(s). Install 5 tap fuses to reduce exposure risk to substation.	Completed	4/30/2010	Reduced outage risk.
	7/10/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	7/10/2009	Inconclusive. Monitor future performance. SAIDI was 62% of the CPI score. Planned maintenance was scheduled at a neighboring substation so the majority of the customers were transferred to the Exchange 8-2 line. While serving all those customer an outage occurred on the line causing an interruption to all of the 8-2 line and all the customers that were transferred to the line. This caused the circuit to receive a high SAIDI value. This is the first time this circuit has ever been on the worst performing circuit list.
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	SAIDI was 80% of the CPI score. The largest outage contributing to CMI was due to an equipment failure while transferring load from Mt. Carmel Substation to Exchange 8-2 to perform maintenance at Mt. Carmel. It was determined that Planning will develop several alternatives for improving transfers in this area.
	2/11/2011: Improve sectionalizing capability. Take tap change to increase 12 kV voltage.	Completed	11/10/2010	Increased substation voltage to allow better transfer capability.
	3/23/2011: Circuit outage data analysis. The Distribution Planner will analyze several alternatives for improving transfers between Exchange and Mt. Carmel substation.	Completed	4/30/2011	Two projects were identified to improve transfers at Exchange Substation. The first project is a new line and terminal at Exchange substation, that will reduce load and customer count on the Exchange 8-1 feeder. The second project is a new line and terminal at Mt. Carmel substation, that will reduce load and customer count on the Mt. Carmel 78-2 feeder.
	4/20/2011: Install new line and terminal. New line and terminal at Exchange substation to reduce load and customer count on the Exchange 8-1 feeder. Planned to improve transfers between Exchange and Mt. Carmel Substations.	Scheduled for	12/1/2014	
	4/20/2011: Install new line and terminal. New line and terminal at Mt. Carmel substation to reduce load and customer count on the Mt. Carmel 78-2 feeder. Planned to improve transfers between Exchange and Mt. Carmel Substations.	Scheduled for	12/1/2014	
<b>30 Circuit ID: 58003 WEST CARLISLE 80-03</b>				<b>Location: West Shore</b>
				<b>CPI: 674</b>
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011	
<b>31 Circuit ID: 13602 RICHLAND 36-02</b>				<b>Location: Bethlehem</b>
				<b>CPI: 655</b>
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
<b>32</b>	<b>Circuit ID: 56802 BENVENUE 68-02</b>			<b>Location: West Shore</b>	<b>CPI: 653</b>
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
<b>33</b>	<b>Circuit ID: 10805 CHERRY HILL 08-05</b>			<b>Location: Bethlehem</b>	<b>CPI: 650</b>
	Monitor future performance.	Ongoing			
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
<b>34</b>	<b>Circuit ID: 13102 NORTHAMPTON 31-02</b>			<b>Location: Bethlehem</b>	<b>CPI: 646</b>
	5/9/2008: Line inspection-equipment.	Completed	6/30/2009	Inconclusive. Monitor future performance.	
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
<b>35</b>	<b>Circuit ID: 57006 WHITE HILL 70-06</b>			<b>Location: West Shore</b>	<b>CPI: 640</b>
	3/17/2009: Expanded Operational Review. Reliability Review Completed 7/22/09. Voltage Profile Completed 7/07/09. Field Work Request Review in Progress.	EOR initiated	12/31/2009	Inconclusive. Monitor future performance.	
	11/11/2009: Install fuse(s). Install tap fuse	Completed	3/16/2010	Reduced customer count affected by each outage.	
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
<b>36</b>	<b>Circuit ID: 63201 MORGANTOWN 32-01</b>			<b>Location: Lancaster East</b>	<b>CPI: 635</b>
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/26/2010	4 Q Summary: CAIDI: 319; SAIFI: 3.437 (the contribution to the overall CPI is 14%); SAIDI: 318.21 (40%); >3 Cases: 715 (27%); Total CPI: 799. The circuit was last trimmed in 2004. The Top Causes of outages were trees, not trimming related and the Top Component was OH-transformer.	
	7/23/2010: Reconductor line. WR 582710 Initiated to Reconductor Section of 32-1 Line (#2 Cu)	Scheduled for	12/30/2011	Reduced outage risk.	
	1/6/2011: Expanded Operational Review.	Scheduled for	12/30/2011		
	1/13/2011: Line inspection-equipment.	Scheduled for	12/30/2011	Reduced outage risk.	
	1/13/2011: Thermographic inspection-OH line.	Completed	5/2/2011		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>37</b>	<b>Circuit ID: 67605 WARWICK 76-05</b>			<b>Location: Lancaster East</b>
				<b>CPI: 626</b>
	7/1/2008: Install animal guard(s). Install 4 animal guards	Completed	8/14/2010	Reduced outage risk.
	7/1/2008: Install fuse(s). Install 4 new fuse cutouts and move 1 fuse cutout.	Completed	6/24/2009	Reduced customer count affected by each outage.
	3/5/2009: Improve sectionalizing capability. Remove sectionalizer @ 41712s32629 due to coordination issues. Leave solid blade disconnects on pole. Install Tap fuse on pole 41631s32953	Completed	5/15/2009	Reduced outage risk.
	2/1/2010: Perform line maintenance identified by line inspection. LMI Inspection performed on 1 phase, 2 phase, and 3 phase line - 48.5 miles total	Completed	3/31/2011	Reduced outage risk. The line inspection identified the need for work and/or repairs at 12 different locations. Work requests were initiated for each location.
	1/6/2011: Improve sectionalizing capability. An intelligent switching project has been identified to reduce customer minutes lost.	Canceled	12/31/2010	Reduced customer count affected by each outage. SISRS project cancelled due to evolution of Smart Grid technology ... future Smart Grid to be evaluated
	1/6/2011: Expanded Operational Review.	Scheduled for	12/30/2011	
	1/13/2011: Line inspection-equipment.	Completed	3/24/2011	Reduced outage risk. The line inspection identified the need for work and/or repairs at 12 different locations. Work requests were initiated for each location.
	1/13/2011: Thermographic inspection-OH line.	Completed	3/31/2011	Reduced outage risk. The line inspection identified the need for work and/or repairs at 12 different locations. Work requests were initiated for each location.
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	4/14/2011	Customers experiencing greater than three outages was the greatest contributor (51%) to the CPI. This was due to outages related to equipment failures, trees-trimming related and to vehicles. Tee trimming is planned for the line in 2011.
<b>38</b>	<b>Circuit ID: 26001 WEST DAMASCUS 60-01</b>			<b>Location: Pocono</b>
				<b>CPI: 604</b>
	10/9/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2009	This circuit experienced a circuit breaker outage during Q3 due to a vehicle hitting a pole. This circuit has had many long duration outages due to the remote location of the circuit.
	10/15/2010: Circuit outage data analysis.	Completed	9/30/2010	Beavers caused trees to bring down wires. Hazard trees have been removed.
	10/21/2010: Improve sectionalizing capability.	Scheduled for	7/31/2011	Work Request 607577 to extend 1 phase and relocate/install recloser.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>39</b>	<b>Circuit ID: 64802 MOUNT NEBO 48-02</b>			<b>Location: Lancaster East</b>
				<b>CPI: 589</b>
	4/28/2009: Monitor future performance. Install 150 kVA Regulator n/o 39518s20247 (Node 13),	Completed	3/31/2010	Inconclusive. Monitor future performance.
	4/28/2009: Expanded Operational Review. Voltage Profile Completed 4/21/09 Reliability Analysis Completed 4/21/09	Completed	12/31/2009	Reduced outage risk.
	See subsequent records for reliability work requests			
	7/10/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/14/2009	Reduced customer count affected by each outage. Discussions around constructing tie to West Willow and constructing substation in Marticville to reduce outage duration and customers affected.
	7/15/2009: Line inspection-equipment. Complete Line Inspection on multiphase line sections - 6.6 miles total	Completed	8/10/2009	Reduced outage risk.
	10/7/2009: Install 3 phase OCR(s). Replace Hydraulic OCR with Telemetric Electronic OCR 40077s20754	Completed	10/29/2009	Reduced outage duration.
	12/15/2009: Perform line maintenance identified by line inspection. WR 538735 - Replace Deteriorated cross arm	Completed	12/31/2009	Reduced outage risk.
	10/13/2010: Reconductor line. Reconductor 1st 12 spans from Substation to 477 Al XLP (WR 447334)	Completed	12/31/2010	Reduced outage risk.
	10/13/2010: Install tie. Construct Tie to West Willow 75-3 via River Rd	Scheduled for	12/31/2012	
	10/13/2010: Install tie. Construct Tie to West Willow 75-3 via Marticville Rd	Scheduled for	12/31/2014	
	4/20/2011: Line inspection-equipment. Additional Line Inspection on Multi-Phase Equipment	Completed	4/20/2011	Reduced outage risk.
<b>40</b>	<b>Circuit ID: 13905 SEIDERSVILLE 39-05</b>			<b>Location: Bethlehem</b>
				<b>CPI: 583</b>
	7/23/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/30/2010	The greatest contribution to the CPI has been due to customers experiencing greater than 3 outages. Many of the larger 3-phase outages on the line have been due to equipment failures. There is inspection and maintenance planned for this line in 2011.
	8/20/2010: Line Reconfiguration. Transfer approximately 500 customers from the Seidersville 39-05 to a lightly loaded line served by Lanark Substation.	Completed	12/30/2010	Reduced customer count affected by each outage.
	8/20/2010: Line Inspection and Maintenance	Scheduled for	12/31/2011	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>41</b>	<b>Circuit ID: 47703 BLOOMSBURG 77-03</b>			<b>Location: Sunbury</b>
				<b>CPI: 583</b>
	1/16/2009: Expanded Operational Review.	EOR planned	12/31/2009	Reduced customer count affected by each outage. EOR completed. A new load break air switch was installed to provide for additional sectionalizing.
	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. This project is scheduled to go in service in 11/2014.	Scheduled for	11/30/2014	
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	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. This line will be inspected for vegetation encroachment and potential equipment failure risks. 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.	Scheduled for	5/2/2011	
<b>42</b>	<b>Circuit ID: 64701 LITITZ 47-01</b>			<b>Location: Lancaster East</b>
				<b>CPI: 568</b>
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/5/2010	Inconclusive. Monitor future performance.
	1/6/2011: Expanded Operational Review.	Scheduled for	12/30/2011	
	1/13/2011: Thermographic inspection-OH line.	Scheduled for	5/2/2011	Reduced outage risk.
	1/13/2011: Line inspection-equipment.	Completed	3/10/2011	Reduced outage risk. As a result of the line inspection, 4 work requests were initiated to make repairs which should minimize future outage risks.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>43</b>	<b>Circuit ID: 60604 NORTH COLUMBIA 06-04</b>			<b>Location: Lancaster</b>
				<b>CPI: 568</b>
	5/19/2008: Perform line maintenance identified by line inspection. LMI Inspection performed on 1 phase and 3 phase line - 10.3 miles total	Completed	3/8/2010	Reduced outage risk.
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/26/2010	Inconclusive. Monitor future performance. 4 Q Summary: CAIDI: 98.08; SAIFI: 3.717 (26% contribution to overall CPI); SAIDI: 364.6 (23%); >3 Cases: 146 (47%); Last Trimmed: 2008. Top Causes of Interruptions: trees - not trimming related. Top Components of Interruptions: OH - Primary/Neutral.
	7/13/2010: Expanded Operational Review. The reliability analysis portion of the EOR was completed 3/10/10	Completed	12/31/2010	Reduced outage duration.
	7/23/2010: Relocate inaccessible line. WR's 585677 & 585688 initiated to relocate inaccessible line sections	Scheduled for	12/31/2012	
	10/13/2010: Perform line maintenance identified by line inspection.	Completed	11/1/2010	The line maintenance work that was identified and completed includes the installation of arc protection devices on several line sections of the overhead primary conductors. This should reduce future-outage risks.
	10/13/2010: Thermographic inspection-OH line.	Completed	2/4/2010	
	10/13/2010: Line inspection-equipment. Line Inspection to be performed on 2 & 3 phase line sections. (5.3 miles)	Completed	3/8/2010	The line maintenance work that was identified and completed includes the installation of arc protection devices on several line sections of the overhead primary conductors.



<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>44 Circuit ID: 47704 BLOOMSBURG 77-04</b>				<b>Location: Sunbury</b>
				<b>CPI: 566</b>
	2/4/2008: Install tie. Extend 3-phase along Millville Rd up to Rt 42 and Tie 77-04 with 77-03 line	Scheduled for	8/14/2011	
	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.
	1/16/2009: Expanded Operational Review.	Completed	12/31/2009	Reduced customer count affected by each outage. EOR completed. Triple Single OCR installed on Millertown Tap.
	4/9/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/26/2009	Inconclusive. Monitor future performance. The 77-04 circuit was reviewed at the Susquehanna Region's WPC meeting on 5/26/09. The outage data and the associated reliability metrics for the last 4 quarters were reviewed. The Bloomsburg #4 circuit is categorized as a worst performing circuit due to its contribution to the system SAIDI. This circuit was heavily impacted during the June 10 storm. This is expected to remain a WPC until the Q2 2008 data drops out of the CPI calculation.
	7/13/2009: Relocate inaccessible line. Relocate 3 phase line (WR 434431) along steep cliffside, subject to tree damage, to the roadside along Rte 42.	Completed	11/18/2009	Reduced outage risk.
	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 damaged.
	8/26/2010: Install tie. A project was placed into the budget to create a tie between Bloomsburg 47704 and Bloomsburg 47703. This will enhance the reliability of both Bloomsburg circuits by providing additional operating flexibility through use of remotely operated interrupting and switching devices. This project is scheduled to go in service in 11/2014.	Scheduled for	11/30/2014	
<b>45 Circuit ID: 24401 TINKER 44-01</b>				<b>Location: Pocono</b>
				<b>CPI: 566</b>
	1/2/2007: Install 3 phase OCR(s).	Completed	5/31/2009	Reduced customer count affected by each outage. Current sectionalizing sufficient
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
<b>46</b>	<b>Circuit ID: 58102 NEW KINGSTOWN 81-02</b>			<b>Location: West Shore</b>	<b>CPI: 556</b>
	3/17/2009: Expanded Operational Review. Reliability Review Completed 8/10/09. Voltage Profile Completed 7/08/09. Field Work Request Review in Progress.	Completed	12/31/2009	Inconclusive. Monitor future performance.	
	11/11/2009: Install fuse(s). Install 4 tap fuses	Completed	9/30/2010	Reduced customer count affected by each outage.	
	11/11/2009: Install animal guard(s). Install 5 transformer animal guards	Completed	9/30/2010	Reduced outage risk.	
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/12/2010	This is the first quarter that the circuit has appeared on the WPC list. It is located very close to a service center and has never experienced a history of poor reliability. Three breaker interruptions in the past year were the major contributors to the CPI. Two of the interruptions were equipment failures which have since been mitigated. The third interruption was tree related.	
	11/12/2010: Investigate replacing LBAS 17560S32865 with an OCR or ROCS device. This will split the circuit customer count in half.	Completed	1/18/2011	Work requests created to install two new automated switches.	
	1/26/2011: Thermographic inspection-OH line.	In progress			
	1/26/2011: Expanded Operational Review.	EOR planned	12/31/2011		
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
	4/13/2011: Install automated devices. Install two new automated switches to allow for the transfer of roughly half the circuit's customer count to the adjacent Carlisle 11-01 line.	Scheduled for	12/31/2012		
<b>47</b>	<b>Circuit ID: 10901 COOPERSBURG 09-01</b>			<b>Location: Bethlehem</b>	<b>CPI: 555</b>
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/30/2010	The greatest contributor to the CPI for this circuit is greater than 3 outages. This circuit has experienced three breaker outages in the past 12 months. One was due to a transmission outage. One was due to animal contact in the substation. One was due to an improper operation of equipment. All three problems were addressed.	
	8/20/2010: Reconfigure line.	Scheduled for	5/31/2011		
<b>48</b>	<b>Circuit ID: 43201 MILLVILLE 32-01</b>			<b>Location: Sunbury</b>	<b>CPI: 552</b>
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
<b>49</b>	<b>Circuit ID: 60803 BUCK 08-03</b>			<b>Location: Lancaster East</b>	<b>CPI: 548</b>
	1/2/2009: Expanded Operational Review. Voltage Profile Completed 8/18/09 Reliability Analysis Completed 8/18/09	Completed	12/31/2009	Completed EOR and created work requests to install 2 new capacitor banks.	
	Reliability work requests under field review				
	1/15/2010: Perform line maintenance identified by line inspection. Initiated 18 work requests for deteriorated poles/arms/hardware at 40 locations.	Completed	2/3/2010	Reduced outage risk.	
	1/18/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/28/2010	Circuit on list primarily due to customer's service being interrupted in storms. Continue to monitor and complete line maintenance previously identified.	
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/5/2010	Inconclusive. Monitor future performance.	
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/6/2011	Customers experiencing greater than three outages was the greatest contributor (58%) to the CPI. This was due to several tree (not trimming related) and equipment failure related outages. There was also one contact/dig-in related outage. Tree trimming is planned for the line in 2014. This circuit will be discussed at the worst performing circuit meeting scheduled for May 6, 2011.	
<b>50</b>	<b>Circuit ID: 11104 EGYPT 11-04</b>			<b>Location: Lehigh</b>	<b>CPI: 535</b>
	4/9/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2009	Inconclusive. Monitor future performance.	
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		
<b>51</b>	<b>Circuit ID: 52401 GREEN PARK 24-01</b>			<b>Location: West Shore</b>	<b>CPI: 534</b>
	Tree trimming.	Completed	12/31/2009		
	Install fuse(s). Install 16 new tap fuses.	Completed	11/5/2009	Reduced customer count affected by each outage.	
	3/17/2009: Expanded Operational Review. Reliability Review Completed 8/11/09. Voltage Profile Completed 7/06/09.	Completed	10/30/2009	Reduced customer count affected by each outage.	
	9/10/2010: Evaluate potential ties. Evaluating project to create tie with 24-03	Completed	9/10/2010	Inconclusive. Monitor future performance. Extensive tree removal completed on this circuit. Not on WPC list. Will reserve project and evaluate should circuit performance degrade.	
	1/26/2011: Expanded Operational Review.	EOR planned	12/31/2011		
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>52</b>	<b>Circuit ID: 41503 FAIRVIEW 15-03</b>			<b>Location: Central</b>
				<b>CPI: 531</b>
	Expanded Operational Review.	Completed	3/10/2010	Reduced customer count affected by each outage.
	3/5/2010: Relocate inaccessible line. Remove 3-phase inaccessible and improve sectionalizing.	Scheduled for	4/30/2012	
	9/23/2010: Perform line maintenance identified by line inspection.	Completed	9/23/2010	Reduced outage risk.
	1/14/2011: Install fuse(s). Install tap fuses at 3 locations.	Completed	1/12/2011	Reduced customer count affected by each outage.
	1/14/2011: Improve sectionalizing capability. Add fault indicators to reduce outage duration.	Scheduled for	6/30/2011	
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	SAIDI was 51% of the CPI score. There was one large outage on this feeder, which was caused by an animal outage on the mobile substation while performing maintenance at Fairview substation. A project is planned to reconductor Reed 19-2, which ties to Fairview 15-3. This will improve transfer capabilities between the two substations and reduce the duration and number of customers affected per outage.
	3/23/2011: Reconductor line. SP 16404. Reconductor Reed 19-2, which ties to Fairview 15-3. This will improve transfer capabilities between the two substations and reduce the duration and number of customers affected per outage.	Scheduled for	5/31/2012	
	3/23/2011: Reconductor line. SP 16404. Reconductor Reed 19-2, which ties to Fairview 15-3.	Scheduled for	5/31/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>53</b>	<b>Circuit ID: 46702 RENOVO 67-02</b>			<b>Location: Susquehanna</b>
				<b>CPI: 529</b>
	Expanded Operational Review.	Completed	12/31/2009	Identified new fusing and animal guard locations.
	Install fuse(s). Install 8 fuses in Renovo Boro.	Completed	5/5/2010	Reduced customer count affected by each outage.
	Thermographic inspection-OH line.	Completed	3/31/2010	6.7 miles of three-phase and 9.5 miles of two-phase were inspected. No repairs identified.
	Install fuse(s). Install 2 fuses on Renovo Rd.	Completed	3/31/2010	Reduced customer count affected by each outage.
	Install fuse(s). Install 4 fuses along Young Womans Creek Rd.	Completed	1/20/2010	Reduced customer count affected by each outage.
	4/8/2009: Perform line maintenance identified by line inspection. Repair damaged conductor on Young Woman's Creek Tap (WR 499544)	Completed	5/1/2009	Reduced outage risk.
	7/10/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/25/2009	Inconclusive. Monitor future performance. The Renovo 67-02 circuit was discussed at Susquehanna Region's 2009 Q2 Worst Performing Circuits meeting on August 25, 2009. This circuit is a worst performer due to its high SAIDI contribution. The entire feeder was interrupted twice during the last 4 quarters: in December due to a structure fire (line de-energized for firefighter safety) and once in February during a rain storm. The August 2009 storm may perpetuate this line being categorized as a WPC. There is one area on this circuit that has been subject to multiple interruptions (Young Woman's Creek) and will be considered in 2010 for hazard tree removals.
	1/4/2010: Install animal guard(s). Install 32 Animal Guards along Young Womans Creek Rd	Completed	12/15/2009	Reduced outage risk.
	1/4/2010: Add Capacitors. Add 600kVAR to existing bank on Huron Ave in Renovo.	Completed	3/31/2010	Voitage Support
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>54</b>	<b>Circuit ID: 47801 MOUNT CARMEL 78-01</b>			<b>Location: Central</b>
				<b>CPI: 525</b>
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	Greater than 3 outages was 68% of the CPI score. The largest outage contributing to CMI was due to an equipment failure while transferring this circuit away to perform maintenance at Mt. Carmel substation. It was determined that Planning will analyze several alternatives for improving transfers in this area.
	3/23/2011: Circuit outage data analysis. The Distribution Planner will analyze several alternatives for improving transfers away from Mt. Carmel Substation.	Completed	4/29/2011	Two projects were identified to improve transfers at Mt. Carmel Substation. The first project is a new line and terminal at Exchange 8-1 feeder. The second project is a new line and terminal at Mt. Carmel substation, that will reduce load and customer count on the Mt. Carmel 78-2 feeder.
	4/21/2011: Install new line and terminal. The new line and terminal at Mt. Carmel substation will reduce load and customer count on the Mt. Carmel 78-2 feeder.	Scheduled for	12/1/2014	
	4/21/2011: Install new line and terminal. The new line and terminal at Exchange substation will reduce load and customer count on the Exchange 8-1 feeder.	Scheduled for	12/1/2014	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>55 Circuit ID: 46701 RENOVO 67-01</b>				<b>Location: Susquehanna</b>
				<b>CPI: 524</b>
	12/18/2008: Expanded Operational Review.	Completed	12/31/2009	Reduced outage risk. Identified locations for additional fusing and 1 animal guard.
	10/9/2009: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2009	Inconclusive. Monitor future performance. The Renovo #1 circuit was discussed at Susquehanna Region's Quarterly WPC meeting on 12/1/09. This circuit is a WPC due to outages longer than 4 hrs in duration. This circuit was affected by a summer wind storm on August 9 resulting in all customers experiencing an outage for approximately 5 hours. The circuit was inspected in October and November to identify improvement projects. Several items identified include additional fusing, repair of pole top found burred by equipment damage, and adding redundancy to the Susquehanna River crossing to S. Renovo Borough. These items are documented individually in this database.
	1/6/2010: Install fuse(s).	Completed	1/20/2010	Reduced customer count affected by each outage.
	1/6/2010: Install animal guard(s).	Completed	1/20/2010	Reduced outage risk.
	1/6/2010: Thermographic inspection-OH line.	Completed	3/31/2010	6.6 miles of three-phase and 0.2 miles of two-phase inspected. No repairs identified.
	7/6/2010: Install fuse(s).	Completed	1/7/2010	Reduced customer count affected by each outage.
	11/3/2010: Relocate inaccessible line. Westport Tap Part 1. Rebuild approx 2.0 miles with 1/0 ACSR XLP and static wire. Portions may only need XLP and no static wire. Other portions can be relocated from one side of SR 120 to other side, away from steep bank.	Scheduled for	12/31/2011	
	11/3/2010: Relocate inaccessible line. Westport Tap Part 2. Rebuild approx 1.3 miles with 1/0 ACSR XLP and static wire. Portions may only need XLP and no static wire. Other portions can be relocated from one side of SR 120 to other side, away from steep bank.	Scheduled for	12/31/2011	
<b>56 Circuit ID: 44703 MUNCY 47-03</b>				<b>Location: Susquehanna</b>
				<b>CPI: 515</b>
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/31/2011	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
<b>57</b>	<b>Circuit ID: 67402 WAKEFIELD 74-02</b>			<b>Location: Lancaster East</b>
				<b>CPI: 512</b>
	5/19/2008: Line inspection-equipment. LMI Inspection performed on 3 phase line - 9.4 miles total	Completed	12/31/2009	Reduced outage risk.
	1/2/2009: Expanded Operational Review. Voltage Profile Completed 9/8/09 Reliability Analysis Completed 9/8/09	Completed	9/8/2009	No reliability work requests needed
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/6/2011	Customers experiencing greater than three outages (32%) , SAIDI (34%) and SAIFI (20%) all were contributors to the CPI. This was due to several tree-nd trimming and equipment failure related outages. Tree trimming is planned for the line in 2011. This circuit will be discussed on more detail on May 6, 2011 at the worst performing circuit meeting.
	4/20/2011: Line inspection-equipment. Additional Inspection on Multi-phase Equipment	Completed	4/20/2011	Reduced outage risk.



- 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 <sup>6</sup>	Percent of Trouble Cases	Customer Interruptions <sup>7</sup>	Percent of Customer Interruptions	Customer Minutes	Percent of Customer Minutes
Animals	4,550	21.94%	77,391	4.76%	9,206,522	4.31%
Contact/Dig-In	158	0.76%	9,445	0.58%	1,078,307	0.50%
Directed by Non-PPL Authority	178	0.86%	12,748	0.78%	763,562	0.36%
Equipment Failures	5,726	27.61%	530,920	32.63%	60,041,494	28.09%
Improper Design	0	0.00%	0	0.00%	0	0.00%
Improper Installation	3	0.01%	1,784	0.11%	291,355	0.14%
Improper Operation	31	0.15%	46,064	2.83%	1,429,705	0.67%
Non PPL Problem–Cust Fac	113	0.54%	2,837	0.17%	545,993	0.26%
Non PPL Problem–Other	198	0.95%	10,472	0.64%	1,217,979	0.57%
Nothing Found	1,712	8.25%	126,301	7.76%	8,737,474	4.09%
Other–Controllable	128	0.62%	14,034	0.86%	725,562	0.34%
Other–Non Control	504	2.43%	52,806	3.25%	4,654,156	2.18%
Other–Public	100	0.48%	27,659	1.70%	1,793,813	0.84%
Trees–Not Trimming Related	5,657	27.28%	518,831	31.89%	95,205,591	44.54%
Trees–Trimming Related	984	4.74%	69,105	4.25%	16,671,177	7.80%
Vehicles	697	3.36%	126,566	7.78%	11,395,518	5.33%
<b>Total</b>	<b>20,739</b>	<b>100.00%</b>	<b>1,626,963</b>	<b>100.00%</b>	<b>213,758,208</b>	<b>100.00%</b>

<sup>6</sup> Cases of trouble are the number of sustained customer service interruptions (i.e., service outages).

<sup>7</sup> 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 22% 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 82% 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 45% of the cases of trouble, 49% 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	1 <sup>st</sup> Quarter		Year-to-date	
		Budget	Actual	Budget	Actual
<b>Transmission</b>					
Transmission C-tag poles (# of poles)	400	129	160	129	160
Transmission arm replacements (# of sets)	100	22	34	22	34
Transmission air break switch inspections (# of switches)	0	0	1	0	1
Transmission lightning arrester installations (# of sets)	38	24	13	24	13
Transmission pole inspections (# of poles)	5,200	2,600	2,837	2,600	2,837
Transmission tree side trim-Bulk Power (linear feet)	N/A				
Transmission herbicide-Bulk Power (# of acres)	N/A				
Transmission reclearing (# of miles) BES Only	503	143	204	143	204
Transmission reclearing (# of miles) 69/138 kv	863	0	0	0	0
Transmission danger tree removals-Bulk Power (# of trees)	N/A				
<b>Substation</b>					
Substation batteries (# of activities)	844	576	633	576	633
Circuit breakers (# of activities)	1270	342	264	342	264
Substation inspections (# of activities)	2637	715	815	715	815
Transformer maintenance (# of activities)	2190	631	619	631	619
<b>Distribution</b>					
Distribution C-tag poles replaced (# of poles)	1,600	387	487	387	487
C-truss distribution poles (# of poles)	5,500	0	521	0	521
Capacitor (MVAR added)	57	12	20	12	20
OCR replacements (# of)	644	264	262	264	262
Distribution pole inspections (# of poles)	130,000	14,451	22,423	14,451	22,423
Distribution line inspections (# of miles)	3,000	1,000	700	1,000	700
Group relamping (# of lamps)	16,000	2,500	250	2,500	250
Test sections of underground distribution cable	500	92	108	92	108
Distribution tree trimming (# of miles)	5,276	1,175	1,714	1,175	1,714
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				
LTN manhole inspections (# of)	423	145	121	145	121
LTN vault inspections (# of)	758	201	157	201	157
LTN network protector overhauls (# of)	101	17	11	17	11
LTN reverse power trip testing (# of)	119	20	18	20	18

- 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	1st Quarter		Year-to-date	
	Budget (\$1,000s)	Actual (\$1,000s)	Budget (\$1,000s)	Actual (\$1,000s)
Provide Electric Service	2,305	2,226	2,305	2,226
Vegetation Management	7,080	7,659	7,080	7,659
Customer Response	14,663	15,309	14,663	15,309
Reliability & Maintenance	13,563	12,924	13,563	12,924
System Upgrade	800	310	800	310
Customer Services/Accounts	28,676	23,225	28,676	23,225
Others	11,847	19,735	11,847	19,735
<b>Total O&amp;M Expenses</b>	<b>78,934</b>	<b>81,388</b>	<b>78,934</b>	<b>81,388</b>

- 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.

	1st Quarter		Year-to-date	
	Budget (\$1,000s)	Actual (\$1,000s)	Budget (\$1,000s)	Actual (\$1,000s)
New Service/Revenue	14,013	14,823	14,013	14,823
System Upgrade	28,878	28,386	28,878	28,386
Reliability & Maintenance	35,940	49,111	35,940	49,111
Customer Response	4,846	6,911	4,846	6,911
Other	3,686	3,117	3,686	3,117
<b>Total</b>	<b>87,363</b>	<b>102,348</b>	<b>87,363</b>	<b>102,348</b>

- 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.

<b>Transmission and Distribution (T&amp;D)</b>	
Lineman Leader	73
Journeyman Lineman	174
Journeyman Lineman-Trainee	126
Helper	45
Groundhand	4
Troubleman	55
<b>T&amp;D Total</b>	<b>477</b>
<b>Electrical</b>	
Elect Leaders-UG	7
Elect Leaders-Net	9
Elect Leaders-Sub	25
Journeyman Elect-UG	25
Journeyman Elect-Net	9
Journeyman Elect-Sub	40
Journeyman Elect Trainee-UG	7
Journeyman Elect Trainee-Net	13
Journeyman Elect Trainee	44
Helper	0
Laborer-Network	5
Laborer-Substation	9
<b>Electrical Total</b>	<b>193</b>
<b>Overall Total</b>	<b>670</b>

***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.

***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. The definitions of the cause codes are:

10 – Improper Design	Controllable	<ul style="list-style-type: none"><li>• 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)</li></ul>
11 – Improper Installation	Controllable	<ul style="list-style-type: none"><li>• 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)</li></ul>
12 – Improper Operation	Controllable	<ul style="list-style-type: none"><li>• 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)</li></ul>
30 – Trees – Trimming Related <sup>8</sup>	Controllable	<ul style="list-style-type: none"><li>• Outages resulting from conductors contacted by tree growth within the clearance zone defined by the current trimming specification (within the Rights-of-Way).</li></ul>
35 – Trees – Not Trimming Related	Non-Controllable	<ul style="list-style-type: none"><li>• 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.</li></ul>
40 – Animals	Controllable	<ul style="list-style-type: none"><li>• Any outage caused by an animal directly or indirectly coming in contact with PPL Electric facilities. This includes birds, squirrels, raccoons, snakes, cows, etc.</li></ul>
41 – Vehicles	Public	<ul style="list-style-type: none"><li>• When cars, trucks or other types of vehicles or their cargoes strike facilities causing a problem.</li></ul>

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<sup>8</sup> 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"> <li>• 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.).</li> <li>• When contact is made by a non-employee with an underground facility causing interruption.</li> </ul>
60 – Equipment Failure	Controllable	<ul style="list-style-type: none"> <li>• Outages resulting from equipment failures caused by corrosion or contamination from build-up of materials, such as cement dust or other pollutants.</li> <li>• Outages resulting from a component wearing out due to age or exposure, including fuse tearing or breaking.</li> <li>• Outages resulting from a component or substance comprising a piece of equipment failing to perform its intended function.</li> <li>• 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.</li> </ul>
77 – Non-PPL Problem – Other	Non-PPL	<ul style="list-style-type: none"> <li>• Where no PPL Electric or customer facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.</li> </ul>
78 – Non-PPL Problem – Customer Facility	Non-PPL	<ul style="list-style-type: none"> <li>• Where no PPL Electric facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.</li> </ul>
80 – Scheduled Outage <sup>9</sup>	Controllable	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Includes requests from customers for interruption of PPL Electric facilities.</li> </ul>

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<sup>9</sup> 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 Authority	Non-Controllable	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>
90 – Other – Controllable (Lineman provides explanation)	Controllable	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Interruptions resulting from excessive load that cause that facility to fail.</li> <li>• 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.</li> <li>• Controllable interruptions or Power Service Problems whose cause is not described by one of the previous controllable cause codes.</li> </ul>
96 – Nothing Found	Non-Controllable	<ul style="list-style-type: none"> <li>• When no cause for the interruption can be found.</li> <li>• 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.</li> <li>• When closed for test, the fuse holds or the OCR remains closed. A patrol of the tap reveals nothing.</li> </ul>
98 – Other Public (Lineman provides explanation)	Public	<ul style="list-style-type: none"> <li>• 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.</li> </ul>

## Appendix B

99 – Other – Non-Controllable (Lineman provides explanation)	Non-Controllable	<ul style="list-style-type: none"><li>• 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.</li><li>• 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.</li><li>• All problems caused by contact of energized equipment with facilities of other attached companies or by trouble on customer owned equipment.</li><li>• 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.</li></ul>
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***PPL Electric Utilities Corporation***  
***Job Descriptions***

***Transmission and Distribution***

Groundhand	<ul style="list-style-type: none"><li>• Performs manual labor and assists employees in higher job classifications.</li></ul>
Helper	<ul style="list-style-type: none"><li>• 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.</li></ul>
Journeyman Lineman	<ul style="list-style-type: none"><li>• 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.</li></ul>
Journeyman Lineman-Trainee	<ul style="list-style-type: none"><li>• 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.</li></ul>
Lineman Leader	<ul style="list-style-type: none"><li>• 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.</li><li>• Engage in and perform work along with providing the necessary leadership, all-around knowledge, initiative, judgment, and experience to produce a quality job.</li><li>• Performs all the direct duties of the Journeyman Lineman when not acting as a Lineman Leader.</li></ul>
Troubleman	<ul style="list-style-type: none"><li>• Investigates and resolves trouble calls, voltage abnormalities on transmission and distribution systems associated with, but not limited to, PPL Electric facilities.</li></ul>

***Electrical***

<p>Electrician Leader          - Substation          - Network          - Underground</p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Engage in and perform work along with providing the necessary leadership, all-around knowledge, initiative, judgment, and experience to produce a quality job.</li> <li>• Performs all direct duties of the Journeyman Electrician when not acting as a leader.</li> </ul>
<p>Helper          - Substation          - Network          - Underground</p>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>
<p>Laborer          - Substation          - Network          - Underground</p>	<ul style="list-style-type: none"> <li>• Performs manual labor and assists employees in higher job classifications.</li> </ul>
<p>Journeyman Electrician          - Substation          - Network          - Underground</p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Uses microprocessor based equipment for troubleshooting and revising relay logic and its control systems related to the Field Services electrical discipline.</li> </ul>
<p>Journeyman Electrician - Trainee          - Substation          - Network          - Underground</p>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Uses microprocessor based equipment for troubleshooting and revising relay logic and its control systems related to the Field Services electrical discipline.</li> </ul>

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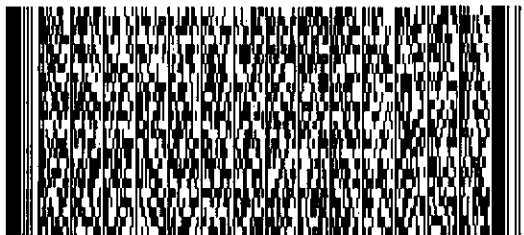
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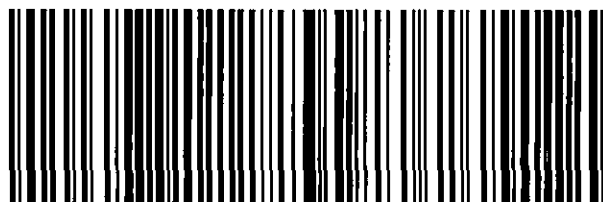
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