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FEDERAL EXPRESS

April 30, 2012

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

RECEIVED

APR 30 2012

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

**Re: PPL Electric Utilities Corporation
Quarterly Reliability Report for the
Period Ended March 31, 2012
Docket No. L-00030161**

Dear Ms. Chiavetta:

Enclosed for filing on behalf of PPL Electric Utilities Corporation ("PPL Electric") are an original and five (5) copies of PPL Electric's Quarterly Reliability Report for the Period Ended March 31, 2012. Also enclosed, in a sealed envelope, is a copy of the report containing competitively sensitive and proprietary information. The Company hereby requests that the Commission treat that information, and the report containing the information, as privileged and confidential. The report is being filed pursuant to the Commission's Final Rulemaking Order adopted May 7, 2004 in the above-captioned docket.

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

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

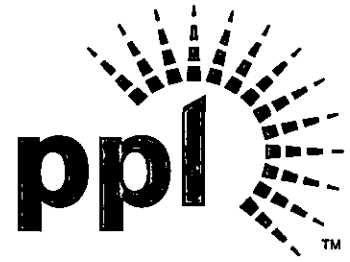
If you have any questions regarding this document, please call me or Joseph M. Kleha, PPL Electric's Manager-Regulatory Compliance and Rates at (610) 774-4486.

Very truly yours,

Paul E. Russell

Enclosures

cc: Mr. Darren Gill
Mr. Daniel Searfoorce



PPL Electric Utilities

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

April 2012

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SECRETARY'S BUREAU

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

There were no major events during the first quarter.

- 1) *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, 2012¹.

SAIFI (Benchmark = 0.98; Rolling 12-month Std. = 1.18)	0.894
CAIDI (Benchmark = 145; Rolling 12-month Std. = 174)	148
SAIDI (Benchmark = 142; Rolling 12-month Std. = 205)	133
MAIFI²	4.673
Average Number of Customers Served³	1,391,937
Number of Sustained Customer Interruptions (Trouble Cases)	16,675
Number of Customers Affected⁴	1,244,351
Customer Minutes of Interruptions	184,464,672
Number of Customer Momentary Interruptions	6,505,140

During the 1st quarter there were no PUC major events or other storms.

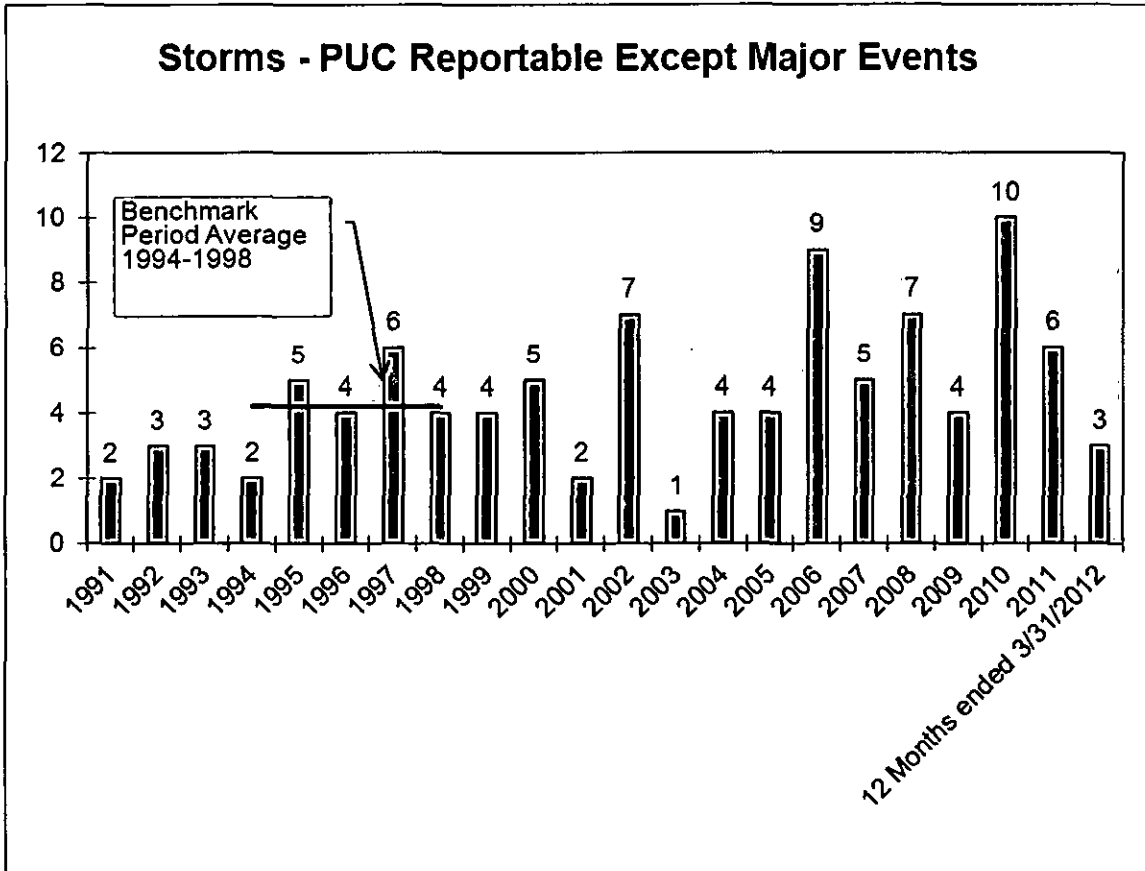
¹ Non-PPL Electric problems are excluded here, but may be found in Item 5.

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

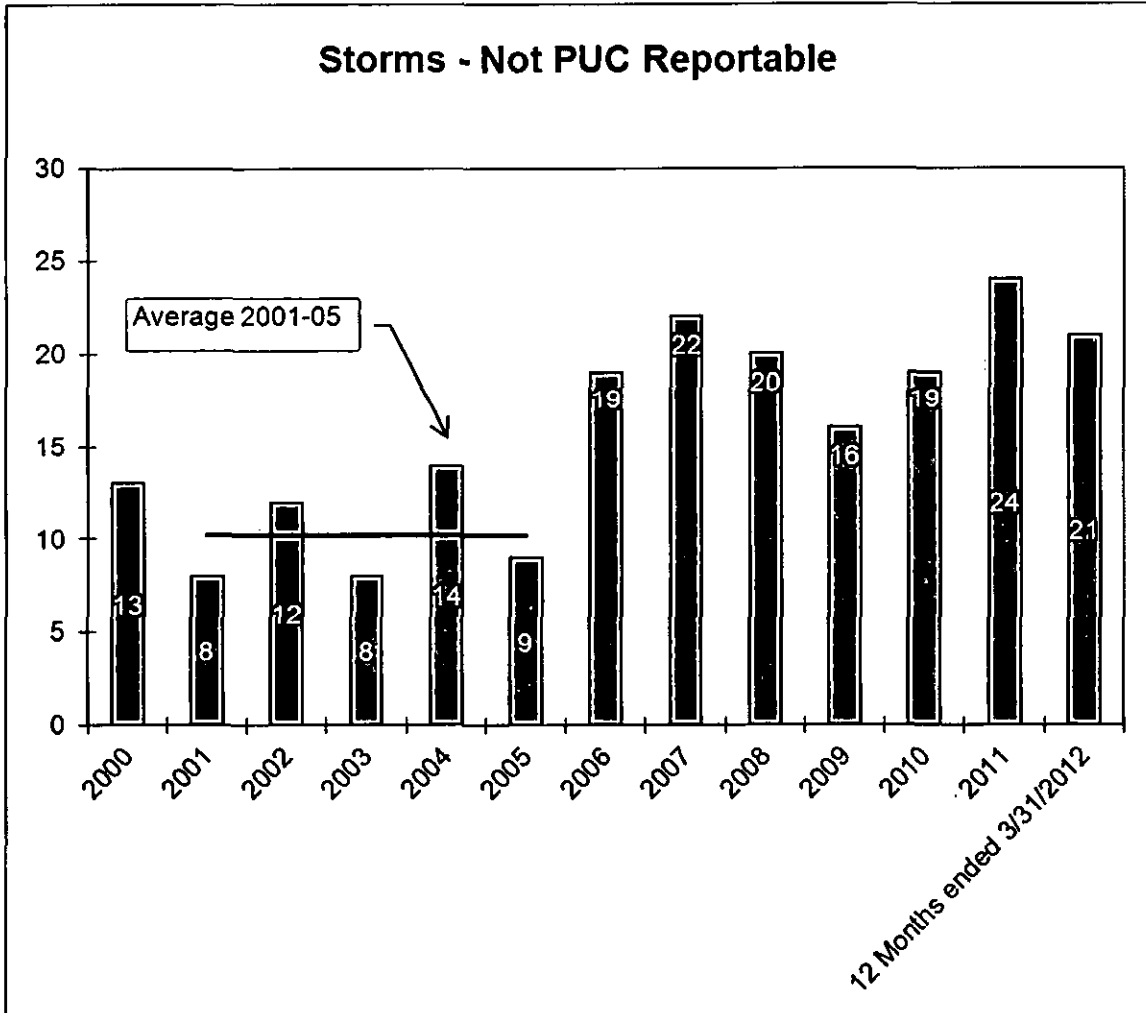
³ PPL Electric calculates the annual indices using customers served at the end of the period. This is consistent with the method used to calculate PPL Electric's benchmarks.

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

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



In addition, there were twenty-one (21) storms that were not reportable, but which did require the opening of one or more area emergency centers to manage restoration efforts.



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

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

WPC Rank	Feeder ID	SAIFI	CAIDI	SAIDI	MAIFI ⁵	Customers	Cases of Trouble ⁶	Customer Minutes Interrupted	CPI
1	47707	1.417	2453.1	3476.3	6.29	1930	49	6,709,270	1191
2	60603	20.041	87.23	1748.1	13.50	268	26	468,504	1185
3	47701	1.425	2316.7	3300.3	5.00	497	5	1,640,268	1162
4	47703	2.888	928.10	2680.1	9.05	1372	38	3,677,130	1077
5	26601	4.447	259.11	1152.3	4.06	1295	37	1,492,223	1072
6	23401	6.392	156.39	999.66	3.05	1735	48	1,734,417	1004
7	10803	8.617	207.88	1791.2	5.00	60	5	107,472	981
8	47501	3.922	488.05	1914.0	1.00	768	24	1,470,004	980
9	47704	4.802	468.91	2251.6	9.63	737	31	1,659,489	948
10	46602	4.576	165.72	758.38	2.00	1548	57	1,173,978	942
11	44802	1.206	2019.2	2435.8	1.28	1449	20	3,529,569	901
12	57403	6.614	60.41	399.51	7.09	1460	28	583,284	868
13	41601	3.782	362.07	1369.3	6.17	413	15	565,553	861
14	13704	6.650	156.31	1039.4	7.74	1575	35	1,637,068	859
15	43401	2.352	862.51	2028.4	1.00	992	38	2,012,236	856
16	44703	3.592	424.16	1523.3	8.00	1755	30	2,673,456	802
17	12305	5.083	113.40	576.37	8.02	883	41	508,935	793
18	13702	4.708	88.97	418.85	6.00	712	26	298,219	787
19	15603	5.158	59.46	306.71	11.50	1064	23	326,336	749
20	11502	4.944	68.86	340.43	4.01	2469	31	840,532	746
21	51002	1.853	1020.4	1891.0	4.98	1702	17	3,218,604	720
22	13302	4.001	100.02	400.23	3.97	1421	12	568,721	707
23	45101	3.915	104.52	409.17	2.04	164	8	67,105	686
24	52401	3.405	214.40	729.93	2.04	1436	56	1,048,180	674
25	44701	1.485	993.57	1475.1	5.96	1075	36	1,585,737	653
26	22402	4.575	133.70	611.71	9.99	1304	18	797,664	645
27	15602	3.581	113.86	407.72	8.96	1193	17	486,409	642
28	43201	2.604	148.51	386.78	0.00	958	15	370,536	636

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

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

WPC Rank	Feeder ID	SAIFI	CAIDI	SAIDI	MAIFI ⁵	Customers	Cases of Trouble ⁶	Customer Minutes Interrupted	CPI
29	15601	4.030	64.34	259.28	7.97	840	24	217,798	626
30	47502	2.485	398.90	991.22	1.00	792	25	785,042	600
31	43302	2.534	470.78	1193.0	6.00	176	6	209,970	580
32	24304	2.109	758.42	1599.3	1.02	1784	11	2,853,188	562
33	22001	3.003	252.35	757.71	0.00	2287	63	1,732,885	552
34	17902	3.788	51.90	196.58	12.13	985	26	193,631	542
35	22602	3.027	149.28	451.84	5.03	1534	49	693,123	538
36	22802	2.023	520.65	1053.3	6.98	564	13	594,065	523
37	55401	3.144	90.27	283.79	1.04	2183	15	619,522	519
38	44601	3.371	148.94	502.01	1.00	761	29	382,031	517
39	25402	3.040	111.49	338.93	6.50	1718	45	582,287	515
40	12301	2.939	191.52	562.94	2.02	1237	35	696,356	512
41	26002	2.493	284.83	710.07	12.04	1201	52	852,791	511
42	28704	0.108	93.18	10.09	0.00	674	4	6,802	507
43	52403	2.984	176.80	527.66	8.02	1155	30	609,447	490
44	11001	3.187	112.62	358.91	3.00	867	37	311,174	465
45	22601	2.985	139.19	415.47	1.01	1985	44	824,708	459
46	45402	3.700	78.99	292.29	5.13	1595	55	466,209	450
47	43001	3.378	113.95	384.95	4.00	973	37	374,559	444
48	27101	2.891	167.16	483.34	2.45	1870	72	903,849	444
49	51003	2.415	425.75	1028.1	1.97	1719	15	1,767,306	443
50	53601	2.695	141.94	382.58	4.03	1129	49	431,937	436
51	16402	2.047	129.17	264.44	2.00	994	31	262,857	418
52	47705	0.908	894.30	811.70	0.87	1440	4	1,168,848	416
53	55408	2.925	118.67	347.07	11.03	1103	20	382,820	415
54	63601	2.902	80.39	233.33	8.04	461	13	107,563	410
55	26105	1.000	745.85	745.85	0.00	1	1	746	402
56	45002	2.073	193.01	400.20	1.00	1920	43	768,388	400
57	54603	3.139	41.49	130.25	9.04	1596	20	207,872	400
58	17001	2.114	195.23	412.79	3.00	1504	44	620,837	392

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

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

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

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

Cause Description	Trouble Cases ⁷	Percent of Trouble Cases	Customer Interruptions ⁸	Percent of Customer Interruptions	Customer Minutes	Percent of Customer Minutes
Animals	2,929	17.57%	52,727	4.24%	4,988,330	2.70%
Contact/Dig-In	167	1.00%	19,536	1.57%	1,392,973	0.76%
Directed by Non-PPL Authority	214	1.28%	6,918	0.56%	3,645,376	1.98%
Equipment Failures	5,821	34.91%	403,861	32.46%	51,001,451	27.65%
Improper Design	2	0.01%	1,580	0.13%	44,438	0.02%
Improper Installation	2	0.01%	291	0.02%	71,440	0.04%
Improper Operation	5	0.03%	1,897	0.15%	168,174	0.09%
Nothing Found	1,455	8.73%	135,008	10.85%	8,738,363	4.74%
Other-Controllable	96	0.58%	19,468	1.56%	6,753,921	3.66%
Other-Non Control	453	2.72%	30,435	2.45%	7,307,968	3.96%
Other-Public	78	0.47%	15,326	1.23%	1,728,669	0.94%
Trees-Not Trimming	4,064	24.37%	365,621	29.38%	72,845,543	39.49%
Trees-Trimming	642	3.85%	31,045	2.49%	8,072,899	4.38%
Vehicles	747	4.48%	160,638	12.91%	17,705,129	9.60%
Total	16,675	100.00%	1,244,351	100.00%	184,464,672	100.00%

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

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

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

Rank	Action	Status	Due/Complete	Result
1	Circuit ID: 47707 BLOOMSBURG 77-07			Location: Sunbury
				CPI: 1191
	3/12/2008: Install tie. Construct Tie between East Danville #2 and Bloomsburg #7 along Rte 11. This project is currently being engineered.	Scheduled for	9/28/2012	
	2/5/2009: Improve sectionalizing capability. Install solid blade disconnects to improve sectionalizing on Grovania Hill Tap (OCR 33751N29561).	Completed	5/27/2010	Reduced customer count affected by each outage.
	4/14/2009: Install fuse(s). Install series fusing - Hollow Rd. (WR# 504489)	Completed	7/16/2010	Reduced customer count affected by each outage.
	4/14/2009: Install fuse(s). Install series fusing on River Drive (WR# 504490).	Completed	7/16/2010	Reduced customer count affected by each outage.
	4/14/2009: Reconductor line. Replace conduit and river crossing on SR 42 Bridge to Catawissa.	Completed	5/14/2011	Reduced customer count affected by each outage.
	4/14/2009: Install 1 phase OCR(s). Install OCR at 35049N27955, Long Woods Rd and Orchard Rd. (WR 503377).	Completed	5/28/2010	Reduced customer count affected by each outage.
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	The contribution of CEMI greater than 3 outages was 42% of the CPI score. The largest outage affected all of the customers on the feeder and was caused by a tree falling on the lines just outside of the substation. This incident was storm related not due to lack of trimming. The third largest outage was an intentional outage due to a fire. PPL was asked by local officials to de-energize the line.
2	Circuit ID: 60603 NORTH COLUMBIA 06-03			Location: Lancaster
				CPI: 1185
	1/4/2010: Expanded Operational Review. Reliability Analysis Completed 3/10/10	Completed	12/31/2010	Reduced outage duration.
	10/11/2010: Improve sectionalizing capability. Build Red Front substation and tie it into the North Columbia 6-3 line.	Completed	3/29/2012	Reduced outage duration. The new Red Front substation greatly improves the sectionalizing capabilities on the west side of the Susquehanna River. It also reduced the number of customers as well as the line length of the North Columbia 6-3 line. The customer count went from about 1,900 to 300 and the line length went from about 80 to 30 miles. The new Red Front substation will greatly reduce CMI, SAIDI, SAIFI and CAIDI on the NCOL 6-3 as well as the NCOL 6-5 lines.
	1/5/2011: Improve sectionalizing capability. 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 underground dips	Completed	3/23/2011	Reduced outage duration.
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/6/2011	SAIDI was the greatest contributor (55%) to the CPI. This was due to one tree trimming related outage that accounted for over 2.2 million of the 2.86 million total customer minutes interrupted.
	6/14/2011: Tree trimming.	Completed	6/30/2011	Reduced outage risk.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
3	Circuit ID: 47701 BLOOMSBURG 77-01			Location: Sunbury	CPI: 1162
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WPC meeting on 12/1/11. The Bloomsburg substation and customers served by this circuit were subjected to historic flood conditions. The flooding was caused by record setting rainfalls from Tropical Storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding and some of our customer's services were under water. This circuit has not on the WPC list before. PPL will continue to monitor this circuit's performance.	
4	Circuit ID: 47703 BLOOMSBURG 77-03			Location: Sunbury	CPI: 1077
	8/26/2010: Install tie. A project was placed into the budget to create a tie between Bloomsburg 47703 and Bloomsburg 47704. This will enhance the reliability of both Bloomsburg circuits by providing additional operating flexibility through use of remotely operated interrupting and switching devices.	Scheduled for	11/30/2014		
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list. This line will be inspected for vegetation encroachment and potential equipment failure risks.	Completed	11/11/2010	The Bloomsburg 77-03 circuit was reviewed at Susquehanna Region's Q3 2010 WPC meeting on November 11, 2010. This circuit is classified as a worst-performer due to the number of customers experiencing multiple outages. Over the last 4 quarters, the substation breaker was interrupted three times, twice due to off-right-of-way trees contacting the line. Based on the performance of this line in the last 2 quarters, this circuit will likely remain a WPC for 2 - 3 more quarters.	
	11/11/2010: Line inspection-equipment.	Completed	5/2/2011	Reduced outage risk. The line inspection revealed the following problems: 2 Blown Lightning Arrestors, Broken Strands on the Primary, 1 Broken Wire Tie, Broken Insulators and Broken Guy Wires.	
5	Circuit ID: 26601 BROOKSIDE 66-01			Location: Scranton	CPI: 1072
	6/30/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	7/30/2010	Inconclusive. Monitor future performance. Several OCR outages due to trees from outside the ROW and equipment failures have significantly contributed to the CPI of this circuit.	
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2011	Inconclusive. Monitor future performance. The Brookside 66-1 12 kV line experienced several large outages that put it into the top ten WPC list. The first of the major outages occurred on 4/30/11 when a tree from outside PPL's right of way fell on the primary line and caused the breaker at the sub to trip to lockout. The outage affected 1,292 customers and resulted in a total customer minutes interrupted (CMI) value of 931,765. Another non trimming related outage occurred on 5/24/11 resulting in an OCR tripping to lockout causing an outage for 870 customers with a CMI value of 72,323.	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
6 Circuit ID: 23401 HONESDALE 34-01				Location: Pocono
				CPI: 1004
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	10/18/2011	Several outages occurred over the rolling four quarters as a result of non trimming related tree contacts. Of these outages, the three that accounted for the largest Customer Minutes Interrupted values occurred in the past four months. On 6/9/11, a tree from outside the right of way contacted the primary wire and caused an outage for 1,805 customers and netted a CMI value of 596,296. Then on 7/29/11, a tree from outside the right of way caused an OCR to trip to lockout. This caused an outage for for 751 PPL customers and resulted in a value of 431,575 CMI. On 9/5/11 the same OCR tripped to lockout due to a tree falling on the primary line from outside the right of way . This caused an outage for 751 PPL customers and totaled 166,122 CMI.
	10/17/2011: Evaluate potential ties.	In progress	6/29/2012	PPL is inspecting the capability of the tie line that connects the HONE 34-1 line to the TINK 44-1 line. If the tie line is nearing its capability to transfer in the next few years or reliability could be improved in any way, it is imperative that a project is planned to improve the reliability for the customers on these circuits.
7 Circuit ID: 10803 CHERRY HILL 08-03				Location: Bethlehem
				CPI: 981
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2010	This circuit had several long duration outages. However, all events on this circuit in the past year have affected under 100 customers. Outages have been due to tree related issues and equipment failures. The circuit was last trimmed in 2009.
	11/30/2010: Install tie. A project has been placed into the budget to create a 5 mile tie between the Cherry Hill 08-03 line and a new area substation, Factoryville.	Scheduled for	12/31/2012	
	1/9/2011: Install three single phase voltage regulators near the Cherry Hill 8-3 Met-Ed tie.	Completed	12/20/2011	These voltage regulators will provide a balance of voltage between the three phases on the main line to improve the power quality of the circuit.
	1/9/2012: Install a remotely operated control switch on the three phase line just before the three customers at the beginning of the circuit. WR 680982	Scheduled for	6/1/2013	
	1/9/2012: A project has been placed into the budget to install a new area substation, Factoryville. This will improve the reliability of the Cherry Hill 8-3 and the Mt Bethel 29-2 area.	Scheduled for	3/29/2013	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
8	Circuit ID: 47501 NEW COLUMBIA 75-01			Location: Sunbury
				CPI: 980
	1/6/2011: Expanded Operational Review. EOR Planned for 2011	Completed	12/31/2011	No problems were identified.
	1/6/2011: Thermographic inspection-OH line. Thermovision inspection of 2 and 3 phase sections to be completed early 2011.	Completed	2/9/2011	Reduced outage risk. All necessary repairs completed.
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	9/19/2011	This circuit was reviewed at the Susquehanna WPC meeting on 9/19/11. The largest contributor to the circuit performance index was a SAIDI contribution of 64.25%. On April 28, 2011 a microburst took down several spans of three phase circuit which caused the circuit breaker to open. Due to the extensive damage all of the customers on this line were out of service for 2,077 minutes. PPL will continue to monitor this circuit's future performance.
9	Circuit ID: 47704 BLOOMSBURG 77-04			Location: Sunbury
				CPI: 948
	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	11/28/2014	
	4/30/2008: Install 3 phase OCR(s). Replace existing OCR with single pole tripping recloser at grid 35204N31678. WR number is 420353.	Completed	8/31/2010	Reduced customer count affected by each outage.
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/19/2010	Inconclusive. Monitor future performance. The Bloomsburg #4 circuit was discussed at Susquehanna Region's Q2 2010 WPC meeting on 8/19/10. This circuit is categorized as a WPC due to storm outages during a May 2010 weather event. This storm resulted in downed trees contacting power lines and causing significant damage.
	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	
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WPC meeting on 12/1/11. The Bloomsburg substation and customers served by this circuit were subjected to historic flood conditions. The flooding was caused by record setting rainfalls from tropical storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding and some of our customer's services were under water. No short term plan is required at this time. PPL will continue to monitor this circuit's performance.
	12/30/2011: Install tie. SP 15410 Relieve the Bloomsburg 77-03 Line RIS 11/2014: This project will add a new ROCS device that will allow system operators to remotely transfer customers from the BLOO 47704 to the BLOO 47703 circuit.	Scheduled for	11/28/2014	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
10	Circuit ID: 46602 LARRYS CREEK 66-02			Location: Susquehanna
				CPI: 942
	4/7/2010: Install 1 phase OCR(s).	Completed	5/13/2010	Reduced customer count affected by each outage. WR 535676 - Install New OCR to protect new line from WR 535675
	5/7/2010: Perform line maintenance identified by line inspection.	Completed	6/25/2010	Reduced outage risk. WR 584575 - Replace 'B' phase stirrup - Emergency
	7/6/2010: Perform line maintenance identified by line inspection.	Completed	7/15/2010	Reduced outage risk. WR 584573 - Replace stem connections and secondary splice - Minimal
	7/6/2010: Install fuse(s).	Completed	3/1/2011	Reduced customer count affected by each outage. WR 556903 - Install 1 Fuse
	7/6/2010: Install fuse(s).	Completed	3/1/2011	Reduced customer count affected by each outage. WR 556905 - Install 5 Fuses
	7/6/2010: Install fuse(s).	Completed	7/1/2011	Reduced customer count affected by each outage. WR 556906 - Install 1 fuse
	7/6/2010: Install fuse(s).	Completed	3/1/2011	Reduced customer count affected by each outage. WR 556915 - Install 1 fuse
	7/7/2010: Relocate inaccessible line. Relocate Inaccessible line along Duffy's Rd.	Completed	7/16/2010	Reduced outage risk. WR 535675 - Relocate Inaccessible line along Duffy's Rd
	7/7/2010: Install fuse(s).	Completed	7/12/2010	Reduced customer count affected by each outage. WR 535701 - Install 1 fuse along Spook Hollow Rd.
	7/7/2010: Relocate inaccessible line.	Completed	3/1/2011	Reduced customer count affected by each outage. WR 556898 - Install 2 fuses on Youngs Rd
	7/7/2010: Relocate inaccessible line.	Completed	7/15/2010	Reduced customer count affected by each outage. WR 535703 - Relocate Inaccessible line along Martins Rd.
	7/7/2010: Install fuse(s).	Completed	3/1/2011	Reduced customer count affected by each outage. WR 556899 - Install 1 fuse on Pine Run Rd
	7/7/2010: Perform line maintenance identified by line inspection.	Completed	8/9/2010	Reduced outage risk. WR 584574 - Replace cutouts/lightning arrestors - Minimal
	7/7/2010: Relocate inaccessible line.	Scheduled for	3/14/2013	WR 556910 - Relocate Inaccessible Line along Tombs Run Rd.
	7/7/2010: Install fuse(s).	Completed	3/1/2011	Reduced customer count affected by each outage. WR 556897 - Install 1 fuse on Level Corners Rd
11	Circuit ID: 44802 EAST DANVILLE 48-02			Location: Sunbury
				CPI: 901
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WPC meeting on 12/1/11. The Danville area and customers served by this circuit were subjected to historic flood conditions. The flooding was caused by record setting rainfalls from Tropical Storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding and some of our customer's services were under water. This circuit was not previously on the WPC list. PPL will continue to monitor this circuit's performance.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
12	Circuit ID: 57403 SPANGLER 74-03			Location: West Shore CPI: 868
	5/31/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2010	Inconclusive. Monitor future performance. The greatest contributing cause to outages has been trees from outside the trimming right of way during small storms.
	10/1/2010: Reconductor line. Reconductor part of the three phase line along Fishing Creek Road. This will improve the transfer capabilities of a tie between the Spangler 74-1 and 74-3 lines.	Scheduled for	12/31/2013	
	10/1/2010: Install automation devices. Add several automation devices to tie points along the Spangler 74-3 circuit. This will improve restoration times.	Completed	6/1/2011	Reduced outage duration.
	1/26/2011: Thermographic inspection-OH line.	Completed	2/28/2011	Inconclusive. Monitor future performance.
	1/26/2011: Expanded Operational Review.	Completed	3/28/2011	Inconclusive. Monitor future performance.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/21/2011	The Spangler 74-03 line is a long radial distribution circuit at the southern edge of PPL territory. The feeder has approximately 1,500 customers across 58 circuit miles. The largest CPI contributor has been the percentage of customers with greater than 3 outages. The circuit breaker experienced three interruptions in the past year. Nothing was found for two of the interruptions, and the CB held for test when thrown back in. Both outages occurred during storm weather, so it is suspected that a tree limb may have made extended contact. The third breaker outage was caused by an equipment failure on a downstream OCR. In addition to the three breaker outages, An OCR in serving 1,050 customers also experienced three interruptions in the past year. The causes include a tree from outside the trimming right of way, a vehicle pole hit, and nothing found. A failed conversion board has since been replaced in the OCR.
	11/21/2011: Relocate a normally open point on a single phase CEMT tap. This will transfer approximately 40 customers to a source closer to the substation.	Scheduled for	12/31/2012	
	11/21/2011: Install ROCS. Install a new normally open ROCS on the Spangler 74-3 in order to transfer approximately 100 customers to a more reliability source at Mount Allen Substation.	Scheduled for	12/31/2012	
	11/21/2011: Tree trimming. Trim the Spangler 74-03 line as part of its four year vegetation management cycle.	Scheduled for	12/31/2012	
	3/12/2012: Load balancing. Extend second phase to alleviate cold load pickup & operator response.	Scheduled for	12/31/2012	
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
13	Circuit ID: 41601 CLEVELAND 16-01			Location: Central
				CPI: 861
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2011	This feeder had multiple tree outages caused by a storm on 6/10/11 that resulted in a total of 203,000 customer minutes interrupted. Since the beginning of 2011, 23 customers have experienced 6 outages on this feeder. Distribution Planning will analyze a project to reduce the number of outages seen by this group of customers. This feeder has not been trimmed for 6 years and is planned for trimming in 2012.
	9/29/2011: Circuit outage data analysis. Between January 2011 to September 2011, 23 customers have experienced 6 outages on this feeder. Distribution Planning will analyze projects to mitigate the number of outages seen by these customers.	Completed	12/1/2011	A project was identified to install a recloser to improve sectionalizing. With the recloser installed, the 23 customers that had 6 outages would have experienced 3 less outages in 2011.
	1/4/2012: Improve sectionalizing capability. Install telemetric recloser to reduce the exposure to customers experiencing multiple interruptions.	Scheduled for	12/31/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
14	Circuit ID: 13704 SCHNECKSVILLE 37-04			Location: Lehigh CPI: 859
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2010	The aerial cable getaway for the Schnecksville 37-04 line failed twice in the past year. The getaway has since been replaced. Two additional OCR outages, due to vehicle contact and trees from outside the right of way, interrupted approximately 600 customers.
	4/20/2011: Circuit outage data analysis.	Completed	4/20/2011	The outage history for Schnecksville 37-04 has been reviewed for the period ending with Q1 2011. The circuit experienced four major outages in the past year. A transmission outage of unknown cause interrupted the substation during a Q1 2011 storm. The transmission line held when reclosed for test. The three remaining outages were due to equipment failures in Q4 2010. Two of which occurred on the same day when the operating bus disconnect failed in Schnecksville Substation. A separate outage occurred when an overhead switch failed while customers were transferred to the adjacent Schnecksville 37-01 line for repairs. The abnormal circuit configuration and repairs under construction delayed customer restoration. Many of the major contributors to the CPI have been equipment failures that have since been mitigated. Performance will continue to be monitored to determine if any proactive steps may be taken to prevent similar interruptions
	5/18/2011: Protection coordination review	Completed	5/18/2011	The protection scheme on this circuit is well laid out. No adjustments are needed at this time.
	4/23/2012: Install fault indications on a remotely operated control switch. WR 667699.	Completed	4/13/2012	Reduced outage duration.
	4/23/2012: Tree trimming.	Scheduled for	12/23/2014	Reduced outage risk.
	4/23/2012: Line inspection-equipment. Perform line walkdown to identify possible trouble spots for trimming and potential projects.	Scheduled for	6/30/2012	
15	Circuit ID: 43401 BENTON 34-01			Location: Sunbury CPI: 856
	8/26/2010: Install tie. A project was placed into the budget to create a tie between Benton 34-1 and Millville 32-2, and a 12 kV tie between Millville 32-2 and Hughesville 70-1. This will enhance the reliability of all three circuits by providing additional operating flexibility through use of remotely operated interrupting and switching devices. The project expects to save approximately 0.3 system SAIDI minutes.	Scheduled for	5/31/2013	
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2011	The largest contributor to the CPI Index was SAIDI. Three circuit breaker interruptions accounted for more than 60% of the customer minutes lost. The longest outage was due to a tree taking down the lines causing the circuit breaker to open. The other two breaker interruptions were due to equipment failures.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
16	Circuit ID: 44703 MUNCY 47-03			Location: Susquehanna
				CPI: 802
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2011	The number of customers experiencing more than 3 outages contributed to 34% of the CPI score for this circuit. Two outages that affected all of the customers accounted for 40% of the total customer minutes lost. One of these outages was due to a 69kV line outage, and the other was due to a tree taking down the lines during a wet snow storm.
	10/17/2011: Relocate inaccessible line. Relocate a 0.8 mile section of the main feeder that currently runs through an area prone to flooding. The proposed relocation circumvents the flood prone area, eliminates two underground dips, and provides a more direct feed to the Muncy Hospital and 1700 customers in Muncy Borough.	Scheduled for	11/29/2013	
17	Circuit ID: 12305 LANARK 23-05			Location: Lehigh
				CPI: 793
	1/9/2011: Circuit patrolled by a line maintenance inspector.	Completed	11/15/2011	Reduced outage risk.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2012	>3 Outages was the largest contributor to this circuits for poor CPI. Trees from outside the right of way caused several circuit breaker outages as well as a few other smaller OCR outages.
	1/9/2012: Adding fault indicators to a remote controlled switch. WR 648355. Improve fault location time.	Scheduled for	6/9/2012	
	1/9/2012: Tree trimming the circuit.	Scheduled for	12/9/2012	
18	Circuit ID: 13702 SCHNECKSVILLE 37-02			Location: Lehigh
				CPI: 787
	6/29/2010: Load balancing.	Canceled	9/11/2010	WR 450607 cancelled.
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
19	Circuit ID: 15603 NO STROUDSBURG 56-03			Location: Pocono
				CPI: 749
	2/14/2008: Monitor future performance.	Ongoing		
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	10/17/2011	Several major outages were found to have resulted from trees outside of PPL's right of way. The first outage occurred on 12/27/10 where a total of 1,085 customers were affected and resulted in a customer minute interrupted (CMI) value of 128,234. The second major tree related event occurred on 7/11/11. In this particular outage, a total of 1,068 customers were affected resulting in a CMI value of 117,579. In addition to these tree non-trimming related incidents, there was one animal contact outage that occurred on 5/3/11. The contact occurred in the substation bus work and resulted in several feeder outages including the 56-3 line. On the 56-3 line the outage resulted in an interruption of 1,078 customers and a CMI value of 94,045. In addition to these major CMI contributors there were four other breaker outages resulting from transmission outages (1), animal contact (2), and a tree contact from outside the right of way (1).
	7/20/2011: 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	12/31/2013	
	3/9/2012: Improve sectionalizing capability. This substation feeder will be a part of the 2013 Pocono Smart Grid Project. All sectionalizing devices will be switched to automated devices that will help reduce customer outage durations.	In progress	12/31/2013	
20	Circuit ID: 11502 FREEMANSBURG 15-02			Location: Bethlehem
				CPI: 746
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2012	>3 Outages was the largest contributor to the poor CPI. Trees falling from outside the right of way as well as an equipment failure caused nearly 1,700 customers to experience 5 outages.
	1/9/2012: Install a telemetric recloser and remove a switch at 67019S48446. Reduce the number of customers that will see an outage.	Scheduled for	12/9/2013	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
21 Circuit ID: 51002 NO HARRISBURG 10-02				Location: Harrisburg
				CPI: 720
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/21/2011	The North Harrisburg 10-2 line is a short urban circuit in downtown Harrisburg. The feeder has approximately 1,700 customers across 18 circuit miles. The largest CPI contributor was circuit SAIDI. This can be attributed to a single outage during the Tropical Storm Lee flooding. Under the direction of the city of Harrisburg, PPL crews cut power to a neighborhood of approximately 1,000 customers due to flooding concerns. As the waters receded, customers were reenergized block by block. The circuit has never experienced a history of poor reliability. The flooding of Tropical Storm Lee is considered to be a one hundred year flood. Circuit performance will continue to be monitored to determine whether further action is required.
	3/14/2012: Thermographic inspection-OH line. Inspect all 2 and 3 phase primary lines with infrared camera.	Completed	4/2/2012	Reduced outage risk.
22 Circuit ID: 13302 ORVILLA 33-02				Location: Bethlehem
				CPI: 707
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2011	The largest CPI contributor has been the percentage of customers with greater than 3 interruptions. There have been 5 breaker outages this year that have affected the entire Orvilla circuit. Two of the outages were caused by transmission, 1 outage was caused by a circuit breaker failing to reclose, 1 outage was due to trees not trimming related, and a final outage was required to complete a tie line.
23 Circuit ID: 45101 CASS 51-01				Location: Central
				CPI: 686
	2/19/2008: Tree trimming. Convert existing transformers between sub and grid 392S483 from the Marlin 71-01 Line.	Canceled	12/25/2010	
	1/15/2009: Circuit outage data analysis - WPC not on preceding qtr. list. Converting customers from 23kV to 12kV.	Scheduled for	12/31/2013	Reduced outage risk. This will convert the customers to our standard distribution voltage. When complete it will provide transfer capability to restore customer when an outage occurs.
	2/24/2010: Improve sectionalizing capability. 23 kV - 12 kV Conversion Part 2	Scheduled for	12/31/2012	
	2/24/2010: Improve sectionalizing capability. 23 kV - 12 kV Conversion Part 3	Scheduled for	12/31/2013	
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
24 Circuit ID: 52401 GREEN PARK 24-01				Location: West Shore
				CPI: 674
	9/10/2010: Evaluate potential ties. Evaluate project to create a tie with the Green Park 24-03 line.	Completed	9/10/2010	Inconclusive. Monitor future performance. Extensive tree removal was completed on this circuit. It is no longer on the WPC list. Project will be documented and reevaluated should circuit performance degrade.
	1/26/2011: Expanded Operational Review.	Completed	3/15/2011	Inconclusive. Monitor future performance.
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/25/2011	The Green Park 24-01 line is a long radial distribution circuit at the western edge of PPL territory. The feeder has approximately 1,440 customers across 144 circuit miles. The largest CPI contributors have been the percentage of customers with >3 interruptions and SAIDI. Two of the largest interruptions occurred when a failed insulator on the Green Park 69kV tap interrupted the JUNI-SDLE 69kV line. The single distribution tie to New Bloomfield Substation limited the number of customers on Green Park Substation that could be restored while repairs were being made.
	5/25/2011: Evaluate potential ties. Evaluate potential tie between the Green Park 24-01 and Green Park 24-03 lines.	Completed	10/17/2011	A project to construct a 4.5 mile three phase tie between the Green Park 24-1 and Green Park 24-3 has been developed and submitted into the five year Update System Facilities capital budget.
	8/24/2011: Investigate protection scheme. Review protection device placement and determine optimum locations for three phase reclosers.	Completed	11/8/2011	Inconclusive. Monitor future performance. Field Services conducted a patrol of the Green Park 24-1 line to review three phase protection device location. Tree exposure as well as customer count distributions limit the number of alternative device locations. It was determined that there would be no net benefit in relocating any three phase devices at this time.
	8/24/2011: Repair the failed circuit breaker on the Juniata-Shermansdale 69kV line. This line serves approximately 7,500 customers at Benvenue, Green Park, New Bloomfield, Shermansdale, and South Shermansdale substations.	Completed	8/24/2011	Reduced outage risk.
	11/21/2011: Install tie. Construct a new 4.5 mile three phase tie between the Green Park 24-1 and Green Park 24-3 circuits. This project will create an automated tie for approximately 1,650 radial customers between the two circuits.	Scheduled for	11/30/2014	
	3/12/2012: Tree trimming. Trim 9 mile Green Park 69 kV transmission tap as part of its vegetation management cycle.	Scheduled for	12/31/2012	
	3/12/2012: Tree trimming. Trim circuit as part of its four year vegetation management cycle.	Scheduled for	12/31/2013	
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
25	Circuit ID: 44701 MUNCY 47-01			Location: Susquehanna	CPI: 653
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	9/19/2011	This circuit was reviewed at the Susquehanna WPC meeting on 9/19/11. The largest contributor to the circuit performance index was customers with greater than 3 outages, with a contribution of 61.08%. On March 18, 2011 all of the customers on this circuit were interrupted due to a 69kV outage. All of the customers experienced a second outage on June 10, 2011 due to the 12kV circuit breaker opening. The aforementioned 12kV breaker outage and most of the other outages were caused by trees outside of the right of way falling on conductors.	
26	Circuit ID: 22402 MORGAN 24-02			Location: Scranton	CPI: 645
	12/15/2009: Relocate inaccessible section of 3 phase line.	Scheduled for	11/30/2013		
	6/30/2010: Circuit outage data analysis.	Completed	7/21/2010	Inconclusive. Monitor future performance. No major outages in Q1 2010. Circuit performance has improved.	
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list. Looking into possible application of automating the all possible sectionalizing devices on circuit and seeing if automation would provide a significant change in customer outage durations.	Scheduled for	3/15/2012	Inconclusive. Monitor future performance. The Morgan 24-2 circuit has not been on the WPC list in the most recent history. Major outages were not found to be improved by device automation, but a section of inaccessible line was found to be the primary contributor of long outage durations. Distribution Planning submitted a spot trimming request for this section of inaccessible line to help prevent further tree related outages.	
27	Circuit ID: 15602 NO STROUDSBURG 56-02			Location: Pocono	CPI: 642
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/25/2011	The North Stroudsburg 56-2 12 kV line experience two major outages that caused it to become a top WPC circuit. The first major outage occurred on 5/3/11 when an animal came in contact with the bus work in the substation taking out the breaker. This resulted in an outage for 1194 customer and 196,542 CMI. The second major outage occurred on 7/7/11 when a tree from outside the right of way fell on the primary wire causing the three phase OCR to trip to lockout. This outage affected 960 total customers and accounted for 119,202 CMI. Other than these major events, a majority of the existing outages occurred on transformers and fuses resulting from trees from outside the right of way.	
	3/9/2012: Improve sectionalizing capability. This substation feeder will be a part of the 2013 Pocono Smart Grid Project. All sectionalizing devices will be switched to automated devices that will help reduce customer outage durations.	Scheduled for	12/31/2013		
28	Circuit ID: 43201 MILLVILLE 32-01			Location: Sunbury	CPI: 636
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2011	The number of customers experiencing more than 3 outages attributed to 74% of the CPI for this circuit. This circuit went into service in January 2011 and the high CPI score was inherited from the old circuit configuration. PPL will continue to monitor this circuit's future performance.	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
29	Circuit ID: 15601 NO STROUDSBURG 56-01			Location: Pocono
				CPI: 626
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	10/17/2011	The NSTR 12 KV line experienced several outages due to varying causes in the rolling 12 month analysis. On 2/19/10, a tree from outside the right of way fell on the primary line causing an outage to 737 customers. The largest outage during the 12 month period occurred on 5/3/11 when the substation breaker failed due to an animal contact. This accounted for a total of 92,435 customer minutes interrupted (CMI). At the time of the outage 841 customers were interrupted. Another outage due to tree contact from outside the right of way occurred on 6/28/11. This outage was the second highest in CMI within the past twelve months with a value of 72,618 and a total of 836 affected customers.
	7/20/2011: Improve sectionalizing capability. This substation feeder will be a part of the 2013 Pocono Smart Grid Project. All sectionalizing devices will be switched to automated devices that will help reduce customer outage durations.	Scheduled for	12/31/2013	
	7/20/2011: Install tie. SP51415 Will build a 3 phase tie line between the 15601 and 15604. This will create a tie line for 750 currently radial customers.	Scheduled for	11/30/2014	
30	Circuit ID: 47502 NEW COLUMBIA 75-02			Location: Sunbury
				CPI: 600
	1/6/2011: Thermographic inspection-OH line. Thermovision inspection of 2 and 3 phase sections to be completed early 2011.	Completed	2/8/2011	Reduced outage risk. Completed 2/9/2011 - All necessary repairs completed.
	1/6/2011: Expanded Operational Review. EOR Planned for 2011	Completed	12/31/2011	Reduced outage risk. A crimp in the secondary was discovered on 2/9/11 during Thermographic Inspection. Repairs were made on 5/18/11 under WR 641824.
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	9/19/2011	This circuit was reviewed at the Susquehanna WPC meeting on 9/19/11. The largest contributor to the circuit performance index was a SAIDI contribution of 42.8%. On April 28, 2011 a microburst took down several spans of three phase circuit which caused the circuit breaker to open. Due to the extensive damage all of the customers on this line were out of service for 1,945 minutes. PPL will continue to monitor this circuit's future performance.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
31	Circuit ID: 43302 WATSON 33-02			Location: Sunbury CPI: 580
	1/4/2010: Expanded Operational Review.	Completed	12/31/2010	No problems were found. PPL will continue to monitor this circuit's performance.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WPC meeting on 12/1/11. On April 28, 2011 all of the customers on this circuit as well as 97 customers that are normally served by the NECO 47502 circuit experienced an outage. This outage was caused by trees taking down wires and breaking cross arms. Customers from the NECO 47502 were temporarily transferred to the WATS 43302 since a helicopter crash took down the river crossing on July 19, 2010. Until repairs were made to the NECO 47502 this circuit had increased exposure to trees and load could not be sectionalized and transferred to the NECO 47502. This circuit was never on the WPC list before. PPL will continue to monitor this circuit's performance.
32	Circuit ID: 24304 RIVER 43-04			Location: Wilkes-Barre CPI: 562
	7/2/2010: Expanded Operational Review. 2010 EOR Voltage profile complete 6/14/2010. Field review to be completed by 8/2/10.	Completed	8/2/2010	Reduced outage risk.
	8/19/2010: Line inspection-equipment. WR 599553 generated to replace 5 transformer cutouts and 3 crossarms.	Completed	9/21/2010	Reduced outage risk.
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	
33	Circuit ID: 22001 BOHEMIA 20-01			Location: Pocono CPI: 552
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/15/2012	Inconclusive. Monitor future performance. A new 12 kV line construction at the Bohemia substation is currently scheduled in PPL's USF budget. This new line will add tie capabilities along with a new source which will help to mitigate both outage durations and customer exposure to outages in the future. Since this line has not been a consistent bad performer. Future performance will be closely monitored.
34	Circuit ID: 17902 BARTONSVILLE 79-02			Location: Pocono CPI: 542
	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 substation feeder will be a part of the 2013 Pocono Smart Grid Project. All sectionalizing devices will be switched to automated devices that will help reduce customer outage durations.	Scheduled for	12/31/2013	
	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.	Completed	6/30/2011	Reduced outage duration.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
35	Circuit ID: 22602 KIMBLES 26-02			Location: Pocono
				CPI: 538
	10/15/2010: Improve sectionalizing capability.	Scheduled for	7/31/2012	
	10/15/2010: Circuit outage data analysis. Problematic areas identified and line patrol scheduled.	Completed	12/31/2010	Reduced outage risk. Tree problems were identified and tree trimming was completed.
	3/9/2012: Tree trimming. The Kimbles substation circuit lines is scheduled for tree trimming in 2012.	Scheduled for	12/31/2012	
	3/9/2012: Improve sectionalizing capability. The Twin Lakes New Line and Terminal project will relieve around 200 customers from the Kimbles 26-2 line. In addition to the customers transferred, this project will also improve tie and sectionalizing capabilities between the Kimbles 26-2 line and Twin Lakes Substation.	Scheduled for	5/31/2014	
36	Circuit ID: 22802 HAUTO 28-02			Location: Central
				CPI: 523
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/29/2012	This circuit became a WPC this quarter due to one large tree outage in July, 2011 that lasted nearly two days. This feeder is currently radial, having 564 customers without the ability to transfer during outage situations. Planning will analyze building a new tie to improve sectionalizing capability.
	4/12/2012: Planning to analyze building a new tie to improve sectionalizing capability.	Scheduled for	5/31/2012	
37	Circuit ID: 55401 SOUTH HERSHEY 54-01			Location: Harrisburg
				CPI: 519
	1/26/2011: Thermographic inspection-OH line.	Completed	2/28/2011	Inconclusive. Monitor future performance.
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/12/2012	The South Hershey 54-01 line is a nonstandard 13 kV distribution circuit. The feeder has approximately 2,200 customers across 54 circuit miles. The largest CPI contributors have been the percentage of customers with greater than 3 outages. A three phase recloser serving over 1,600 customers experienced four interruptions in the past year. The outage causes include load shedding due to a substation transformer overload during maintenance, flooding during Tropical Storm Lee, failure of a downstream capacitor bank, and nothing found.
	3/12/2012: Install 3 phase OCR(s). Install 3 phase recloser. Install a new telemetered three phase recloser downstream of existing problematic recloser. The new device will allow for a system operator to remotely transfer approximately 1,000 customers in the event of an outage on an upstream device.	Scheduled for	12/31/2013	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
38	Circuit ID: 44601 SALEM 46-01			Location: Sunbury
				CPI: 517
	1/11/2010: Expanded Operational Review.	Completed	12/31/2010	Reduced outage risk.
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/19/2012	This circuit was reviewed at the Susquehanna WPC meeting on 3/19/12. The Shickshinny area and customers served by this circuit were subjected to historical flood conditions. The flooding was caused by record setting rainfalls from tropical storm Lee. Efforts to restore service were hindered since some of PPL's equipment was inaccessible due to flooding and some of our customer's services were under water. On December 7, 2011 all of the customers on this circuit experienced an outage due to the circuit breaker operating to lockout. A defective OCR that protects the tap to the SSES Nuclear Power plant in Berwick was found to be the cause of the outage. This customer owed OCR has been removed and replaced.
	4/13/2012: Tree trimming-selected line segments only (hot spots).	Completed	3/20/2012	Reduced outage risk. Removed hazard tree west of pole # 44103N35809
	4/13/2012: Line inspection-equipment.	Completed	7/29/2011	Reduced outage risk. The line was patrolled by a Line Maintenance Inspector. Damaged dead end insulators were identified. The insulators were replaced.
39	Circuit ID: 25402 LAKE HARMONY 54-02			Location: Wilkes-Barre
				CPI: 515
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/29/2012	Through 2011, 182 customers on this circuit experienced 6 or more outages, primarily caused by trees. The largest contributors to customer minutes interrupted (CMI) were two tree outages for a total of 379,000 CMI. Approximately 8.5 miles of single phase has been identified for tree trimming and hazard tree removal.
	4/12/2012: Tree trim and remove hazard trees along 8.5 miles of single phase.	Scheduled for	6/30/2012	
40	Circuit ID: 12301 LANARK 23-01			Location: Lehigh
				CPI: 512
	6/29/2011: Monitor future performance.	Completed	6/29/2011	Intelligent switching scheme has been turned off and will be removed entirely to be replaced with traditional recloser controls. Monitor future performance for improvement.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2012	>3 Outages was the largest contributor to the poor CPI. Trees falling from outside the right of way, conductor failure, and misoperation of SISRS devices caused a large number of outages as well as long restoration times.
	1/9/2012: Tree trimmed circuit.	Completed	12/9/2010	Reduced outage risk.
	1/9/2012: Replacing old circuit automation controls. Improve fault location, restoration time, and communication with devices.	Scheduled for	12/9/2014	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
41	Circuit ID: 26002 WEST DAMASCUS 60-02			Location: Pocono	CPI: 511
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2011	This circuit experienced a majority of tree related outages . On 4/28/2011 a non trimming related tree outage operated the circuit breaker causing a large outage to 1192 customers. On 4/28/2011 a non trimming related tree outage caused an OCR to operate and interrupt 91 customers. In addition to tree related outages, a three phase OCR caused a large outage due to equipment failure on 6/24/2011. SP31105 will add a tie line between the WDAM 60-1 and WDAM 60-2 12 kV lines. This will improve the sectionalizing capability of the WDAM 60-2 circuit and help decrease CMI on the circuit.	
	10/17/2011: Install tie. SP 31105 builds a new tie between the West Damascus 60-1 and the West Damascus 60-2 12kV lines. This project will benefit 886 customers on the 60-1 and 60-2 lines. This project will reduce outage durations and increase operational flexibility and reliability in the area.	In progress			
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012		
42	Circuit ID: 28704 HAMLIN 87-04			Location: Pocono	CPI: 507
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012		

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
43	Circuit ID: 52403 GREEN PARK 24-03			Location: West Shore CPI: 490
	11/11/2009: Install fuse(s). Install 4 tap fuses	Completed	4/30/2010	Reduced customer count affected by each outage.
	1/26/2011: Expanded Operational Review.	Completed	3/28/2011	Inconclusive. Monitor future performance. Voltage profile will continue to be monitored over the following year during peak and light load conditions to determine whether additional voltage control devices will need to be installed. A new tie between the Green Park 24-1 and Green Park 24-3 circuits is expected to improve reliability.
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/23/2011	The Green Park 24-03 line is a long radial distribution circuit at the western edge of PPL territory. The feeder has approximately 1,160 customers across 124 circuit miles. The largest CPI contributors have been the percentage of customers with greater than 3 outages. Two of the largest interruptions occurred when a failed insulator on the Green Park 69kV tap interrupted the JUNI-SDLE 69kV line. A third transmission outage occurred when a 69 kV circuit breaker failed to reclose during a period of thunder and lightning. The single distribution tie to New Bloomfield Substation limited the number of customers on Green Park Substation that could be restored while repairs were being made.
	8/24/2011: Install fuse(s). Install additional fusing on a CEMI tap to reduce the exposure seen by customers.	Scheduled for	12/31/2012	
	8/24/2011: Repair the failed circuit breaker on the Juniata-Shermansdale 69kV line. This line serves approximately 7,500 customers at Benvenue, Green Park, New Bloomfield, Shermandale, and South Shermandale substations.	Completed	8/24/2011	Reduced outage risk.
	8/24/2011: Relocate to road and reconductor to XLP approximately 1 mile of single phase along a CEMI customer tap.	Scheduled for	12/31/2013	
	11/21/2011: Install tie. Construct a new 4.5 mile three phase tie between the Green Park 24-1 and Green Park 24-3 circuits. This project will create an automated tie for approximately 1,650 radial customers between the two circuits.	Scheduled for	11/30/2014	
	3/12/2012: Tree trimming. Trim 9 mile Green Park 69 kV transmission tap as part of its vegetation management cycle.	Scheduled for	12/31/2012	
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
44	Circuit ID: 11001 EAST GREENVILLE 10-01			Location: Bethlehem
				CPI: 465
	4/9/2009: Reconductor line. Reconductor and relocate 20 spans to the road.	Completed	11/30/2010	Reduced outage risk. Line relocated to reduce risk of outage for customers
	4/9/2009: Improve sectionalizing capability. Install new OCR, replace existing OCR with telemetric OCR.	Completed	8/20/2010	Reduced outage risk.
	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	
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/30/2010	Customers experiencing greater than three outages was the greatest contributor to the CPI. This was due to several tree related outages (due to non-tree trimming related outages) and one instance of equipment failure on the line. Tree trimming is planned for the line in 2011.
	8/20/2010: Line Inspection and Maintenance	Completed	12/31/2011	Two new projects have been identified and are currently being engineered.
	4/18/2011: Tree trimming. Trim East Greenville 10-01 circuit as part of 4 year vegetation management cycle. Efforts are being made to ensure circuit is at the top of the spring 2011 trim priority.	Completed	12/30/2011	Reduced outage risk.
	5/17/2011: Quarterly WPC Meeting	Completed	5/17/2011	Discussed reliability options and the idea of a new substation to improve reliability in the area. Verified that a new remote controlled switch was installed at 62085S42120.
	6/17/2011: Install telemetric recloser at 62160S41744. WR608684. Improve sectionalizing and add fault detection.	Scheduled for	12/17/2012	
	6/17/2011: Install new remotely operated control switch near 61799S42443. Improve sectionalizing and fault detection. WR 500785	Scheduled for	5/1/2012	
	6/17/2011: Install new substation near the end of the feeder.	Scheduled for	11/30/2015	
	1/9/2012: Reconfigure circuit by removing a single phase recloser and installing two new ones down stream. WR 603059. Improve reliability by reducing the number of customers that experience an outage.	Scheduled for	5/1/2013	
45	Circuit ID: 22601 KIMBLES 26-01			Location: Pocono
				CPI: 459
	1/18/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	10/15/2010	No longer among 5% worst performing circuits.
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
46	Circuit ID: 45402 WEST BLOOMSBURG 54-02			Location: Sunbury
				CPI: 450
	11/13/2007: Install 3 phase OCR(s). Replace OCR 37694N30236 with telemetric OCR.	Completed	7/29/2011	Reduced outage duration.
	5/15/2008: Perform line maintenance identified by line inspection. Eliminate exposure of unused 3 phase line by Rte 487 bridge.	Completed	7/29/2011	Reduced outage risk.
	5/27/2008: Relocate inaccessible line. Develop and implement scope for small reliability project on the Welsh Home Tap and implement.	Completed	5/28/2010	Reduced outage risk.
	5/27/2008: Thermographic inspection-OH line. Select taps with multiple interruptions.	Completed	4/28/2010	Reduced outage risk.
	11/26/2008: Install 3 phase OCR(s). Upgrade OCR 38029N29537 with Telemetric VCR.	Completed	7/29/2011	Reduced outage duration.
	11/26/2008: Install 3 phase OCR(s). Upgrade OCR 36573N30013 with Telemetric VCR.	Completed	7/29/2011	Reduced outage duration.
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	
47	Circuit ID: 43001 ALLENWOOD 30-01			Location: Sunbury
				CPI: 444
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	
48	Circuit ID: 27101 GREENFIELD 71-01			Location: Scranton
				CPI: 444
	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 upgdgraded to allow remote operation.
	1/28/2011: Install tie. A tie for 1,350 radial customers is currently being engineered by the field personnel.	Completed	6/30/2011	The tie line was engineered. Construction postponed due to budget constraints.
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	
	4/23/2012: Install tie. A tie line for 1,350 radial customers was engineered by field personnel. Project was not constructed due to budget constraints. Distribution Planning will review the justification and place the project into the ISR budget.	Scheduled for	6/15/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
49	Circuit ID: 51003 NO HARRISBURG 10-03			Location: Harrisburg CPI: 443
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/12/2012	The North Harrisburg 10-3 line is a short urban circuit in downtown Harrisburg. The feeder has approximately 1,700 customers across 19 circuit miles. The largest CPI contributor was circuit SAIDI. This can be attributed to a single outage during the Tropical Storm Lee flooding. Under the direction of the city of Harrisburg, PPL crews cut power to the entire circuit due to flooding concerns. As the waters receded, customers were reenergized. The circuit has never experienced a history of poor reliability. The flooding of Tropical Storm Lee is considered to be a one hundred year flood. Circuit performance will continue to be monitored to determine whether further action is required.
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.
50	Circuit ID: 53601 DALMATIA 36-01			Location: Harrisburg CPI: 436
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/21/2011	The Dalmatia 36-1 line is a long distribution circuit in a rural section of PPL territory. The feeder has approximately 1,150 customers across 102 circuit miles. The largest CPI contributors have been the percentage of customers with greater than 3 interruptions. The circuit breaker experienced a single outage on 3/07/11 due to a failed insulator on the main three phase line. In addition to the circuit breaker interruption, OCR serving 330 customers experienced four interruptions in the past year. The causes include trees trimming related, a vehicle pole hit, and two trees not trimming related. The circuit is currently being trimmed.
	11/21/2011: Tree trimming. Trim the Dalmatia 36-01 line as part of its four year vegetation management cycle.	Completed	12/30/2011	Reduced outage risk.
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.
51	Circuit ID: 16402 MOUNT POCONO 64-02			Location: Pocono CPI: 418
	4/26/2010: Improve sectionalizing capability. A project has been identified to change the normal open point with 56-04 line and automate switches/OCRs to minimize the number of customers involved in a outage	Completed	11/30/2010	Project was completed and remotely operated devices have been installed on this circuit. This will reduce the time needed to sectionize customers during an outage.
	6/30/2010: Perform line maintenance identified by line inspection.	Completed	12/31/2010	Circuit was inspected and a large amount of equipment known to be prone to failure will be replaced.
	6/30/2010: Tree trimming-selected line segments only (hot spots).	Scheduled for	12/31/2010	Line was inspected for tree clearance problems and hot spot trimming will be performed.
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	2/18/2011	
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
52	Circuit ID: 47705 BLOOMSBURG 77-05			Location: Sunbury CPI: 416
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	
53	Circuit ID: 55408 SOUTH HERSHEY 54-08			Location: Harrisburg CPI: 415
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	
54	Circuit ID: 63601 LETORT 36-01			Location: Lancaster CPI: 410
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	4/17/2012	In the previous 4 quarters, the greatest contribution to the Circuit Performance Index was due to the number of cases of trouble on the circuit (56%). SAIFI was 23% and SAIDI was 17%. Most of the cases of trouble were due to equipment failures. Here is a listing of the top 5 CMI outages due to equipment failures. On 1/23/12 a primary UG cable failed causing an outage to 223 customers for 152 minutes. On 9/23/11 a primary OH wire failed causing an outage to 232 customers for 91 minutes. On 1/12/12 a lightning arrester failed causing an outage to 223 customers for 55 minutes, on 6/22/11 a transformer failed causing an outage to 40 customers for 305 minutes and on 2/19/12 a transformer failure causing an outage to 32 customers for 75 minutes.
	4/17/2012: Thermographic inspection-OH line.	Completed	1/16/2012	Reduced outage risk.
	4/17/2012: Line inspection-equipment.	Scheduled for	10/31/2012	Reduced outage risk.
55	Circuit ID: 26105 THROOP 61-05			Location: Scranton CPI: 402
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012	
56	Circuit ID: 45002 LIMESTONE 50-02			Location: Sunbury CPI: 400
	1/5/2011: Thermographic inspection-OH line. Thermovision inspection of 2 and 3 phase sections to be completed early 2011.	Completed	2/7/2011	Reduced outage risk. Completed 2/7/2011 - All necessary repairs completed.
	1/5/2011: Expanded Operational Review. EOR Planned for 2011	Completed	12/31/2011	Reduced outage risk. A defective stem connector was identified during Thermographic inspection. Repairs were made on 4/7/11 under WR 641816.
	1/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/19/2012	This circuit was reviewed at the Susquehanna WPC meeting on 3/19/12. On March 10, 2011 and December 28, 2011 the CIRCUIT BREAKER tripped to lockout due to failed insulators. The failed insulators were replaced. This circuit was not on the WPC list since 2004. PPL will continue to monitor this circuit's performance.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>	
57	Circuit ID: 54603 SUMMERDALE 46-03			Location: West Shore	CPI: 400
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.	
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012		
58	Circuit ID: 17001 RIDGE ROAD 70-01			Location: Bethlehem	CPI: 392
	5/24/2010: Install tie. Build a tie between Ridge Road 70-1 and Richland 36-6 to create an auto transfer scheme to mitigate the effects of breaker operations.	Completed	12/31/2011	Reduced outage duration.	
	5/24/2010: Reconductor line. Reconductor a single phase section of line serving 74 CEMI customers with tree wire.	Scheduled for	12/31/2013		
	5/24/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2010	The SAIDI component was the greatest contributor to the CPI. A tree-related outage during a March storm led to the circuit breaker being interrupted for 2,099 minutes. This resulted in 2,162,010 CMI. Outages on nearby lines left customers unable to be transferred.	
	5/25/2010: Install animal guard(s). Install animal guards on a portion of the line with significant animal outage history.	Completed	9/10/2010	Reduced outage risk.	
	8/20/2010: Create tie with Blooming Glen 06-1 line	Scheduled for	9/15/2014		
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	5/30/2012		

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 17.6% of PPL Electric's cases of trouble. Although this represents a significant number of cases, the effect on SAIFI and CAIDI is small because nearly 80% of the number of cases of trouble was associated with individual distribution transformers. However, when animal contacts affect substation equipment, the effect may be widespread and potentially can interrupt thousands of customers on multiple circuits. In addition to guarding new distribution transformers and substations, in 2009, PPL Electric initiated distribution and substation animal guarding programs to focus systematically on protecting existing facilities most at risk of incurring animal-caused interruptions.

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

Equipment Failure: Equipment failure is one of the largest single contributors to the number of cases of trouble, customer interruptions and customer minutes. However, approximately 47% of the cases of trouble, 51% of the customer interruptions and 59% 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 st Quarter		Year-to-date	
		Budget	Actual	Budget	Actual
Transmission					
Transmission C-tag poles (# of poles)	240	64	57	64	57
Transmission arm replacements (# of sets)	50	13	15	13	15
Transmission air break switch inspections (# of switches)	64	5	3	5	3
Transmission lightning arrester installations (# of sets)	0	0	1	0	1
Transmission pole inspections (# of poles)	0	0	0	0	0
Transmission tree side trim-Bulk Power (linear feet)	N/A				
Transmission herbicide-Bulk Power (# of acres)	N/A				
Transmission reclearing (# of miles) BES Only	637.34	319.83	422.69	319.83	422.69
Transmission reclearing (# of miles) 69 kv	865.95	15.27	16.69	15.27	16.69
Transmission reclearing (# of miles) 138 kv	296.60	0	0	0	0
Transmission danger tree removals-Bulk Power (# of trees)	N/A				
Substation					
Substation batteries (# of activities)	885	473	510	473	510
Circuit breakers (# of activities)	1495	304	269	304	269
Substation inspections (# of activities)	5227	1452	1465	1462	1465
Transformer maintenance (# of activities)	2186	542	547	542	547
Distribution					
Distribution C-tag poles replaced (# of poles)	1,600	542	623	542	623
C-truss distribution poles (# of poles)	5,500	1,700	949	1,700	949
Capacitor (MVAR added)	57	32	28	32	28
OCR replacements (# of)	644	242	250	242	250
Distribution pole inspections (# of poles)	130,000	13,510	35,078	13,510	35,078
Distribution line inspections (# of miles)	3,000	504	997	504	997
Group re-lamping (# of lamps)	16,000	3,000	3,518	3,000	3,518
Test sections of underground distribution cable	500	109	177	109	177
Distribution tree trimming (# of miles)	7087.50	1496.36	2037.14	1496.36	2037.14
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)	132	55	37	55	37
LTN vault inspections (# of)	774	204	180	204	180
LTN network protector overhauls (# of)	71	11	16	11	16
LTN reverse power trip testing (# of)	141	36	24	36	24

- 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 (\$000)	Actual (\$000)	Budget (\$000)	Actual (\$000)
Provide Electric Service	1,942	2,774	1,942	2,774
Vegetation Management	11,042	9,744	11,042	9,744
Customer Response	12,950	10,623	12,950	10,623
Reliability & Maintenance	16,003	16,165	16,003	16,165
System Upgrade	254	224	254	224
Customer Services/Accounts	29,696	29,844	29,696	29,844
Others	16,058	15,790	16,058	15,790
Total O&M Expenses	87,945	85,164	87,945	85,164

- 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 (\$000)	Actual (\$000)	Budget (\$000)	Actual (\$000)
New Service/Revenue	16,481	20,790	16,481	20,790
System Upgrade	59,514	36,660	59,514	36,660
Reliability & Maintenance	47,839	41,179	47,839	41,179
Customer Response	1,948	3,220	1,948	3,220
Other	6,092	4,936	6,092	4,936
Total	131,874	106,785	131,874	106,785

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

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

Transmission and Distribution (T&D)	
Lineman Leader	77
Journeyman Lineman	193
Journeyman Lineman-Trainee	118
Helper	14
Groundhand	5
Troubleman	55
T&D Total	462
Electrical	
Elect Leaders-UG	6
Elect Leaders-Net	10
Elect Leaders-Sub	24
Journeyman Elect-UG	30
Journeyman Elect-Net	12
Journeyman Elect-Sub	62
Journeyman Elect Trainee-UG	1
Journeyman Elect Trainee-Net	6
Journeyman Elect Trainee	12
Helper	33
Laborer-Network	0
Laborer-Substation	0
Electrical Total	196
Overall Total	658

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

10 – Improper Design	Controllable	<ul style="list-style-type: none">• When an employee or agent of PPL Electric is responsible for an error of commission or omission in the engineering or design of the distribution system. (Facility Records personnel use only)
11 – Improper Installation	Controllable	<ul style="list-style-type: none">• When an employee or agent of PPL Electric is responsible for an error of commission or omission in the construction or installation of the distribution system. (Facility Records personnel use only)
12 – Improper Operation	Controllable	<ul style="list-style-type: none">• When an employee or agent of PPL Electric is responsible for an error of commission or omission in the operation or maintenance of the distribution system. (Facility Records personnel use only)
30 – Trees – Trimming Related ⁹	Controllable	<ul style="list-style-type: none">• Outages resulting from conductors contacted by tree growth within the clearance zone defined by the current trimming specification (within the Rights-of-Way).
35 – Trees – Not Trimming Related	Non-Controllable	<ul style="list-style-type: none">• Outages due to trees, but not related to lack of proper tree trimming maintenance. This includes danger timber blown into PPL Electric facilities, and trees or limbs felled by the public.
40 – Animals	Controllable	<ul style="list-style-type: none">• Any outage caused by an animal directly or indirectly coming in contact with PPL Electric facilities. This includes birds, squirrels, raccoons, snakes, cows, etc.
41 – Vehicles	Public	<ul style="list-style-type: none">• When cars, trucks or other types of vehicles or their cargoes strike facilities causing a problem.

⁹ The title and description of this code have been revised for clarity. The purpose and application of the code have not changed.

Appendix B

51 – Contact/Dig-in	Public	<ul style="list-style-type: none"> • When work in the vicinity of energized overhead facilities results in interruptions due to accidental contact by cranes, shovels, TV antennas, construction equipment (lumber, siding, ladders, scaffolding, roofing, etc.). • When contact is made by a non-employee with an <i>underground facility causing interruption.</i>
60 – Equipment Failure	Controllable	<ul style="list-style-type: none"> • Outages resulting from equipment failures caused by corrosion or contamination from build-up of materials, such as cement dust or other pollutants. • Outages resulting from a component wearing out due to age or exposure, including fuse tearing or breaking. • Outages resulting from a component or substance comprising a piece of equipment failing to perform its intended function. • Outages resulting from a failure that appears to be the result of a manufacturer’s defect or can not be described by any other code indicating the specific type of failure.
77 – Non-PPL Electric Problem – Other	Non-PPL Electric	<ul style="list-style-type: none"> • Where no PPL Electric or customer facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
78 – Non-PPL Electric Problem – Customer Facility	Non-PPL Electric	<ul style="list-style-type: none"> • Where no PPL Electric facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
80 – Scheduled Outage ¹⁰	Controllable	<ul style="list-style-type: none"> • Interruptions under the control of a PPL Electric switchman or direction of a PPL Electric System Operator for the purpose of performing <u>scheduled maintenance, repairs and capacity replacements</u> for the safety of personnel and the protection of equipment. • Includes requests from customers for interruption of PPL Electric facilities.

¹⁰ Interruptions under the control of a PPL Electric switchman or the direction of a PPL Electric System Operator for the purpose of isolating damaged facilities to make repairs are reported using the initial cause of the damage when the interruption is taken immediately, but are reported as a scheduled outage when the interruption is postponed.

Appendix B

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

Appendix B

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

Transmission and Distribution

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

Electrical

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

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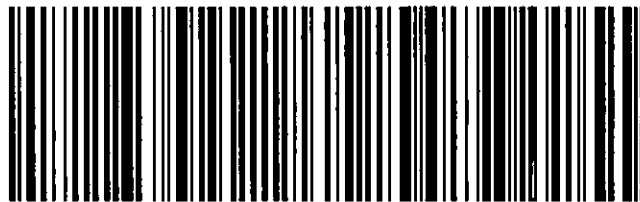
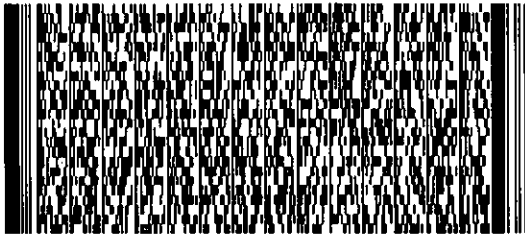
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