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FEDERAL EXPRESS

October 31, 2011

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

Re: PPL Electric Utilities Corporation
Quarterly Reliability Report for the
Period Ended September 30, 2011
Docket No. L-00030161

Dear Ms. Chiavetta:

Enclosed for filing on behalf of PPL Electric Utilities Corporation ("PPL Electric") are an original and five (5) copies of PPL Electric's Quarterly Reliability Report for the Period Ended September 30, 2011. Also enclosed, in a sealed envelope, is a copy of the report containing competitively sensitive and proprietary information. The Company hereby requests that the Commission treat that information, and the report containing the information, as privileged and confidential. The report is being filed pursuant to the Commission's Final Rulemaking Order adopted May 7, 2004 in the above-captioned docket.

Pursuant to 52 Pa. Code § 1.11, the enclosed document is to be deemed filed on October 31, 2011, which is the date it was deposited with an overnight express delivery service as shown on the delivery receipt attached to the mailing envelope.

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

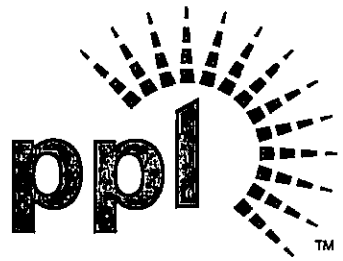
If you have any questions regarding this document, please call me or Joseph M. Kleha, PPL Electric's Manager-Regulatory Compliance and Rates at (610) 774-4486.

Very truly yours,

Paul E. Russell

Enclosures

cc: Mr. Darren Gill
Mr. Daniel Searfoorce



PPL Electric Utilities

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

October 2011

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

Hurricane Irene

On the evening of Saturday, August 27, 2011, PPL Electric Utilities Corporation's service area began to feel the effects of Hurricane Irene as it tracked along the East coast. The heavy rain and winds began on Saturday, August 27, 2011, and continued until late afternoon on Sunday, August 28, 2011. Rainfall across PPL Electric's service territory totaled between 5 and 8 inches. The highest wind speed reached 39 mph with a maximum gust of 55 mph. Restoration efforts were often hampered because of flooding and the need for tree removal.

The territory experienced a total of 3,102 cases of trouble resulting in 428,503 customer service interruptions. A total of 256,187 customers experienced a service interruption lasting longer than six hours; 159,951 customers were without service for more than 12 hours; 98,785 customers were without service for 24 hours or longer. The last customers were returned to service at 8:22 PM on Saturday, September 3, 2011. Hurricane Irene is the second most damaging storm event to impact the PPL Electric service territory since 1991.

Actions Underway

As a result of this year's storm activities, PPL Electric is in the process of updating and revising its Emergency Response Plan. The primary objectives of the Plan are to:

- Document the processes for the electric delivery system restoration under different levels of emergency or disaster conditions.
- Identify the threshold for expanding participation in the event beyond a few key organizations and into a structured process shared by the entire PPL Electric organization.
- Streamline the restoration of services and provide better restoration information to customers.
- Refine roles and accountabilities.
- Refine the feedback mechanism for assessing restoration performance following an event and allow for improved continuous adjustments.

Additionally, several Outage Management System (OMS) enhancements are either completed, in progress or scheduled. The below enhancements will help ensure more accurate outage data and more efficient processing of outage data during large storm events:

- OMS hardware and the OMS database version was upgraded to enhance processing and memory.

- Large-scale storm Estimated Restoration Time (ERT) enhancements are scheduled to be completed in November 2011.

- The OMS database will be tuned to speed up overall processing and user interface by year-end 2011.

- OMS system patches will be completed by year-end to resolve OMS model corruption issues.

Finally, PPL Electric is creating a streamlined outage reporting IVR application to be used during the initial phases of major outages. Today, customers spend about 2 minutes (on average) in the IVR reporting their service interruption and listening to the various options available to them (i.e., ERT alerts and wake-up calls). PPL Electric is creating a streamlined application that would reduce this time by one-half during the early stages of a major event, effectively doubling call handling capability during this critical time.

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

The following table provides data for the 12 months ended September 30, 2011.

SAIFI (Benchmark = 0.98; Rolling 12-month Std. = 1.18)	1.079
CAIDI (Benchmark = 145; Rolling 12-month Std. = 174)	152
SAIDI (Benchmark = 142; Rolling 12-month Std. = 205)	164
MAIFI[1]	5.104
Average Number of Customers Served[2]	1,388,172
Number of Sustained Customer Interruptions (Trouble Cases)	19,371
Number of Customers Affected[3]	1,497,840
Customer Minutes of Interruptions	227,976,941
Number of Customer Momentary Interruptions	7,085,893

During the 3rd quarter, there was one (1) PUC major event, one (1) PUC-reportable storm (≥ 2,500 customers interrupted for ≥ 6 hours) and fifteen (15) other storms that required the opening of one or more area emergency centers to manage restoration efforts.

Specifically, during the 12-month reporting period, there were two (2) PUC major events and seven (7) PUC-reportable storms (≥ 2,500 customers interrupted for ≥ 6 hours) other than major events.

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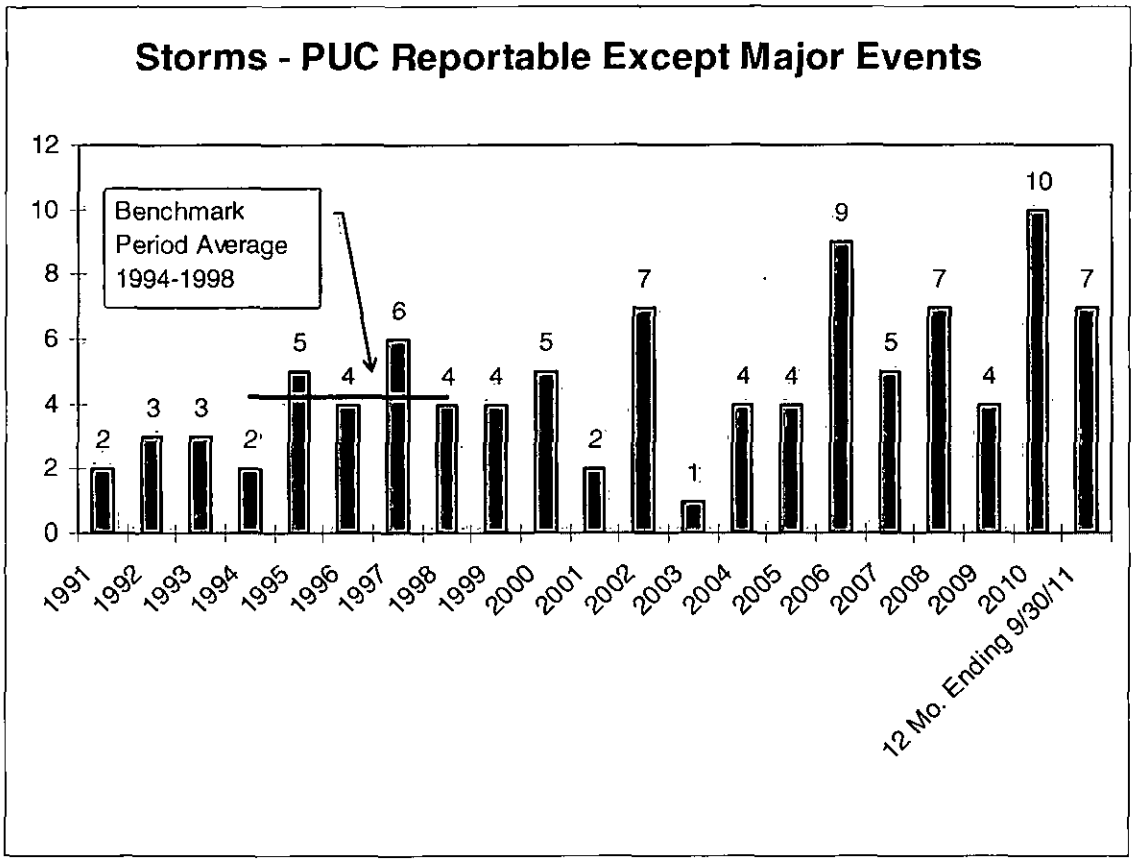
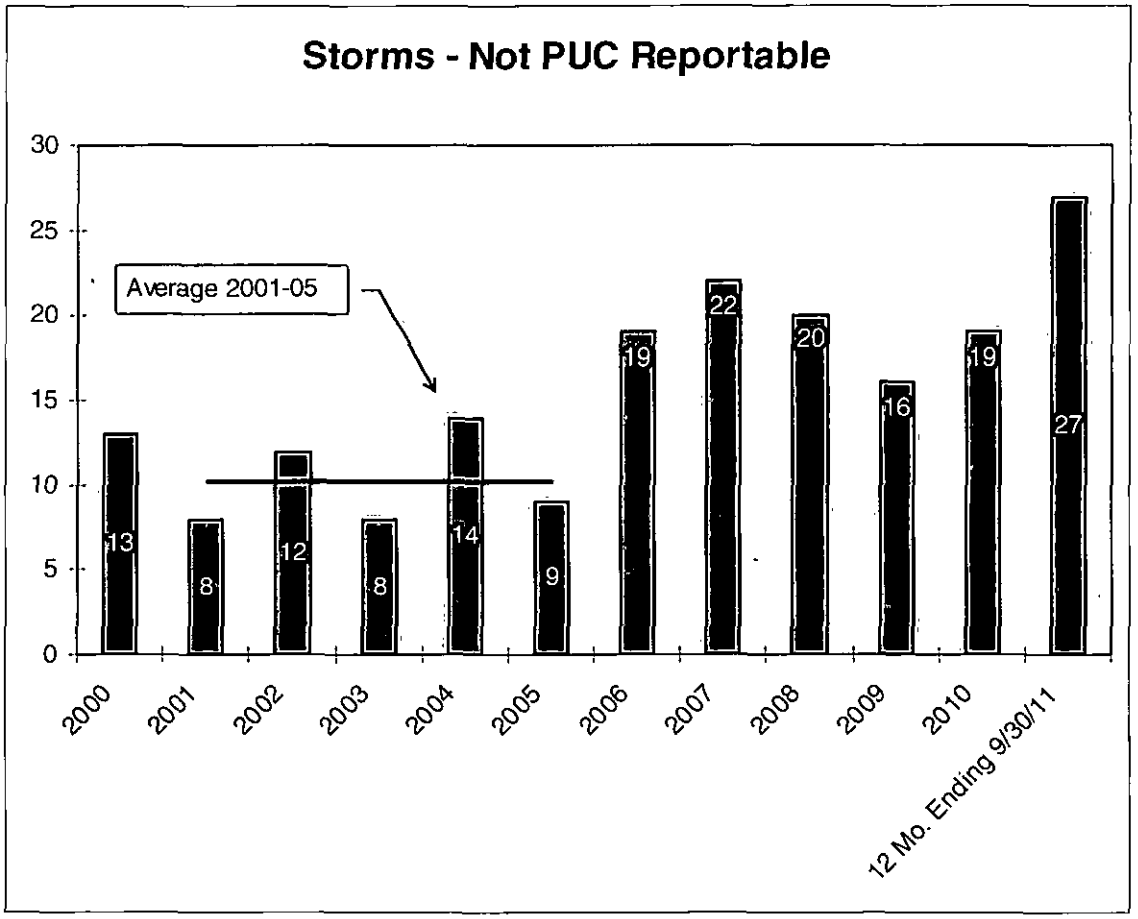
[1] MAIFI data is obtained at the substation breaker and does not include momentary interruptions at lower level devices.

[2] 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.

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


Storms - PUC Reportable Except Major Events
Benchmark
Period Average
1994-1998
12
10
8
6
4
2
0
2
3
3
2
5
4
6
4
4
5
2
7
1
4
4
9
5
7
4
10
7
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
12 Mo. Ending 9/30/11

In addition, there were twenty-seven (27) storms that were not reportable, but which did require the opening of one or more area emergency centers to manage restoration efforts. This is 165% higher than the average of 10.2 non-reportable storms per year for the five years from 2001 through 2005.



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

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

WPC Rank	Feeder ID	SAIFI	CAIDI	SAIDI	MAIFI[4]	Customers	Cases of Trouble[5]	Customer Minutes Interrupted	CPI
1	10803	11.16	299	3334	9.00	62	9	206,703	1958
2	47707	2.74	1275	3497	6.18	1964	59	6,868,251	1334
3	44703	4.99	337	1680	15.01	1750	34	2,939,277	1253
4	43401	3.63	686	2489	1.00	994	58	2,474,366	1216
5	47501	5.83	381	2220	1.00	766	23	1,700,698	1156
6	47703	3.08	874	2690	12.06	1369	40	3,682,998	1132
7	47701	1.35	2377	3207	4.00	510	4	1,635,576	1128
8	26601	4.68	234	1093	2.00	1290	45	1,409,598	1084
9	52401	5.54	162	898	2.04	1436	77	1,289,361	1080
10	60603	3.80	376	1427	7.13	1920	33	2,739,795	1071
11	52402	6.31	160	1009	5.67	1652	74	1,666,194	1054
12	41601	4.09	322	1316	8.16	415	19	546,121	930
13	44802	1.23	2001	2469	2.30	1432	22	3,535,639	913
14	13302	6.12	102	624	7.09	1405	15	876,246	911
15	13704	4.68	118	550	5.01	1571	44	864,674	904
16	47704	4.55	492	2235	5.99	729	29	1,629,123	892
17	24401	5.08	120	609	26.64	1245	54	758,556	871
18	54701	5.36	103	554	8.16	1854	66	1,027,558	861
19	52403	4.52	139	630	7.03	1158	39	729,498	848
20	11001	7.77	124	967	4.98	870	48	841,052	847
21	56802	5.23	129	675	10.62	1398	59	943,025	835
22	15603	6.23	69	432	17.41	1056	26	456,156	826
23	23401	3.56	239	850	4.05	1738	42	1,476,554	787
24	44701	2.50	601	1503	6.02	1065	41	1,600,490	786
25	43202	4.09	181	740	0.00	1151	60	851,971	776
26	12701	2.99	335	1003	8.02	1520	47	1,524,158	736
27	15601	5.14	67	342	4.01	833	40	284,584	702
28	26002	3.03	295	893	12.11	1196	59	1,068,489	702

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

[5] Cases of trouble are the number of sustained customer service interruptions.

WPC Rank	Feeder ID	SAIFI	CAIDI	SAIDI	MAIFI[4]	Customers	Cases of Trouble[5]	Customer Minutes Interrupted	CPI
29	13701	4.19	58	244	7.02	1607	22	391,375	687
30	51002	0.85	2216	1877	6.94	1706	17	3,202,543	682
31	40802	9.34	137	1283	3.01	984	7	1,262,777	677
32	57403	5.39	44	239	11.08	1468	27	350,925	671
33	15602	3.63	117	425	8.03	1184	20	503,788	656
34	43302	2.69	415	1115	5.00	177	5	197,303	650
35	28102	3.59	176	632	1.04	1712	87	1,082,345	644
36	22402	4.59	133	611	8.01	1302	22	795,265	640
37	43201	2.55	151	386	0.00	959	16	370,653	635
38	40302	3.63	184	671	5.07	630	12	422,426	631
39	12301	3.21	224	718	2.01	1238	42	888,631	610
40	28001	3.19	169	538	3.00	1788	77	961,223	609
41	11502	4.02	76	307	4.04	2467	33	757,713	597
42	12305	3.43	174	598	8.03	885	40	529,040	595
43	17902	4.24	54	231	11.11	987	39	227,893	589
44	59202	3.19	164	523	2.01	2268	91	1,185,360	575
45	20601	3.47	138	478	3.00	1456	41	695,308	571
46	53601	3.73	109	406	8.27	1133	54	460,081	563
47	22602	3.72	127	471	4.98	1532	60	721,939	561
48	11506	3.60	150	540	4.99	1305	47	704,251	559
49	22001	2.88	259	746	0.00	2276	76	1,698,609	558
50	41201	2.08	550	1143	6.00	230	6	262,836	557
51	20402	3.67	76	278	3.00	1928	48	535,070	552
52	57006	3.17	227	720	8.98	1368	17	985,233	546
53	13606	3.33	172	573	2.59	1799	44	1,030,576	535
54	47502	2.26	396	896	1.19	788	20	705,952	531
55	46206	3.35	257	860	13.04	1755	51	1,510,061	529
56	45602	4.02	104	418	1.01	1585	58	661,839	528

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.

(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: 10803 CHERRY HILL 08-03**			**Location: Bethlehem** **CPI: 1958**
	7/9/2009: Line inspection-equipment. Inspect line and make repairs.	Completed	12/31/2009	Crews replaced several cutouts and lightning arrestors, reducing outage risk.
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2010	This circuit had several long duration outages. However, all events on this circuit in the past year have affected under 100 customers. Outages have been due to tree related issues and equipment failures. The circuit was last trimmed in 2009.
	11/30/2010: Install tie. A project has been placed into the budget to create a 5 mile tie between the Cherry Hill 08-03 line and a new area substation. Factoryville Substation will help improve the reliability of Cherry Hill 08-03 and Mt Bethel 29-02 by providing an alternate source in the radial edge of PPL territory. Both projects are expected to be placed in service in late 2012.	Scheduled for	11/30/2012	

Rank	Action	Status	Due/Complete	Result
2	**Circuit ID: 47707 BLOOMSBURG 77-07**		**Location: Sunbury**	**CPI: 1334**
	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	
	1/16/2009: Expanded Operational Review.	Completed	12/31/2009	Reliability Review completed. There are 4 new single phase OCR's to be installed on this circuit in 2010. Additional series fusing has been identified and scheduled to be installed. Line sections have been identified for future work to move to road.
	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 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.
	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 - Hollow Rd. (WR# 504489)	Completed	2/19/2010	No problems were found. PPL will continue to monitor this circuit's performance.
	10/12/2009: Reconductor line. WR 145093 - Reconductor 3 phase portion Deussen Dr. approx. from Grovania to Catawissa.	Completed	1/8/2010	Reduced outage risk.
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	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.
3	**Circuit ID: 44703 MUNCY 47-03**		**Location: Susquehanna**	**CPI: 1253**
	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	

Rank	Action	Status	Due/Complete	Result
4	**Circuit ID: 43401 BENTON 34-01**		**Location: Sunbury**	**CPI: 1216**
	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 interupting and switching devices. The project expects to save approximately 0.3 system SAIDI minutes. This project is scheduled to go in service in 5/2013.	Scheduled for	5/31/2013	
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	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.
5	**Circuit ID: 47501 NEW COLUMBIA 75-01**		**Location: Sunbury**	**CPI: 1156**
	1/6/2011: Thermographic inspection-OH line. Thermovision Inspection of 2 and 3 phase sections to be completed early 2011.	Completed	2/9/2011	Reduced outage risk. All necessary repairs completed.
	1/6/2011: Expanded Operational Review. EOR Planned for 2011	EOR initiated	12/31/2011	
	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.

Rank	Action	Status	Due/Complete	Result
6	**Circuit ID: 47703 BLOOMSBURG 77-03**			**Location: Sunbury** **CPI: 1132**
	1/16/2009: Expanded Operational Review.	Completed	12/31/2009	Reduced customer count affected by each outage. A new load break air switch was installed to provide for additional sectionalizing.
	8/26/2010: Install tie. A project was placed into the budget to create a tie between Bloomsburg 47703 and Bloomsburg 47704. This will enhance the reliability of both Bloomsburg circuits by providing additional operating flexibility through use of remotely operated interupting 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.
7	**Circuit ID: 47701 BLOOMSBURG 77-01**			**Location: Sunbury** **CPI: 1128**
	1/16/2009: Expanded Operational Review.	Completed	12/31/2009	Reduced outage risk. No problems found, monitor future performance.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
8	**Circuit ID: 26601 BROOKSIDE 66-01**			**Location: Scranton** **CPI: 1084**
	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	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 occured 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 iterrupted (CMI) value of 931,765. Another non trimming related outage occured on 5/24/11 resulting in an OCR tripping to lockout causing an outage for 870 customers with a CMI value of 72,323.

Rank	*Action*	*Status*	*Due/Complete*	*Result*
9	**Circuit ID: 52401 GREEN PARK 24-01**			**Location: West Shore** **CPI: 1080**
	3/17/2009: Tree trimming.	Completed	12/31/2009	Reduced outage risk.
	3/17/2009: Expanded Operational Review. Reliability Review Completed 8/11/09. Voltage Profile Completed 7/06/09.	Completed	10/30/2009	Inconclusive. Monitor future performance.
	9/2/2009: Install fuse(s). Install 16 new tap fuses.	Completed	11/5/2009	Reduced customer count affected by each outage.
	9/10/2010: Evaluate potential ties. Evaluating project to create a tie with 24-03	Completed	9/10/2010	Inconclusive. Monitor future performance. Extensive tree removal was completed on this circuit. Not on WPC list. Will reserve project and evaluate should circuit performance degrade.
	1/26/2011: Expanded Operational Review.	EOR planned	12/31/2011	
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/25/2011	The Green Park 24-02 line is a long radial distribution circuit at the western edge of PPL territory. The feeder has approximately 1,440 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.	Scheduled for	11/15/2011	
	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.
	8/24/2011: Investigate protection scheme. Review protection device placement and determine optimum locations for three phase reclosers.	Scheduled for	12/31/2011	

Rank	*Action*	*Status*	*Due/Complete*	*Result*
10	**Circuit ID: 60603 NORTH COLUMBIA 06-03**		**Location: Lancaster**	**CPI: 1071**
	5/22/2009: Perform line maintenance identified by line inspection.	Completed	12/31/2009	Reduced outage risk.
	1/4/2010: Expanded Operational Review. Reliability Analysis Completed 3/10/10	Completed	12/31/2010	Reduced outage duration.
	10/11/2010: Improve sectionalizing capability. Build Red Front substation and tie it into the North Columbia 6-3 line.	Scheduled for	3/29/2012	
	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. Tree trimming is planned for the line in 2011.
	10/14/2011: Tree trimming.	Completed	6/30/2011	Reduced outage risk.

Rank	Action	Status	Due/Complete	Result
11	**Circuit ID: 52402 GREEN PARK 24-02**			**Location: West Shore** **CPI: 1054**
	3/17/2009: Expanded Operational Review. Reliability Review Completed 7/30/09. Voltage Profile Completed 7/02/09. Field Work Request Review in Progress.	*Completed*	*12/31/2009*	*Inconclusive. Monitor future performance.*
	11/11/2009: Install fuse(s). Install 9 tap fuses	Completed	7/6/2010	Reduced customer count affected by each outage.
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/25/2011	The Green Park 24-02 line is a long radial distribution circuit at the western edge of PPL territory. The feeder has approximately 1,645 customers across 139 circuit miles. The largest CPI contributors have been the percentage of customers with >3 interruptions and SAIDI. Two of the largest interruptions occurred when a failed insulator on the Green Park 69kV tap interrupted the JUNI-SDLE 69kV line. The single distribution tie to New Bloomfield Substation limited the number of customers on Green Park Substation that could be restored while repairs were being made. Local areas of the circuit were also heavily hit during the 02/02/11 ice storm.
	5/25/2011: Install fuse(s). Install additional fusing on a CEMI tap to reduce the exposure seen by customers.	Scheduled for	12/31/2011	
	5/25/2011: Install 1 phase OCR(s). Replace a single phase 1004H recloser at to a 140V4h recloser for increased reliability and better coordination.	Scheduled for	3/31/2012	
	5/25/2011: Reconductor line. Reconductor approximately 8,500 feet of single phase CWC to 1/0 ACSR XLP or equivalent.	Scheduled for	12/31/2012	
	5/25/2011: Improve sectionalizing capability. Install automated ROCS devices between the Green Park 24-02 and Green Park 24-03 circuits to allow for faster sectionalizing.	Scheduled for	12/31/2011	
	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.
12	**Circuit ID: 41601 CLEVELAND 16-01**			**Location: Central** **CPI: 930**
	7/24/2009: Reconductor line. Reconductor underground primary in Knoebels.	Completed	3/24/2010	Reduced outage risk.
	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.	Scheduled for	12/1/2011	

Rank	*Action*	*Status*	*Due/Complete*	*Result*
13	**Circuit ID: 44802 EAST DANVILLE 48-02**			**Location: Sunbury** **CPI: 913**
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
14	**Circuit ID: 13302 ORVILLA 33-02**			**Location: Bethlehem** **CPI: 911**
	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 >3 interruptions. There have been 5 breaker outages this year that have affected the enitre Orvilla Circuit. 2 of the outages were caused by transmission, 1 outage was caused by a circuit breaker failing to reclose, 1 outage was trees not trimming related, and a final outage was required to complete a tie line.
15	**Circuit ID: 13704 SCHNECKSVILLE 37-04**			**Location: Lehigh** **CPI: 904**
	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 needed at this time.

Rank	*Action*	*Status*	*Due/Complete*	*Result*
16	**Circuit ID: 47704 BLOOMSBURG 77-04**			**Location: Sunbury** **CPI: 892**
	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	1/31/2012	
	4/30/2008: Install 3 phase OCR(s). Replace existing OCR with single pole tripping recloser at grid 35204N31678. WR number is 420353.	Completed	8/31/2010	Reduced customer count affected by each outage.
	1/16/2009: Expanded Operational Review.	Completed	12/31/2009	Reduced customer count affected by each outage. EOR completed. Triple Single OCR installed on Millertown Tap.
	7/13/2009: Relocate inaccessible line. Relocate 3 phase line (WR 434431) along steep cliffside, subject to tree damage, to the roadside along Rte 42.	Completed	11/18/2009	Reduced outage risk.
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/19/2010	Inconclusive. Monitor future performance. The Bloomsburg #4 circuit was discussed at Susquehanna Region's Q2 2010 WPC meeting on 8-19-10. This circuit is categorized as a WPC due to storm outages during a May 2010 weather event. This storm resulted in downed trees contacting power lines and causing significant 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 interupting 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.	Scheduled for	11/25/2011	
17	**Circuit ID: 24401 TINKER 44-01**			**Location: Pocono** **CPI: 871**
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2011	In May 2011, a part of the Tinker 44-1 12kV line load was transferred to the East Carbondale 12-6 12kV line. The reliability was significantly improved for the transferred customers.
	10/17/2011: Evaluate potential ties.	In progress		

Rank	*Action*	*Status*	*Due/Complete*	*Result*
18	**Circuit ID: 54701 NEW BLOOMFIELD 47-01**			**Location: West Shore** **CPI: 861**
	5/31/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2010	This is a new 12 kV distribution line from a new substation. The major contributing outage occurred when the substation recloser failed shortly after being put in service. If it weren't for the premature failure of new equipment, the circuit would not be on the WPC list. Future performance will be monitored to determine whether additional action items are warranted.
	7/1/2010: Improve sectionalizing capability. Automate existing tie to the Newport 50-1 line with ROCS devices.	Completed	7/30/2010	ROCS device will allow for faster sectionalizing for approximately 300 customers.
	7/1/2010: Line inspection-equipment. Repair insulators on New Buffalo State Park tap.	Completed	7/7/2010	Reduced outage risk.
	10/1/2010: Install 3 phase OCR(s). Replace existing 3 phase hydraulic recloser with a new electronic recloser near Enchanted Springs Drive for better coordination.	Completed	10/1/2010	Reduced outage risk.
	10/5/2010: Tree trimming-selected line segments only (hot spots). Trim hazard trees on sections of the main three phase line.	Completed	10/31/2010	Reduced outage risk. Reduced exposure to vegetation related outages.
	11/12/2010: Investigate 3 phase OCR(s). Investigate the mis-operation of recloser. Check settings and swap contols.	Completed	2/10/2011	Reduced outage risk. Existing three phase hydraulic recloser was replaced with a new electronic VCR model.
	1/26/2011: Expanded Operational Review.	EOR planned	12/31/2011	
	4/20/2011: Tree trimming. Trim circuit as part of four year vegetation management cycle.	Scheduled for	12/30/2011	
	5/25/2011: Circuit outage data analysis.	Completed	5/25/2011	New Bloomfield 5-47-01 continues to remain on the WPC list for the fifth consecutive quarter. The largest CPI contributor has been the percentage of customers with >3 interruptions. In the past four quarters, the circuit breaker has experienced five breaker interruptions, mostly due to trees from outside the trimming right of way. Two of the largest contributing outages to the CPI have been caused by the miscoordination of the breaker VCR with a downstream VCR.
	5/25/2011: Investigate an alternative VCR protection coordination scheme between the substation VCR and a downstream device.	Completed	6/22/2011	Reduced outage risk. Protection settings have been updated to allow for better coordination.
	5/25/2011: Evaluate potential distribution line. Evaluate potential USF project for a new distribution circuit in the New Bloomfield area to improve reliability. A new circuit will reduce the number of customers served by the breaker and will provide an additional tie in the event of an outage.	Completed	6/28/2011	The new circuit cuts the customer count of the New Bloomfield 47-1 line approximately in half.
	5/25/2011: Install fuse(s). Install additional fusing on a CEMI tap to reduce the exposure seen by customers.	Scheduled for	12/31/2011	
	5/25/2011: Improve sectionalizing capability. Install an automated ROCS device near the midpoint of a six mile section of three phase line to improve sectionalizing capability.	Scheduled for	12/31/2012	

Rank	Action	Status	Due/Complete	Result
	6/28/2011: Install new line and terminal. Construct a new line and terminal at Green Park Substation to relieve reliability on the adjacent New Bloomfield 47-1 line.	Scheduled for	11/30/2014	
	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.
19	**Circuit ID: 52403 GREEN PARK 24-03**			**Location: West Shore** **CPI: 848**
	3/17/2009: Expanded Operational Review. Reliability Review Completed 7/06/09. Voltage Profile Completed 7/06/09.	EOR initiated	12/31/2009	Inconclusive. Monitor future performance.
	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 >3. 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: Relocate to road and reconductor to XLP approximately 1 mile of single phase along a CEMI customer tap.	Scheduled for	12/31/2013	
	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, Shermansdale, and South Shermansdale substations.	Completed	8/24/2011	Reduced outage risk.

Rank	*Action*	*Status*	*Due/Complete*	*Result*
20	**Circuit ID: 11001 EAST GREENVILLE 10-01**			**Location: Bethlehem** **CPI: 847**
	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 and install motorized switch at East Greenville 10-1/Macungie 27-1 tie.	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 outates) and one instance of equipment failure on the line. Tree trimming is planned for the line in 2011.
	8/20/2010: Line Inspection and Maintenance	Scheduled for	12/31/2011	
	4/18/2011: Tree trimming. Trim East Greenville 10-01 circuit as part of 4 year vegetation management cycle. Efforts are being made to ensure circuit is at the top of the spring 2011 trim priority.	Scheduled for	12/30/2011	
	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 new substation near the end of the feeder.	Scheduled for	11/30/2015	
	6/17/2011: Install remotely operated controlled switch at 62160S41744. WR608684.	Scheduled for	12/17/2012	
	6/17/2011: Install new remotely operated control switch near 61799S42443.	Scheduled for	12/17/2013	

Rank	*Action*	*Status*	*Due/Complete*	*Result*
21	**Circuit ID: 56802 BENVENUE 68-02**			**Location: West Shore** **CPI: 835**
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/25/2011	The largest CPI contributor has been the percentage of customers with >3 interruptions. The Benvenue 68-02 line experienced two circuit breaker interruptions when a failed insulator on the Green Park 69kV tap interrupted the JUNI-SDLE 69kV line. In addition, there have been two long duration vehicle pole hits affecting 930 customers. Restoration times were delayed due to traffic caused by the vehicle accidents. The pole that was hit is behind a guard rail and down a steep embankment away from the road. The two accidents are considered to be by chance. Relocating the pole does not provide any clear reliability benefit.
	5/15/2011: Improve sectionalizing capability. Automate tie with the Rockville 65-04 circuit.	Completed	5/20/2011	Reduced outage duration. A telemetric VCR and ROCS device were installed to automate the potential transfer of 750 customers at the end of the Benvenue 68-02 line.
	8/24/2011: Repair the failed circuit breaker on the Juniata-Shermansdale 69kV line. This line serves approximately 7,500 customers at Benvenue, Green Park, New Bloomfield, Shermansdale, and South Shermansdale substations.	Completed	8/24/2011	Reduced outage risk.
22	**Circuit ID: 15603 NO STROUDSBURG 56-03**			**Location: Pocono** **CPI: 826**
	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 exist on this line resulting from trees from outside PPL's right of way. The first outage occured on 12/27/10 where a total of 1085 customers were affected and resulted in a customer minute interupted (CMI) value of 128,234. The second major tree related event occured 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 two tree non-trimming related incidents, there was one animal contact outage that occured on 5/3/11. The contact occured 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 interuption 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	

Rank	*Action*	*Status*	*Due/Complete*	*Result*
23	**Circuit ID: 23401 HONESDALE 34-01**			**Location: Pocono** **CPI: 787**
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	10/18/2011	Several ourtages occured over the rolling twelve months WPC outlook as a result of non trimming related tree contacts. Of these outages, the three that accounted for the largest CMI values occcured 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 431,575 CMI value. 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 to a CMI value of 166,122.
	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.
24	**Circuit ID: 44701 MUNCY 47-01**			**Location: Susquehanna** **CPI: 786**
	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 the CEMI > 3 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.

Rank	*Action*	*Status*	*Due/Complete*	*Result*
25	**Circuit ID: 43202 MILLVILLE 32-02**			**Location: Sunbury** **CPI: 776**
	1/16/2009: Expanded Operational Review.	Completed	12/31/2009	No longer among 5% worst performing circuits. EOR complete
	6/1/2010: Perform line maintenance identified by line inspection.	Completed	6/7/2010	Reduced outage risk. Two work requests have been taken out by Distribution Operations to improve the Mordonsville Tap along Rhodemoyer Road and Hogs Back Road. Engineering is complete on these WRs and the project is on track for 12/31/2010 in-service.
	6/1/2010: *As a result of high customer outages* 32-2 CB was maintained.	Completed	6/7/2010	Reduced outage duration.
	6/7/2010: Tree trimming-selected line segments only (hot spots).	Completed	6/10/2010	Reduced outage risk.
	6/7/2010: Install 1 phase OCR(s).	Scheduled for	1/31/2012	
	6/7/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	6/7/2010	Inconclusive. Monitor future performance. This circuit was reviewed at Susquehanna Region's WPC meeting on 6/7/10. This circuit is categorized as a worst performer due to the number of customers experiencing more than 3 outages within the 12 month period. The causes of each of the high customer outages have been mitigated (off right of way tree, customer equipment, and substation CB maintainence). The line will be monitored for future issues.
	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 interupting and switching devices. The project expects to save approximately 0.3 system SAIDI minutes.	Scheduled for	5/31/2012	
	4/18/2011: Install new line and terminal. Reconductor sections of the circuit to 3 phase 477 AL and install ROCS devices.	Scheduled for	11/30/2011	

Rank	*Action*	*Status*	*Due/Complete*	*Result*
26	**Circuit ID: 12701 MACUNGIE 27-01**			**Location: Lehigh** **CPI: 736**
	2/28/2008: Relocate inaccessible line. A section along Churchview Road is to be relocated along the road.	Scheduled for	5/31/2013	
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	All the customers on the Macungie 27-1 line experienced four outages in the past year. Two of the four outages were due to substation getaway failures, which were repaired at the time of the interruption. A seperate action item has been taken out for the replacement. One outage was due to animal contact and another outage was due to the circuit breaker failing to reclose.
	4/20/2011: Replace UG getaway. Due to recent performance issues, the Macungie 27-01 UG getaway has been identified for replacement as part of the 2011 Asset Optimization Strategy (AOS) plan.	Scheduled for	12/30/2011	
	6/17/2011: A new 69/12kV substation is in the budget for 2015. It will be located near the end of the circuit and transfer about 350 customer to the new substation.	Scheduled for	12/30/2015	
	6/17/2011: Animal guard being installed on entire substation.	Scheduled for	12/31/2015	
27	**Circuit ID: 15601 NO STROUDSBURG 56-01**			**Location: Pocono** **CPI: 702**
	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 occured on 5/3/11 when the substation breaker failed due to an animal contact. This accounted for a total of 92,435 customer minutes interupted (CMI). At the time of the outage 841 customers were interupted. Another outage due to tree contact from outside the right of way occured 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 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	
	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	

Rank	*Action*	*Status*	*Due/Complete*	*Result*
28	**Circuit ID: 26002 WEST DAMASCUS 60-02**		**Location: Pocono**	**CPI: 702**
	8/11/2006: Install sectionalizers. An intelligent switching project has been identified to reduce customer minutes lost.	Completed	12/31/2009	Reduced customer count affected by each outage.
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	6/16/2011	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. A future tie line between the West Damascus 60-1 and West Damascus 60-2 tie lines is currently being evaluated.
	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		

Rank	*Action*	*Status*	*Due/Complete*	*Result*
29	**Circuit ID: 13701 SCHNECKSVILLE 37-01**			**Location: Lehigh** **CPI: 687**
	10/8/2008: Load balancing.	Canceled	9/15/2010	
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	10/18/2011	The Schnecksville 37-01 line experienced five major outages. The first outage occurred when a tree from outside the right of way interrupted the circuit breaker. A transmission outage of unknown cause interrupted the substation during a Q1 2011 storm. The transmission line held when reclosed for test. The three remaining outages were due to equipment failures in Q4 2010. Two of which occurred on the same day when the operating bus disconnect failed in Schnecksville Substation. A separate outage occurred when an overhead switch failed while customers from the adjacent Schnecksville 37-04 line were being carried by the 37-01 line for repairs. The abnormal circuit configuration and repairs under construction delayed customer restoration. Many of the major contributors to the CPI have been equipment failures that have since been mitigated. In Q2 of 2011 there has been one major outage affecting 300 customers which was caused by a tree falling from outside of right of way. Performance will continue to be monitored to determine if any proactive steps may be taken to prevent similar interruptions in the future.
	5/18/2011: Protection coordination review	Completed	5/18/2011	The protection scheme on this circuit is well laid out. No adjustments needed at this time.
30	**Circuit ID: 51002 NO HARRISBURG 10-02**			**Location: Harrisburg** **CPI: 682**
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	

Rank	Action	Status	Due/Complete	Result
31	**Circuit ID: 40802 EXCHANGE 08-02**			**Location: Central** **CPI: 677**
	6/15/2009: Install fuse(s). Install 5 tap fuses to reduce exposure risk to substation.	Completed	4/30/2010	Reduced outage risk.
	2/11/2010: Improve sectionalizing capability. Take tap change to increase 12 kV voltage.	Completed	11/10/2010	Increased substation voltage to allow better transfer capability.
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	SAIDI was 80% of the CPI score. The largest outage contributing to CMI was due to an equipment failure while transferring load from Mt. Carmel Substation to Exchange 8-2 to perform maintenance at Mt. Carmel. It was determined that Planning will develop several alternatives for improving transfers in this area.
	3/23/2011: Circuit outage data analysis. The Distribution Planner will analyze several alternatives for improving transfers between Exchange and Mt. Carmel substation.	Completed	4/30/2011	Two projects were identified to improve transfers at Exchange Substation. The first project is a new line and terminal at Exchange substation, that will reduce load and customer count on the Exchange 8-1 feeder. The second project is a new line and terminal at Mt. Carmel substation, that will reduce load and customer count on the Mt. Carmel 78-2 feeder.
	4/20/2011: Install new line and terminal. New line and terminal at Mt. Carmel substation to reduce load and customer count on the Mt. Carmel 78-2 feeder. Planned to improve transfers between Exchange and Mt. Carmel Substations.	Scheduled for	12/1/2014	
	5/4/2011: Improve sectionalizing capability. Upgrade existing LBAS to ROCS.	Scheduled for	10/28/2012	
32	**Circuit ID: 57403 SPANGLER 74-03**			**Location: West Shore** **CPI: 671**
	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: 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.
	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	4/1/2012	
	1/26/2011: Expanded Operational Review.	Completed	3/28/2011	Inconclusive. Monitor future performance.
	1/26/2011: Thermographic Inspection-OH line.	Completed	2/28/2011	Inconclusive. Monitor future performance.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	

Rank	*Action*	*Status*	*Due/Complete*	*Result*
33	**Circuit ID: 15602 NO STROUDSBURG 56-02**			**Location: Pocono** **CPI: 656**
	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 occured 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 a customer minute interupted (CMI) value of 196,542. The second major outage occured 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 customer minutes interupted (CMI) . Other than these major events, a majority of the existing outages occured on transformers and fuses resulting from trees from outside the right of way.
34	**Circuit ID: 43302 WATSON 33-02**			**Location: Sunbury** **CPI: 650**
	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.	Scheduled for	11/25/2011	

Rank	Action	Status	Due/Complete	Result
35	**Circuit ID: 28102 TWIN LAKES 81-02**			**Location: Pocono** **CPI: 644**
	7/14/2009: Monitor future performance.	Completed	4/11/2011	*Reduced outage risk. Circuit performance has improved substantially in Q1, Q2, and Q3 of 2009.*
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/31/2011	A tree outage (5/31/11) from outside of the right of way fell on the primary line resulting in a blown tap fuse at grid number 76106N45793. A tree outage (5/18/11) from inside the right of way fell on the primary line causing OCR 78282N46075 to operate affecting 207 customers. On April 26th, a size 40 class 4 overhead pole at grid number 78345N46877 broke which resulted in the operation of OCR 78282N46075. A total of 44 customers were affected. On March 7, 2011, an outage occurred on the primary line from a vehicle accident near grid number 77918N44927. A total of 1,714 customers were affected when the accident caused the CB to operate. On March 6th, a tree from outside the right of way fell on the primary line resulting in the operation of the OCR at grid number 78345N46877. This outage affected 44 customers. A tree outage (2/19/11) from outside the right of way caused a fault that tripped the CB at the substation. A total of 1,712 customers were affected including the 1 CEMI 7 customer. On January 8, 2011, a transmission outage occurred affecting the entire 1,720 customers on the circuit. Review with Vegetation Management.
	4/21/2011: Improve sectionalizing capability. Replace existing air break with a new telemetric recloser. This will isolate a section of line from the breaker. With the new recloser outages on this section of line will only affect 550 customers instead of 1800.	Canceled	6/30/2011	Inconclusive. Monitor future performance. Could not coordinate OCR with other downstream devices.
	7/14/2011: Install tie. SP 33608 builds a new tie between the Bohemia 20-2 and the Twin Lakes 81-2 12kV lines. This project will benefit 1,150 customers on the 20-2 and 81-2 lines. This project will reduce outage durations and increase operational flexibility and reliability in the area.	Scheduled for	5/31/2014	
36	**Circuit ID: 22402 MORGAN 24-02**			**Location: Scranton** **CPI: 640**
	1/19/2009: Additional projects are being reviewed for inclusion of the budget to increase reliability.	Completed	12/15/2009	Project to relocate an inaccessible section of 3 phase has been identified and will be completed in 2010.
	10/15/2009: Circuit outage data analysis.	Completed	1/14/2010	Inconclusive. Monitor future performance. There were three breaker outages and one large OCR outage during isolated thunder storms in Q2 2009. The outages were caused by trees from outside the ROW. In Q3 2009 there has been one breaker outage caused by an animal contact at the substation. There were no major outages in Q4 2009.
	12/15/2009: Relocate inaccessible section of 3 phase line.	Scheduled for	11/30/2013	Project will reduce outage risk and speed restoration.
	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.	Scheduled for	11/25/2011	

Rank	Action	Status	Due/Complete	Result
37	**Circuit ID: 43201 MILLVILLE 32-01**			**Location: Sunbury** **CPI: 635**
	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.
38	**Circuit ID: 40302 TAMANEND 03-02**			**Location: Central** **CPI: 631**
	1/15/2010: Install tie. Build tie between Tamanend #2 and Mahanoy City #2.	Scheduled for	12/31/2012	
	1/15/2010: Expanded Operational Review.	Completed	8/3/2010	Inconclusive. Monitor future performance.
	8/3/2010: Relocate inaccessible line. Relocate 3PH tie to road.	Scheduled for	12/31/2011	
	8/3/2010: Perform line maintenance identified by line inspection.	Scheduled for	11/30/2011	
	8/3/2010: Reconductor line. Eliminate UG Dip under highway.	Scheduled for	12/31/2011	
	8/3/2010: Monitor future performance. Install fault indicators with solid blade disconnects.	Completed	10/20/2010	Reduced outage duration.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
39	**Circuit ID: 12301 LANARK 23-01**			**Location: Lehigh** **CPI: 610**
	6/29/2011: Monitor future performance.	Completed	6/29/2011	All of the above work is expected to improve the circuit's performance.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
40	**Circuit ID: 28001 TAFTON 80-01**			**Location: Pocono** **CPI: 609**
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2010	This circuit experienced a long duration breaker outage due to trees - not trimming related in December 2010 during a stormy/windy day. A variety of issues have contributed to outages on this circuit including wind, transmission misoperation, animals, etc.
	4/20/2011: Install tie. A new 3 phase tie line (SP 33013) between Tafton 80-1 and the Newfoundland 83-2 line is currently being engineered and is expected to be completed by year end 2011. The new tie will allow greater operational flexibility, reduce outage exposure, and increase ability to remotely isolate and restore customers.	Scheduled for	12/31/2011	
41	**Circuit ID: 11502 FREEMANSBURG 15-02**			**Location: Bethlehem** **CPI: 597**
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	

Rank	*Action*	*Status*	*Due/Complete*	*Result*
42	**Circuit ID: 12305 LANARK 23-05**			**Location: Lehigh** **CPI: 595**
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
43	**Circuit ID: 17902 BARTONSVILLE 79-02**			**Location: Pocono** **CPI: 589**
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2010	Five circuit breaker outages contributed to the high CPI of this circuit. Two were caused by transmission outages, one was a tree from outside the ROW, one pole hit, and one animal contact.
	4/20/2011: Improve sectionalizing capability. This circuit will be automated as part of the second phase of the PPL Smart Grid Project. This will allow automatic isolation and restoration of customers during outage conditions.	Scheduled for	12/31/2013	
	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.
44	**Circuit ID: 59202 THOMPSONTOWN 92-02**			**Location: West Shore** **CPI: 575**
	6/24/2011: Perform line maintenance identified by line inspection.	Completed	10/5/2010	Reduced outage risk.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	

Rank	Action	Status	Due/Complete	Result
45	**Circuit ID: 20601 GREENWOOD 06-01**			**Location: Central** **CPI: 571**
	10/6/2010: Install tie. Construct a 2.5 mile 3-phase tie between Ashfield 20403 and Greenwood 20601. Install a remote-controlled switch as the normally open point between the two circuits.	Completed	11/30/2010	This project created a tie line for both circuits and will minimize the number of customer minutes interrupted per outage. This project is projected to save an estimated 230,000 customer minutes interrupted per year. The estimated system SAIDI improvement is 0.16 minutes saved. This project improves transfer capabilities from Ashfield Substation to Greenwood Substation.
	1/14/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	2/18/2011	SAIDI was 34% of the CPI score. The majority of the outages were due to trees, not trimming related. A 2.5 mile tie project was completed at the end of 2010 that is expected to significantly reduce the duration and number of customers affected per outage.
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2011	The largest outage on this feeder in the rolling 12-months occurred on 10/19/10, caused by an equipment failure and resulted in 424,000 Customer Minutes Interrupted (CMI). At the time of the outage, 1,250 customers were fed radially from Greenwood without any options for transferring load. In November 2010, a new tie was built between Greenwood 6-1 and Ashfield 4-3 that allows these 1,250 customers to be transferred when the breaker operates or 400 customers to be transferred when the VCR (recloser) operates. The new tie successfully transferred 1,250 customers on 6/10/2011 in less than 5 minutes, resulting in a momentary outage (75,000 CMI were saved). Continued reliability savings are expected to be seen as a result of this new tie.
46	**Circuit ID: 53601 DALMATIA 36-01**			**Location: Harrisburg** **CPI: 563**
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
47	**Circuit ID: 22602 KIMBLES 26-02**			**Location: Pocono** **CPI: 561**
	1/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2010	High CPI for this circuit is due to 2 large OCR outages caused by trees outside of the right-of-way and a transmission outage due to a failed switch (the switch was replaced).
	10/15/2010: Circuit outage data analysis. Problematic areas identified and line patrol scheduled.	Completed	12/31/2010	Reduced outage risk. Tree problems identified and tree trimming was completed.
	10/15/2010: Improve sectionalizing capability.	Scheduled for	1/15/2012	
48	**Circuit ID: 11506 FREEMANSBURG 15-06**			**Location: Bethlehem** **CPI: 559**
	7/20/2011: 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 >3 interruptions. There have been 3 outages affecting over 1,000 customers, these 3 outages were caused by equipment failure and trees not trimming related. In addition, there have been several more localized outages caused by trees not trimming related. At this point the protection scheme for this circuit appears to be adequate. Monitor future performance for any changes.

Rank	Action	Status	Due/Complete	Result
49	**Circuit ID: 22001 BOHEMIA 20-01**			**Location: Pocono** **CPI: 558**
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
50	**Circuit ID: 41201 KENMAR 12-01**			**Location: Susquehanna** **CPI: 557**
	1/1/2006: Expanded Operational Review.	Completed	12/17/2009	No problems were found. PPL will continue to monitor this circuit's future performance.
	7/6/2010: Thermographic inspection-OH line.	Completed	3/31/2010	No problems were found. PPL will continue to monitor this circuit's future performance.
	10/18/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
51	**Circuit ID: 20402 ASHFIELD 04-02**			**Location: Central** **CPI: 552**
	7/20/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2011	This is the first time this feeder has been on the WPC list. It experienced two tree outages between 5/27/11 and 5/28/11, which were part of the Memorial Day Major Storm Event and not included in the CPI calculation. The largest contributor to CMI is due to a tree outage that caused the breaker to operate and 1,923 customers were out of service for 2.5 hours (300,000 customer minutes interrupted).
52	**Circuit ID: 57006 WHITE HILL 70-06**			**Location: West Shore** **CPI: 546**
	3/17/2009: Expanded Operational Review. Reliability Review Completed 7/22/09. Voltage Profile Completed 7/07/09. Field Work Request Review in Progress.	Completed	12/31/2009	Inconclusive. Monitor future performance.
	11/11/2009: Install fuse(s). Install tap fuse	Completed	3/16/2010	Reduced customer count affected by each outage.
	4/11/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	5/25/2011	Q1 2011 is the first quarter the circuit has appeared on the WPC list. The largest CPI contributor has been SAIDI. The breaker has been interrupted three times in the last 4 quarters. Two of the breaker outages were due to trees from outside the trimming right of way during storms. The third outage was caused by an equipment failure. White Hill will be a future Smart Grid substation. Currently all of the automated tie points are installed but not yet live. An additional OCR and two normally closed LBAS will be replaced with automated devices later this year. Once the automated devices are installed and live, circuit SAIDI is anticipated to improve dramatically.
	5/25/2011: Install additional SMARTGRID devices. Automate the White Hill 70-6 line as part of the SMARTGRID pilot program.	Scheduled for	12/31/2011	
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	

Rank	Action	Status	Due/Complete	Result
53	**Circuit ID: 13606 RICHLAND 36-06**			**Location: Bethlehem** **CPI: 535**
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/30/2010	The SAIDI component and the >3 outages on this circuit contributed greatly to the CPI. There were multiple tree related outages (non-trimming related) for over 600 customers on the line. This circuit is scheduled to be tree trimmed by the end of 2011.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
54	**Circuit ID: 47502 NEW COLUMBIA 75-02**			**Location: Sunbury** **CPI: 531**
	1/6/2011: Expanded Operational Review. EOR Planned for 2011	EOR initiated	12/31/2011	
	1/6/2011: Thermographic inspection-OH line. Thermovision Inspection of 2 and 3 phase sections to be completed early 2011.	Completed	2/8/2011	Reduced outage risk. Completed 2/9/2011 - All necessary repairs completed.
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	9/19/2011	This circuit was reviewed at the Susquehanna WPC meeting on 9/19/11. The largest contributor to the circuit performance index was a SAIDI contribution of 42.8%. On April 28, 2011 a microburst took down several spans of three phase circuit which caused the circuit breaker to open. Due to the extensive damage all of the customers on this line were out of service for 1945 minutes. PPL will continue to monitor this circuit's future performance.
55	**Circuit ID: 46206 DANVILLE 62-06**			**Location: Sunbury** **CPI: 529**
	10/25/2007: Relocate inaccessible line.	Completed	10/28/2010	Reduced outage risk. Relocate inaccesible portion of Pine Swamp Hollow Tap on Danville 62-06. Will be done with Reliability Preservation budget funds.
	10/29/2007: Relocate inaccessible line.	Completed	11/30/2009	Relocated inaccessible part of Quitman Tap on Danville 62-6 and reconductored steel wire.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	
56	**Circuit ID: 45602 WOOLRICH 56-02**			**Location: Susquehanna** **CPI: 528**
	8/1/2008: Improve sectionalizing capability. Install LBAS on north branch of feeder.	Completed	3/31/2010	Reduced customer count affected by each outage.
	8/1/2008: Monitor future performance.	Completed	3/31/2010	PPL will continue to monitor this circuit's performance. This circuit has not been a WPC since the second quarter of 2005.
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/25/2011	

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

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

Cause Description	Trouble Cases[6]	Percent of Trouble Cases	Customer Interruptions[7]	Percent of Customer Interruptions	Customer Minutes	Percent of Customer Minutes
Animals	3,306	16.76%	44,378	2.92%	4,507,724	1.92%
Contact/Dig-In	159	0.81%	14,662	0.96%	1,092,689	0.46%
Directed by Non-PPL Authority	249	1.26%	11,459	0.75%	3,901,389	1.66%
Equipment Failures	6,382	32.35%	507,959	33.38%	61,723,370	26.26%
Improper Design	2	0.01%	1,580	0.10%	44,438	0.02%
Improper Installation	4	0.02%	2,074	0.14%	362,675	0.15%
Improper Operation	0	0.00%	0	0.00%	0	0.00%
Non PPL Problem-Cust Fac	162	0.82%	1,618	0.11%	865,514	0.37%
Non PPL Problem-Other	196	0.99%	22,029	1.45%	6,200,634	2.64%
Nothing Found	1,634	8.28%	162,329	10.67%	10,690,646	4.55%
Other-Controllable	119	0.60%	13,612	0.89%	6,768,005	2.88%
Other-Non Control	537	2.72%	47,946	3.15%	8,778,971	3.73%
Other-Public	94	0.48%	31,836	2.09%	2,908,774	1.24%
Trees-Not Trimming Related	5,318	26.95%	455,460	29.93%	96,882,039	41.22%
Trees-Trimming Related	838	4.25%	53,315	3.50%	14,204,009	6.04%
Vehicles	730	3.70%	151,280	9.94%	16,119,267	6.86%
Total	**19,730**	**100.00%**	**1,521,537**	**100.00%**	**235,050,143**	**100.00%**

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

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

Analysis of causes contributing to the majority of service interruptions:

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

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

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

Animals: Animals accounted for about 17% 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 81% 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 51% of the cases of trouble, 53% of the customer interruptions and 60% 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	3rd Quarter		Year-to-date	
		Budget	Actual	Budget	Actual
Transmission					
Transmission C-tag poles (# of poles)	400	50	72	318	318
Transmission arm replacements (# of sets)	100	32	23	75	81
Transmission air break switch inspections (# of switches)	0	0	0	0	2
Transmission lightning arrester installations (# of sets)	38	0	4	37	32
Transmission pole inspections (# of poles)	5,200	2,600	2,526	5,200	5,363
Transmission tree side trim-Bulk Power (linear feet)	N/A				
Transmission herbicide-Bulk Power (# of acres)	N/A				
Transmission re-clearing (# of miles) BES Only	503	100.16	94.93	409.98	448.28
Transmission re-clearing (# of miles) 69/138 kV	765.84	488.07	364.34	733.45	520.02
Transmission danger tree removals-Bulk Power (# of trees)	N/A				
Substation					
Substation batteries (# of activities)	844	51	93	801	803
Circuit breakers (# of activities)	1270	235	85	955	419
Substation inspections (# of activities)	2637	654	223	2,031	1,236
Transformer maintenance (# of activities)	2190	409	186	1,677	941
Distribution					
Distribution C-tag poles replaced (# of poles)	1,600	387	232	1,242	1,166
C-truss distribution poles (# of poles)	5,500	1,836	1,564	3,659	4,342
Capacitor (MVAR added)	57	17	7	53	59
OCR replacements (# of)	644	96	29	574	443
Distribution pole inspections (# of poles)	130,000	43,110	38,805	100,668	123,265
Distribution line inspections (# of miles)	3,000	924	314	2,938	1,568
Group re-lamping (# of lamps)	16,000	5,586	5,650	11,185	7,974
Test sections of underground distribution cable	500	136	178	391	531
Distribution tree trimming (# of miles)	5,139	1,242.34	960.63	3,825.31	3,448.60
Distribution herbicide (# of acres)	N/A				
Distribution >18" removals within R/W (# of trees)	N/A				
Distribution hazard tree removals outside R/W (# of trees)	N/A				
LTN manhole inspections (# of)	423	49	0	347	121
LTN vault inspections (# of)	758	163	0	577	170
LTN network protector overhauls (# of)	101	31	0	79	11
LTN reverse power trip testing (# of)	119	35	0	90	18

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

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

	3rd Quarter		Year-to-date	
Activity	**Budget ($000)**	**Actual ($000)**	**Budget ($000)**	**Actual ($000)**
Provide Electric Service	2,753	2,236	7,522	6,669
Vegetation Management	7,096	9,380	21,385	24,561
Customer Response	15,101	28,154	46,320	59,845
Reliability & Maintenance	14,217	11,239	42,824	33,680
System Upgrade	819	236	2,957	749
Customer Services/Accounts	31,471	28,568	90,030	76,587
Others	12,476	20,353	36,721	55,891
Total O&M Expenses	**83,933**	**100,166**	**247,759**	**257,982**

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.

	3rd Quarter		Year-to-date	
	Budget ($000)	**Actual ($000)**	**Budget ($000)**	**Actual ($000)**
New Service/Revenue	13,841	26,699	40,542	56,267
System Upgrade	33,503	32,315	99,564	93,945
Reliability & Maintenance	40,145	39,315	123,963	136,862
Customer Response	5,673	372	15,656	14,495
Other	6,554	4,144	13,646	10,257
Total	**99,716**	**102,845**	**293,371**	**311,826**

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	76
Journeyman Lineman	199
Journeyman Lineman-Trainee	85
Helper	42
Groundhand	5
Troubleman	55
T&D Total	**462**
Electrical	
Elect Leaders-UG	6
Elect Leaders-Net	11
Elect Leaders-Sub	25
Journeyman Elect-UG	29
Journeyman Elect-Net	12
Journeyman Elect-Sub	64
Journeyman Elect Trainee-UG	2
Journeyman Elect Trainee-Net	6
Journeyman Elect Trainee	12
Helper	22
Laborer-Network	0
Laborer-Substation	0
Electrical Total	**189**
Overall Total	**651**

Appendix A

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.

Appendix B

PPL Electric Utilities Corporation
Service Interruption Definitions

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

10 – Improper Design	Controllable	• 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	• 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	• 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[8]	Controllable	• 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	• 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	• 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	• When cars, trucks or other types of vehicles or their cargoes strike facilities causing a problem.

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

51 – Contact/Dig-in	Public	• When work in the vicinity of energized overhead facilities results in interruptions due to accidental contact by cranes, shovels, TV antennas, construction equipment (lumber, siding, ladders, scaffolding, roofing, etc.). • When contact is made by a non-employee with an underground facility causing interruption.
60 – Equipment Failure	Controllable	• 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 Problem – Other	Non-PPL	• Where no PPL Electric or customer facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
78 – Non-PPL Problem – Customer Facility	Non-PPL	• Where no PPL Electric facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
80 – Scheduled Outage[9]	Controllable	• Interruptions under the control of a PPL Electric switchman or direction of a PPL Electric System Operator for the purpose of performing scheduled maintenance, repairs and capacity replacements for the safety of personnel and the protection of equipment. • Includes requests from customers for interruption of PPL Electric facilities.

[9] 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.

85 – Directed by Non-PPL Authority	Non-Controllable	• 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	• 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	• When no cause for the interruption can be found. • When there is no evidence of equipment failure, damage or contact after line patrol is completed. This could be the case during a period of heavy thunder and lightning, when a line fuse blows or a single phase OCR locks open. • When closed for test, the fuse holds or the OCR remains closed. A patrol of the tap reveals nothing.
98 – Other Public (Lineman provides explanation)	Public	• 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.

99 – Other – Non-Controllable (Lineman provides explanation)	Non-Controllable	• 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.

Appendix C

PPL Electric Utilities Corporation
Job Descriptions

Transmission and Distribution

Groundhand	• Performs manual labor and assists employees in higher job classifications.
Helper	• 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	• 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	• 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	• 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	• 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	• 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	• 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	• Performs manual labor and assists employees in higher job classifications.
Journeyman Electrician - Substation - Network - Underground	• 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	• 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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