Paul E. Russell Associate General Counsel

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FEDERAL EXPRESS

October 30, 2012

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

RECEIVED

OCT 39 2012

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

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

Dear Ms. Chiavetta:

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

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

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

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

Very truly yours,

Paul E. Russell

Enclosures

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



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

November 2012



OCT 30 2012

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

There were no major events during the third quarter ended September 30, 2012.

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 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, 2012¹.

SAIFI (Benchmark = 0.98; Rolling 12-month Std. = 1.18)	1.034
CAIDI (Benchmark = 145; Rolling 12-month Std. = 174)	149
SAIDI (Benchmark = 142; Rolling 12-month Std. = 205)	155
MAIFI ²	4.09
Average Number of Customers Served ³	1,390,552
Number of Sustained Customer Interruptions (Trouble Cases)	16,645
Number of Customers Affected ⁴	1,438,012
Customer Minutes of Interruptions	215,373,040
Number of Customer Momentary Interruptions	5,693,678

During the 3rd quarter there were no PUC major events, four (4) PUC Reportable storms, and seven (7) other storms that required the opening of one or more area emergency centers to manage restoration efforts.

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

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

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

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

Specifically, during the 12-month reporting period, there was one (1) PUC major event and six (6) PUC-reportable storms (\geq 2,500 customers interrupted for \geq 6 hours) other than major events.





In addition, there were seventeen (17) storms that were not reportable, but which did require the opening of one or more area emergency centers to manage restoration efforts.

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

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

WPC Rank	Feeder ID	SAIFI	CAIDI	SAIDI	MAIFI ⁵	Customers	Cases of Trouble ⁶	Customer Minutes Interrupted	СРІ
1	13902	5.509	127.04	699.94	19.99	1869	31	1,308,196	1025
2	11406	3.089	266.30	822.57	5.05	1013	15	833,260	972
3	46602	4.285	254.81	1,091.8	0.00	1548	67	1,690,180	924
4	43001	5.264	134.10	705.97	4.09	972	50	686,207	922
5	55502	4.78	122.71	586.58	0.00	1591	23	933,242	919
6	23401	6.09	97.065	591.12	4.10	1736	65	1,026,180	915
7	45402	5.21	215.24	1,121.5	6.16	1592	60	1,785,434	903
8	47502	4.067	243.46	990.05	3.10	782	32	774,217	837
9	55401	3.917	208.88	818.14	2.07	2134	16	1,745,901	810
10	24401	2.518	709.95	1,787.5	5.01	1234	45	2,205,822	792
11	28402	4.448	190.18	846.03	10.18	1590	43	1,345,186	789
12	13702	5.307	71.578	379.85	2.98	717	17	272,355	782
13	14403	2.73	164.87	450.08	4.64	2554	62	1,149,504	753
14	22601	3.649	151.17	551.65	2.05	1978	60	1,091,173	746
15	11404	5.497	55.780	306.61	1.00	767	9	235,170	746
16	51401	4.224	92.889	392.38	1.00	464	12	182,064	737
17	20403	3.878	115.41	447.57	0.00	1909	48	854,414	731
18	13704	5.707	157.31	897.85	4.74	1575	42	1,414,108	724
19	52002	3.696	109.63	405.27	7.02	1647	20	667,482	696
20	13503	4.204	109.74	461.35	8.58	1417	21	653,740	695
21	27501	1.9	722.38	1,372.2	1.06	1265	20	1,735,880	683
22	12102	2.673	302.79	809.36	1.00	1110	30	898,385	681
23	67803	3.484	274.61	956.62	11.01	1969	34	1,883,575	676
24	62604	3.947	97.083	383.17	3.00	1354	9	518,812	672
25	43101	3.278	288.35	945.1	2.00	1434	24	1,355,279	668
26	60406	9.392	127.93	1,201.6	2.01	204	1	245,127	655
27	45501	3.062	324.16	992.57	2.05	1437	63	1,426,325	637
28	47704	2.812	527.09	1,482.1	6.13	734	28	1,087,929	627

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

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

WPC Rank	Feeder ID	SAIFI	CAIDI	SAIDI	MAIFI ⁵	Customers	Cases of Trouble ⁶	Customer Minutes Interrupted	СРІ
29	43302	5.58	265.07	1,479.0	5.01	176	7	260,304	615
30	25801	2.034	532.62	1,083.2	0.00	1803	38	1,953,131	613
31	55507	1.587	108.09	171.59	0.00	1013	12	173,820	607
32	16202	2.304	489.03	1,126.5	2.02	1443	19	1,625,556	603
33	23001	3.6	133.32	479.96	8.09	1392	24	668,106	584
34	24402	3.179	244.68	777.73	3.00	493	14	383,420	580
35	22602	3.792	95.015	360.29	6.08	1538	39	554,131	563
36	28501	1	1267.8	1,267.8	0.00	1	1	1,268	554
37	47703	2.738	299.31	819.55	8.02	1382	41	1,132,621	548
38	22002	4.102	118.34	485.46	2.99	1393	42	676,239	545
39	16801	3.452	111.27	384.15	7.13	1599	56	614,257	544
40	11405	3.208	121.98	391.34	6.04	1860	23	727,889	535
41	64904	3.213	241.52	775.97	2.01	3026	8	2,348,098	521
42	46701	1.459	732.21	1,068.2	3.08	706	14	754,183	513
43	10205	3.112	241.41	751.23	0.99	2844	16	2,136,497	510
44	28302	3.664	119.22	436.88	6.10	2813	104	1,228,943	505
45	25502	6.081	80.694	490.71	2.32	493	13	241,922	499
46	28403	3.784	126.20	477.59	3.10	1530_	35	730,720	494
47	18501	2.409	327.66	789.19	3.03	1449	27	1,143,541	484
48	27101	3.339	147.47	492.39	2.64	1883	64	927,170	481
49	45302	2.002	450.44	901.62	2.99	1213	27	1,093,670	478
50	43401	3.293	121.65	400.65	0.00	992	26	397,441	470
51	29402	2.452	233.58	572.72	3.03	1567	20	897,448	469
52	57403	3.743	85.063	318.42	5.05	1457	27	463,935	468
53	14801	3.449	183.14	631.7	0.61	1794	28	1,133,274	467
54	12301	2.234	203.73	455.13	0.00	1231	51	560,270	466
55	44702	2.208	173.06	382.2	5.22	451	13	172,371	454
56	45002	1.952	380.67	742.93	1.00	1922	36	1,427,916	454
57	43102	2.612	225.09	588.04	2.01	970	19	570,402	448
58	62602	2.914	204.69	596.45	3.03	499	12	297,628	447

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

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

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

Rank	Action	Status	Due/Comple	te Result	· · · · · · · · · · · · · · · · · · ·
1 Ci	rcuit ID: 13902 SEIDERSVILLE 39-02	-		Location: Bethlehem	CPI: 1025
7/5	/2012: Expanded Operational Review.	Completed	7/31/2012	Developed 7 Work Requests to reduce outage risk performance.	k and improve circuit
7/1: pre	9/2012: Circuit outage data analysis - WPC not on ceding qtr. list.	Completed	8/31/2012	Determined that additional three phase sectionaliz greatly reduce customers affected and restoration to address these issues.	ting and automation will times. WO's developed
7/2 adj	3/2012: Transferring 110 customers to a more reliable, acent circuit.	Completed	8/30/2012	Reduced customer count affected by each outage	
WC)# 42073599				
7/2 655	3/2012: Install LBAS(s). Installing Remote 537s47000controlled switch to reduce restoration times.	Scheduled for	12/31/2012		
7/2 420 Fus bre	3/2012: Install fuse(s). WO#'s 42075448, 42075446, 075790, 42075787, 420,75789, 42075788. ses to isolate exposed single and 3 phase taps from tripping raker.	Scheduled for	6/30/2013		
2 Ci	rcuit ID: 11406 FARMERSVILLE 14-06			Location: Bethlehem	CPI: 971
6/2	7/2012: Expanded Operational Review.	Completed	10/1/2012	Developed two WO's to reduce outage risk and re	storation times.
6/2	7/2012: Expanded Operational Review.	Completed	10/1/2012	Developed WO to improve circuit performance.	
10/ pre	11/2012: Circuit outage data analysis - WPC not on ceding qtr. list.	Scheduled for	11/15/2012		
10/ 671	25/2012: Load balancing. WO#: 42073592 @ 100S50812	Scheduled for	12/31/2013		
10/ 67(25/2012: WO#: 42073596 - Install new recloser @ 056S50819	Scheduled for	12/31/2013		
10/ 674	25/2012: Install fuse(s). WO#: 42073597 - Install fuse @ 464850472	Scheduled for	12/31/2013		

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Ran	k Action		Status	Due/Comple	te Result		
3	Circuit ID: 46602	LARRYS CREEK 66-02			Location: Susquehanna	CPI:	934
	7/6/2010: Install fuse(s).		Completed	3/1/2011	Reduced customer count affected by each outage. Insta reduce outage exposure. WR 556905 - Install 5 fuses WR 556906 - Install 1 fuse WR 556915 - Install 1 fuse WR 556903 - Install 1 fuse WR 556899 - Install 1 fuse on Pine Run Rd WR 535701 - Install 1 fuse along Spook Hollow Rd WR 556898 - Install 2 fuses on Youngs Rd WR 556897 - Install 1 fuse on Level Corners Rd	alled fusing to	o
	7/7/2010: Relocate inacce	essible line.	Scheduled for	3/14/2013	WR 556910 - Relocate Inaccessible Line along Tombs F	Run Rd.	
4	Circuit ID: 43001	ALLENWOOD 30-01			Location: Sunbury	CPI:	922
	4/11/2012: Circuit outage preceding qtr. list.	data analysis - WPC not on	Completed	6/14/2012	On December 1, 2012 all of the customers on this circuit service when the Lycoming - Lewisburg 69 kV line went customers on this circuit were transferred to the WATS 3 the OCR at 22908N34599 was bypassed. On December customers downstream of OCR 20972N34933 experience when the device operated to lockout. The neutral broke is wrapped around the primary.	t were out of out. All 973 33-1 circuit a r 26, 2012, 5 ced an outag loose and	ifter 42 Je
	10/11/2012: Circuit outage preceding qtr. list.	e data analysis - WPC not on	Scheduled for	11/15/2012			
5	Circuit ID: 55502	HERSHEY 55-02			Location: Harrisburg	CPI:	919
:	3/14/2012: Thermographic and 3 phase primary lines	c inspection-OH line. Inspected all 2 with infrared camera.	Completed	3/14/2012	Reduced outage risk.		
	7/28/2012: Circuit outage preceding qtr. list.	data analysis - WPC not on	Completed	9/10/2012	The Hershey 55-2 line has approximately 1,600 customer circuit miles. The largest CPI contributor has been the p customers with greater than 3 interruptions. The circuit experienced four outages in the past year. On 03/10/12 a pole and interrupted customers for 17 minutes. On 03 customer cut a tree down onto the distribution line. On from outside the trimming right of way fell on the line. Of branch making contact wore down the insulation on a sp conductor and caused a permanent fault.	Ins across 38 bercentage o breaker , a vehicle st i/31/12, a 06/30/12, a t Dn 08/03/12, ban of XLP	3 f ruck ree a tree
,	10/4/2012: Tree trimming. Vegetation Management s	. Trim circuit as part of its four year chedule.	Scheduled for	12/31/2013			

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Rank	Action	Status	Due/Comple	te Result	
6 Cir	rcuit ID: 23401 HONESDALE 34-01			Location: Pocono	CPI: 917
7/12 prec	V2011: Circuit outage data analysis - WPC not on reding qtr. list.	Completed	10/18/2011	Several outages occurred over the rolling four qual trimming related tree contacts. Of these outages, t for the largest customer minutes interrupted values four months. On 6/9/11, a tree from outside the rig primary wire and caused an outage for 1,805 custo value of 596,296. Then on 7/29/11, a tree from out caused an OCR to trip to lockout. This caused an customers and resulted in a value of 431,575 CMI OCR tripped to lockout due to a tree falling on the outside the right of way. This caused an outage for and totaled 166,122 CMI.	rters as a result of non the three that accounted s occured in the past that of way contacted the omers and netted a CMI tside the right of way outage for 751 PPL . On 9/5/11 the same primary line from or 751 PPL customers
10/1	7/2011: Evaluate potential ties.	Completed	6/29/2012	PPL is inspecting the capability of the tie line that of 1 line to the TINK 44-1 line. If the tie line is nearing in the next few years or reliability could be improve imperative that a project is planned to improve the customers on these circuits.	connects the HONE 34- g its capability to transfer ed in any way, it is reliability for the
10/2	6/2012: Improve sectionalizing capability.	In progress			
7 Ciı	rcuit ID: 45402 WEST BLOOMSBURG	54-02		Location: Sunbury	CPI: 903
11/1 376	3/2007: Install 3 phase OCR(s). Replace OCR 94N30236 with telemetric OCR.	Completed	7/29/2011	Reduced outage duration.	
5/15 insp 487	72008: Perform line maintenance identified by line ection. Eliminate exposure of unused 3 phase line by Rte bridge.	Completed	7 <i>1</i> 29/2011	Reduced outage risk.	
11/2 380:	6/2008: Install 3 phase OCR(s), Upgrade OCR 29N29537 with Telemetric VCR.	Completed	7/29/2011	Reduced outage duration.	
4/11 prec	/2012: Circuit outage data analysis - WPC not on eding qtr. list.	Completed	6/14 <i>/</i> 2012	On February 20, 2012 all of the customers on this service when two conductors came down and cond 36113N30401. Restoration was delayed due to sw caused by cold load pick-up. On September 15, 20 2012 the WBLO 54-2 Sect VCR at 37624N30209 i reclose due to a Temporarily Cleared Green Tag F customers downstream from this device. This Gre taken out during construction of the WBLO 54-2 to May 27, 2011 a transmission outage left all of the out of service for 4.5 hours.	circuit were out of tacted the ground at ritching problems 012 and September 27, tripped and did not Permit. There are 748 en tag permit was likely 0 WBER 53-3 tie. On customers on this circuit

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Rank	Action	Status	Due/Comple	te Result	
8 C	Sircuit ID: 47502 NEW COLUMBIA 75-0	2		Location: Sunbury	CPI: 838
1/0 20	6/2011: Expanded Operational Review. EOR Planned for 011	Completed	12/31/2011	Reduced outage risk. A crimp in the secondary of during Thermographic Inspection. Repairs were a WR 641824.	was discovered on 2/9/11 made on 5/18/11 under
1/0 in: 20	6/2011: Thermographic inspection-OH line. Thermovision spection of 2 and 3 phase sections to be completed early 011.	Completed	2/8/2011	Reduced outage risk. Completed 2/9/2011 - All a completed.	necessary repairs
7/ pr	12/2011: Circuit outage data analysis - WPC not on receding qtr. list.	Completed	9/19/2011 This circuit was reviewed at the Susquehanna WPC meeting on 9/19/1 The largest contributor to the circuit performance index was a SAIDI contribution of 42.8%. On April 28, 2011 a microburst took down sever spans of three phase circuit which caused the circuit breaker to open. to the extensive damage all of the customers on this line were out of service for 1,945 minutes. PPL will continue to monitor this circuit's fut performance.		
9 C	Circuit ID: 55401 SOUTH HERSHEY 54-	01		Location: Harrisburg	CPI: 811
1/.	26/2011: Thermographic inspection-OH line.	Completed	2/28/2011	Inconclusive. Monitor future performance.	
1/ pr	11/2012: Circuit outage data analysis - WPC not on receding qtr. list.	Completed	3/12/2012	The South Hershey 54-01 line is a nonstandard The feeder has approximately 2,200 customers a The largest CPI contributors have been the perce greater than 3 outages. A three phase recloser s customers experienced four interruptions in the p causes include load shedding due to a substation during maintenance, flooding during Tropical Sto downstream capacitor bank, and nothing found.	13 kV distribution circuit. across 54 circuit miles. entage of customers with serving over 1,600 bast year. The outage in transformer overload rm Lee, failure of a
3/ In: ex sy cu	12/2012: Install 3 phase OCR(s). Install 3 phase recloser. stall a new telemetered three phase recloser downstream of disting problematic recloser. The new device will allow for a stem operator to remotely transfer approximately 1,000 istomers in the event of an outage on an upstream device.	Scheduled for	12/31/2013		
5/ im ar Ca	22/2012: Improve sectionalizing capability. Investigate proving sectionalizing capability by reconfiguring the circuit ound the triangle of Rt 39 (Hershey Rd), N Hanover St, and E anal St.	Scheduled for	11/15/2012		
5/ Su re 54	22/2012: Construct a new 69-13.2 kV West Hershey ubstation to increase transfer capacity in the area as well as iduce customer counts and circuit miles on the South Hershey 4-01 line.	Scheduled for	5/30/2014		

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Ran	k Action		Status	Due/Comple	te Result	
10	Circuit ID: 24401	TINKER 44-01			Location: Pocono	CPI: 792
	4/11/2011: Circuit outage preceding qtr. list.	e data analysis - WPC not on	Completed	5/31/2011	In May 2011, a part of the Tinker 44-1 12kV line to the East Carbondale 12-6 12kV line. The reliabilit improved for the transferred customers.	oad was transferred to y was significantly
	10/17/2011: Evaluate pot	tential ties.	Completed	1/20/2012	Tie line capability is being analyzed between the and Honesdale 34-1 12kV line. With this tie line c transfers, customers from the Tinker line can be c	Tinker 44-1 12kV line apable of making effectively restored during
	10/11/2012: Circuit outag preceding qtr. list.	ge data analysis - WPC not on	Scheduled for	11/15/2012		
11	Circuit ID: 28402	HARTLAND 84-02			Location: Central	CPI: 791
	10/11/2012: Circuit outag preceding qtr. list.	ge data analysis - WPC not on	Scheduled for	11/15/2012		
12	Circuit ID: 13702	SCHNECKSVILLE 37-0)2		Location: Lehigh	CPI: 782
	4/11/2012: Circuit outage preceding qtr. list.	ə data analysis - WPC not on	Completed	9/30/2012	Circuit has no 3 phase sectionalizing or protective WR's to improve conditions.	e devices. Developed
	8/27/2012: install 3 phas 59702S48072. Should re-	e OCR(s). At grid location duce exposure to CB lockout.	Scheduled for	4/30/2013		
	9/6/2012: install 3 phase 59477S48102, WR 1202/	OCR(s). Telemetric VCR at 8691.	Scheduled for	1/31/2013		
	9/6/2012: Line inspection walkdown to identify poss potential projects. Generation	n-equipment. Performed line sible trouble spots for trimming and ated 1 WR.	Completed	10/5/2012	Reduced outage risk.	
	10/9/2012: Improve secti 59199S48178.	ionalizing capability. Install ROCS at	Scheduled for	5/31/2013		
13	Circuit ID: 14403	SO SLATINGTON 44-0	3		Location: Lehigh	CPI: 752
	9/6/2012: Line inspection walkdown to identify poss potential projects	n-equipment. Performed line sible trouble spots for trimming and	Completed	6/30/2012	Generated 13 WR's to improve reliability of this ci	ircuit.
	10/11/2012: Circuit outag preceding qtr. list.	ge data analysis - WPC not on	Scheduled for	11/15/2012		
14	Circuit ID: 22601	KIMBLES 26-01			Location: Pocono	CPI: 746
	4/11/2012: Circuit outage preceding gtr. list.	e data analysis - WPC not on	Scheduled for	5/30/2012		

Rani	k Action	Status	Due/Complet	e Result		······
15 (Circuit ID: 11404 FARMERSVILLE 14-04			Location: Bethlehem	CPI:	746
6	6/25/2012: Expanded Operational Review.	Completed	7/31/2012	Developed WR's to improve circuit performance.		
1 7	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012			
1 iı	10/25/2012: Intall 1200 kVAR capacitor @ 67473s49764 to mprove voltage. WO#: 42071530	Scheduled for	12/31/2012			
16 (Circuit ID: 51401 LYKENS 14-01			Location: Harrisburg	CPI:	737
3	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Inconclusive. Monitor future performance.	,	
1 F	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012			
17 (Circuit ID: 20403 ASHFIELD 04-03			Location: Central	CPI:	732
1 t t	10/6/2011: Install tie. Construct a 2.5 mile 3-phase tie between Ashfield 20403 and Greenwood 20601. Instally a remote-controlled switch as the normally open point between he two circuits.	Completed	11/30/2010			
1 F	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012			

Rank	Action	Status	Due/Complet	te Result	- <u>-</u>
18 Circ	uit ID: 13704 SCHNECKSVILLE 37-04	ļ		Location: Lehigh	CPI: 724
10/11/ preced	2010: Circuit outage data analysis - WPC not on ding qtr. list.	Completed	11/30/2010	The aerial cable getaway for the Schnecksville 37-04 lit the past year. The getaway has since been replaced. OCR outages, due to vehicle contact and trees from ou way, interrupted approximately 600 customers.	te failed twice in Two additional tside the right of
4/20/2	2011: Circuit outage data analysis.	Completed	<i>4/20/</i> 2011	The outage history for Schnecksville 37-04 has been reperiod ending with Q1 2011. The circuit experienced for in the past year. A transmission outage of unknown ca substation during a Q1 2011 storm. The transmission reclosed for test.	viewed for the sur major outages use interrupted the line held when
				The three remaining outages were due to equipment fa Two of which occurred on the same day when the oper disconnect failed in Schnecksville Substation. A separ occurred when an overhead switch failed while custom transferred to the adjacent Schnecksville 37-01 line for abnormal circuit configuration and repairs under constr customer restoration.	ilures in Q4 2010. ating bus ate outage ers were repairs. The uction delayed
				Many of the major contributors to the CPI have been ere that have since been mitigated. Performance will conti monitored to determine if any proactive steps may be to similar interruptions	uipment failures nue to be aken to prevent
5/18/2	011: Protection coordination review.	Completed	5/18/2011	The protection scheme on this circuit is well laid out. N needed at this time.	o adjustments are
4/23/2 to ider projec	2012: Line inspection-equipment. Perform line walkdown ntify possible trouble spots for trimming and potential ts.	Completed	6/1/2012	Identified potential fuse locations to limit exposure and customers experiencing outages.	reduce number of
4/23/2 contro	012: Install fault indications on a remotely operatied a switch. WR 667699.	Completed	4/30/2012	Reduced outage duration.	
4/23/2	2012: Tree trimming.	Scheduled for	r 12/23/2014		
6/6/20 autom cause	112: Replaced last compression style splices with newer latic splices. The compression style splices have been s for outages historically.	Completed	6/30/2012	Reduced outage risk.	
6/6/20 reduce 56771	112: Install fuse(s). Install fuses at new locations to e number of customers experiencing outages. S48902 and 573-S-501.	Scheduled fa	r 12/1/2012		
9/6/20 12028	12: Install 3 phase OCR(s). At 59157S49550. WR 1666.	Scheduled fo	r 1/31/2013		
10/10/ walkd poteni	/2012: Line inspection-equipment. Performed line own to identify possible trouble spots for trimming and tial projects. Generated 10 Work Requests.	Completed	10/10/2012	Reduced outage risk.	

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Rai	nk Action		Status	Due/Comple	te Result		
19	Circuit ID: 52002 LINGL	ESTOWN 20-02			Location: Harrisburg	CPI:	696
	3/14/2012: Thermographic inspection- and 3 phase primary lines with infrared	OH line. Inspected all 2 camera.	Completed	3/14/2012	Inconclusive. Monitor future performance,		
	7/16/2012: Expanded Operational Rev	iew.	Scheduled for	12/31/2012			
	7/19/2012: Circuit outage data analysis preceding qtr. list.	s - WPC not on	Completed	9/10/2012	The Linglestown 20-2 line has approximately 1,640 customers across 28 circuit miles. The largest CPI contributor has been the percentage of customers with greater than 3 interruptions. The circuit breaker experienced four outages in the past year. Two of the outages were caused by trees from outside the trimming right of way during PUC reportable storms on 09/07/11 and 06/29/12. Nothing was found during a third storm on 08/05/12. A fourth outage on 06/03/12 was attributed to animal contact in the substation.		
	10/4/2012: Tree trimming. Trim circuit vegetation management cycle.	as part of its four year	Scheduled for	12/31/2013			
	10/4/2012: Investigate replacing a rem switch with a three phase recloser alon	ote operator controlled g Old Jonestown Rd.	Scheduled for	12/31/2012			
20	Circuit ID: 13503 MCMIC	CHAELS 35-03			Location: Pocono	CPI:	696
	10/11/2012: Circuit outage data analys preceding qtr. list.	is - WPC not on	Scheduled for	11/15/2012			
21	Circuit ID: 27501 WEISS	PORT 75-01			Location: Central	CPI:	683
	10/11/2012: Circuit outage data analys preceding qtr. list.	is - WPC not on	Scheduled for	11/15/2012			
22	Circuit ID: 12102 SO ALI	LENTOWN 21-02			Location: Lehigh	CPI:	681
	6/29/2011: Install animal guard(s).		Completed	6/30/2011	Reduced outage risk.		
	6/29/2011: Replace lightning arrestor a connections identified by thermography	nd transformer	Scheduled for	11/30/2011	Reduced outage risk. WR 445919, 445925, 44593 445940 deferred, currently awaiting scheduling	31 - complete. WR	
	10/11/2012: Tree trimming. Entire circ trimming in 2013.	uit is due for tree	Scheduled for	12/31/2013			
	10/11/2012: Install LBAS(s). Will insta indicators at two locations, 64198S463 WRs 12033671 and 12033676.	II LBAS and fault 18 and 64231S46331.	Scheduled for	5/31/2013			
	10/11/2012: Circuit outage data analys preceding qtr. list.	is - WPC not on	Scheduled for	11/15/2012			

Rank	Action	Status	Due/Comple	te Result	
23 Circ	uit ID: 67803 WEST LANCASTER 78-0)3		Location: Lancaster	CPI: 676
5/19/20 perform	008: Monitor future performance. LMI inspection ned on 2 phase and 3 phase line - 3.7 miles total	Completed	12/30/2011	Reduced outage risk.	
1/6/20	11: Expanded Operational Review.	Completed	12/30/2011	No work is needed.	
1/13/20	011: Line inspection-equipment.	Completed	7/20/2011	Reduced outage risk.	
1/13/2	011: Thermographic inspection-OH line.	Completed	3/31/2011	Reduced outage risk.	
10/11/ preced	2012: Circuit outage data analysis - WPC not on fing qtr. list.	Completed	_ 10/25/2012	Inconclusive. Monitor future performance. The West La has approximately 1,960 customers across 36 circuit mi contributor to the CPI (Circuit Performance Index) has b the top 10 outages in the past year, four occurred on the 7, 2012) due to a severe T&L storm. That one storm res (Customer Minutes Interrupted) of over 975,000. Four o outages were caused by trees from outside the trimming circuit is due to be trimmed on 2014. The West Lancast never been on the Worst Performing Circuit list.	ncaster 78-3 line les. The largest een SAIDI. Of same day (July sulted in a CMI if the other a right of way. The er 78-3 line has
24 Circ	uit ID: 62604 ENGLESIDE 26-04			Location: Lancaster	CPI: 673
1/6/20 tap. G	11: Expanded Operational Review. Check one unfused Set rid of double circuit. Check various animal guarding.	Completed	12/30/2011	Reduced outage risk.	
1/13/2	011: Thermographic inspection-OH line.	Completed	3/31/2011	Reduced outage risk.	
1/13/2	011: Line inspection-equipment.	Completed	5/10/2011	Reduced outage risk.	
10/11 <i>/.</i> precec	2012: Circuit outage data analysis - WPC not on Jing qtr. list.	Completed	10/26/2012	Inconclusive. Monitor future performance. The Englesid approximately 1,290 customers across 23 circuit miles. contributor has been the percentage of customers with g interruptions. The circuit breaker experienced two outag year. On 06/21/12, the line needed to be de-energized f and interrupted customers for 67 minutes. On 06/22/12, breaker experienced an improper operation and interrup 12 minutes. On 6/10/12, and again on 9/8/12, approxim customers were interrupted due to equipment failures. a severe T&L storm, 63 customers were interrupted for to a tree from outside the trimming right of way fell on th is due to be trimmed on 2014. This is the first time the f has been on the worst performing circuit list.	e 26-4 line has The largest CPI reater than 3 les in the past or safety reason the circuit ted customers for ately 1,200 On 7/7/12 during 1500 minutes due e line. The circuit Engleside 26-4 line

Rank	Action		Status	Due/Comple	te Result	
25 Circ	cuit ID: 43101 S	OUTH MILTON 31-01			Location: Sunbury	CPI: 668
7/19/2 preced	2012: Circuit outage dat ding qtr. list.	a analysis - WPC not on	Completed	9/24/2012	On May 3, 2012 and June 22, 2012 all of the were out of service due to lightning strikes on caused the 69kV fuses at the SMIL substation been a WPC before. PPL will continue to more performance.	customers on this circuit the SMIL 43101 circuit that n to blow. This circuit has not nitor this circuit's
9/28/2 Helico this ci severa This c	2012: Reconductor line. opter Patrol of the Susqu rcuit revealed that the ca al spots and that there w conductor is scheduled to	On September 18, 2012 a rehanna River crossing section of onductor was "bird caging" in rere also several broken strands. o be replaced in November 2012.	Scheduled for	11/30/2012		
9/28/2 was p The p severa sched mount	2012: Reconductor line, atrolled by Joe Doyle, F atrol revealed that the co al spots along Route 15. luled to be replaced in N ted above the three pha:	On June 29, 2012 this circuit rank Dempsey, and Matt Besz. onductor was "bird caging" in The damaged conductor is ovember. A static wire will be se for lightning protection.	Scheduled for	11/30/2012		
9/28/2 trip du 2012 i	2012: The SMIL 43101 the to the ligthning strikes is scheduled to be replace	12kV circuit breaker that failed to s on May 3, 2012 and June 22, ced in Q1 2013.	Scheduled for	3/31/2013		
26 Circ	ruit ID: 60406 D	ILLERVILLE 04-06			Location: Lancaster	CPI: 655
1/2/20)12: Expanded Operatio	nal Review.	Scheduled for	12/31/2012		
5/16/2	2012: Line inspection-ed	quipment.	Scheduled for	12/31/2012		
5/16/2	2012: Thermographic in:	spection-OH line.	Completed	6/1/2012	Reduced outage risk.	
10/11/ preces	/2012: Circuit outage da ding qtr. list.	ita analysis - WPC not on	Completed	10/26/2012	Inconclusive. Monitor future performance. The approximately 184 customers across 33 circu- contributor to the CPI (Circuit Performance in 9/18/12, the circuit breaker opened and interr a tree that fell into the line. At the time, the fu- usually only supplies 184 customers, was bei adjacent circuit that had over 1800 customers trimmed in 2012. The Dillerville 4-6 line has Performing Circuit list one time over the last 1	e Dillerville 4-6 line has it miles. The largest dex) was SAIDI. On upted 1900 customers due to Dillerville 4-6 line, which ng used to supply an s in it. The circuit was last only been on the Worst 10 years.

Rank Action	Status	Due/Comple	te Result	
27 Circuit ID: 45501 DERRY 55-01			Location: Sunbury	CPI: 638
12/15/2009: Install tie. Revisit feasibility/justification of tie with Watson #4 and resubmit to planning.	Scheduled for	11/30/2012		
8/26/2010: Install tie. A project was placed into the budget to create a tie between Watson 43304 and Deny 45501. This project is scheduled to go in service in 5/2013.	Scheduled for	5/31/2013		
10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012		
28 Circuit ID: 47704 BLOOMSBURG 77-04			Location: Sunbury	CPI: 627
10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1/2011	This circuit was reviewed at the Susquehanna WP The Bloomsburg substation and customers served subjected to major flood conditions. The flooding w setting rainfalls from tropical storm Lee. Efforts to r hindered since some of PPL's equipment was inact and some of our customer's services were under w plan is required at this time. PPL will continue to m performance.	C meeting on 12/1/11. I by this circuit were vas caused by record restore service were cessible due to flooding vater. No short term nonitor this circuit's
12/30/2011: Install tie. SP 15410 Relieve the Bloomsburg 77- 03 Line RIS 11/2014: This project will add a new ROCS device that will allow system operators to remotely transfer customers from the BLOO 47704 to the BLOO 47703 circuit.	Scheduled for	11/30/2014		
29 Circuit ID: 43302 WATSON 33-02			Location: Sunbury	CPI: 615
1/4/2010: Expanded Operational Review.	Completed	12/31/2010	No problems were found. PPL will continue to mon performance.	itor this circuit's
10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	12/1 <i>1</i> 2011	This circuit was reviewed at the Susquehanna WP On April 28, 2011 all of the customers on this circu customers that are normally served by the NECO 4 experienced an outage. This outage was caused b wires and breaking cross arms. Customers from the temporarily transferred to the WATS 43302 since a down the river crossing on July 19, 2010. Until repi NECO 47502 this circuit had increased exposure to not be sectionalized and transferred to the NECO 4 never on the WPC list before. PPL will continue to performance.	C meeting on 12/1/11. it as well as 97 47502 circuit y trees taking down he NECO 47502 were a helicopter crash took airs were made to the o trees and load could 47502. This circuit was monitor this circuit's

Ran	k Action	Status	Due/Comple	te Result	
30	Circuit ID: 25801 SULLIVAN TRAIL 58-01			Location: Wilkes-Barre	CPI: 613
	9/27/2010: Line inspection-equipment. Generated WR 607838 to repair degraded conditions found during field review - transformer cutouts, missing animal guard, degraded crossarms, etc.	Completed	12/8/2010	Reduced outage risk.	
	7/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/30/2011	This feeder had 3 tree outages between May 2011 a causing it to be on the WPC list for a seventh time. customers and 114 line miles on this feeder. Severa identified for analysis by Distribution Planning, which alternatives of building a 3-phase loop, replacing ma remote-controlled and transferring customers to ano the number of customers on this circuit.	nd June 2011, There are over 1,800 I projects have been will compare the nual switches with ther feeder to reduce
	9/29/2011: Circuit outage data analysis. Several projects will be analyzed by Distribution Planning, which will compare the alternatives of building a 3-phase loop, replacing manual switches with remote-controlled and transferring customers to another feeder to reduce the number of customers on this circuit.	Completed	11/30/2011	It was determined that outage duration could be redu installing an additional telemetric recloser and replac recloser and manual air-break switch with remote-co project has been developed to make these circuit rei	uced significantly by sing an existing introlled devices. A inforcements.
	1/4/2012: Improve sectionalizing capability. Install additional telemetric recloser and replace existing recloser and manual air- break switch with remote-controlled devices.	Scheduled for	12/31/2013		
31	Circuit ID: 55507 HERSHEY 55-07			Location: Harrisburg	CPI: 607
	9/27/2010: Install 3 phase OCR(s). Install new 3 phase OCR outside of substation. Field to identify location.	Completed	3/9/2011	Reduced outage risk.	
	1/26/2011: Thermographic inspection-OH line.	Completed	2/28/2011	Inconclusive. Monitor future performance.	
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Inconclusive. Monitor future performance.	
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012		
32	Circuit ID: 16202 POCONO FARMS 62-02			Location: Pocono	CPI: 603
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012		
33	Circuit ID: 23001 SAINT JOHNS 30-01			Location: Central	CPI: 585
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012		

Rani	k Action		Status	Due/Comple	te Result	
34 (Circuit ID: 24402 TINKE	R 44-02			Location: Pocono	CPI: 581
7 F	7/12/2011: Circuit outage data analysis preceding qtr. list.	- WPC not on	Scheduled for	8/31/2011	Inconclusive. Monitor future performance. Th WPC list for several quarters. On April 13, 20 experienced an outage to to a substation pow Crews addressed the cause of the operation a customers, the total outage CMI was 46,624. customers experienced an OCR outage on Ap assessment, a tree was determined to have fai of way and cause the OCR to trip. The outage	is circuit has not been on the 11 498 PPL customers er fuse operation. PPL and restored all affected Approximately 26 oril 28, 2011. Upon crew lien from outside PPL's right a total CMI of 20,835.
1 F	10/11/2012: Circuit outage data analys preceding qtr. list.	is - WPC not on	Scheduled for	11/15/2012		
35 (Circuit ID: 22602 KIMBL	ES 26-02			Location: Pocono	CPI: 563
1	10/15/2010: Improve sectionalizing cap	ability.	Scheduled for	7/31/2012	PPL will be extending a section of single phas and to a portion of the Kimbles 26-2 over to B	e from the Bohemia 20-2 OHE 20-2
1 i	10/15/2010: Circuit outage data analys dentified and line patrol scheduled.	is. Problematic areas	Completed	12/31/2010	Reduced outage risk. Tree problems were ide was completed.	entified and tree trimming
3 N 0 5 1	3/9/2012: Improve sectionalizing capate New Line and Terminal project will relie customers from the Kimbles 26-2 line. customers transfered, this project will al sectionalizing capabilities between the I Fwin Lakes Substation.	vility. The Twin Lakes ve around 200 In addition to the so improve tie and Kimbles 26-2 line and	Scheduled for	5/31/2014		
1 F	10/11/2012: Circuit outage data analys preceding qtr. list.	is - WPC not on	Scheduled for	11/15/2012		
1 1	12/31/2012: Tree trimming. The Kimbl ines is scheduled for tree trimming in 2	es substation circuit 012.	Scheduled for	12/31/2012		
36 (Circuit ID: 28501 FABRI-	KAL 85-01			Location: Central	CPI: 555
4 F	4/11/2012: Circuit outage data analysis preceding qtr. list.	- WPC not on	Completed	5/30/2012	This circuit serves one customer. The outage in the substation that serves the customer and reliability issue with the circuit.	was due to a lightning strike d there is no inherent
1 F	10/11/2012: Circuit outage data analys preceding qtr. list.	is - WPC not on	Scheduled for	11/15/2012		

Ra	nk Action	Status	Due/Comple	te Result	
37	Circuit ID: 47703 BLOOMSBURG 77-03			Location: Sunbury	CPI: 549
	8/26/2010: Install tie. A project was placed into the budget to create a tie between Bloomsburg 47703 and Bloomsburg 47704. This will enhance the reliability of both Bloomsburg circuits by providing additional operating flexibility through use of remotely operated interrupting and switching devices.	Scheduled for	11/30/2014		
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list. This line will be inspected for vegetation encroachment and potential equipment failure risks. Completed 11/11/2010 The Bloomsburg 77-03 circuit was reviewed at Susque 2010 WPC meeting on November 11, 2010. This circuit encroachment and potential equipment failure risks. encroachment and potential equipment failure risks. worst-performer due to the number of customers expoutages. Over the last 4 quarters, the substation breat three times, twice due to off-right-of-way trees contact on the performance of this line in the last 2 quarters, remain a WPC for 2 - 3 more quarters.			at Susquehanna Region's Q3 This circuil is classified as a mers experiencing multiple ation breaker was interrupted es contacting the line. Based quarters, this circuit will likely	
	11/11/2010: Line inspection-equipment.	Completed	5/2/2011	Reduced outage risk. The line inspection re 2 blown lightning arrestors, broken strands of tie, broken insulators and broken guy wires, were completed to fix the problems identified 641020 & WR 641068.	rvealed the following problems: on the primary, 1 broken wire The following Work Requests d by the inspection: WR
	9/16/2011: Raise the control panel for the normally open ROCS device that lies the 47703 to the 47707 circuit. The control panel was under water in the aftermath of Tropical Storm Lee.	Completed	9/30/2011	The control panel for the normally open ROG flood level.	CS device was raised above
38	Circuit ID: 22002 BOHEMIA 20-02			Location: Pocono	CPI: 545
	4/26/2010: Install tie. SP 33608 build tie from Bohemia 20-2 to Twin Lakes 81-2. This will create a tie for 1,150 radial customers. Remotely operated devices will be installed.	Scheduled for	11/30/2012		
	4/21/2011: Install new line and terminal. SP33607 A new line and terminal at Bohemia will relieve the 20-2 line and reduce the customer count from 1,400 to 750.	Scheduled for	11/30/2012		
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012		
39	Circuit ID: 16801 WAGNERS 68-01			Location: Pocono	CPI: 545
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012		

Rai	nk Action	Status	Due/Complete	e Result		
40	Circuit ID: 11405 FARMERSVILLE 14-05			Location: Bethlehem	CPI:	535
	6/26/2012: Load balancing, WO#: 42073589 - Phase swap @ 68562S49566	Scheduled for	11/25/2013			
	6/26/2012: WO#: 42073594 - Install ROCS @ 68207S49508	Scheduled for	12/31/2013			
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11 /15/2 012			
41	Circuit ID: 64904 MILLERSVILLE 49-04			Location: Lancaster	CPI:	521
	1/6/2011: Expanded Operational Review. Install Telemetric OCR at grid block 397S250. ROCs all 5 Abs	Completed	3/10/2011	Reduced outage duration.		
	1/13/2011: Thermographic inspection-OH line.	Completed	3/31/2011	Reduced outage risk.		
	1/13/2011: Line inspection-equipment.	Scheduled for	12/30/2011			
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	10/26/2012	No longer among 5% worst performing circuits. The Millersville 49-4 I has approximately 3000 customers across 45 circuit miles. The large contributor to the CPI (Circuit Performance Index) was SAIDI. The circuit breaker experienced three outages in the past year. On 5/29/12, and again on 7/7/12, the circuit breaker opened and interrupted 3000 customers due to trees from outside the trimming right of way fell into line. On 1/22/12, the circuit breaker opened due to a contact dig-in fm customer doing work near our underground line. The circuit is due to trimmed on 2014. This is the first time this line has been on the work performing circuit list.		line est ircuit d o the rom a o be st
42	Circuit ID: 46701 RENOVO 67-01			Location: Susquehanna	CPI:	513
	11/3/2010: Relocate inaccessible line. Westport Tap Part 1. Rebuild approx 2.0 miles with 1/0 ACSR XLP and static wire. Portions may only need XLP and no static wire. Other portions can be relocated from one side of SR 120 to other side, away from steep bank.	Scheduled for	12/31/2012			
	11/3/2010: Relocate inaccessible line. Westport Tap Part 2. Rebuild approx 1.3 miles with 1/0 ACSR XLP and static wire. Portions may only need XLP and no static wire. Other portions can be relocated from one side of SR 120 to other side, away from steep bank.	Scheduled for	12/31/2013			
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012			

Rank	Action		Status 2	Due/Comple	te Result			
43 Ci	rcuit ID: 10205 A	LLENTOWN 02-05			Location:	Lehigh	CPI:	510
10/1 pred	i1/2012: Circuit outage da eding qtr. list.	ta analysis - WPC not on	Scheduled for	11/15 / 2012				
44 Cir	rcuit ID: 28302 N	EWFOUNDLAND 83-0	2		Location:	Pocono	CPI:	505
10/11/2010: Circuit outage data analysis - WPC not on C preceding qtr. list. 7/19/2012: Circuit outage data analysis - WPC not on Scl preceding qtr. list.		Completed	11/30/2010	September 30, 2012, a tree from outside PPL's right of way cam contact with a section of three phase conductor. This contact res the operation and lockout of a three phase OCR resulting in an o 87 PPL customers. PPL crews responded to the fallen conductor restored all affected customers. The total outage resulted in a Cf 119,015. On the same day, another tree from outside of PPL's rig fell on another section of three phase conductor which caused th phase OCR at 66273N41069 to trip to lockout. PPL addressed th conductor and restored power to all affected customers. The tota CMI was 97,686. In addition to the two OCR outages, approxima 2,907 PPL customers experienced a breaker outage on 7/17/201 outage was assessed and found to be caused by an improper op the 83-2 breaker relay. The total outage CMI was 74,041. The pr relay was analyzed and recoordinated.		I quarters. On I way came in contact resulte ing in an outset conductor an ted in a CMi o of PPL's right caused the th dressed the fr s. The total ou approximately n 7/17/2012. T tproper opera 41. The proble	id in ge for d f of way iree allen itage / fhe tion of em	
		tage data analysis - WPC not on Scheduled for 7/		772472012	This circuit has not been on the WPC list for several quarters. On 2012 approximately 2,800 PPL experieced an outage due to a sub relay malfunction. PPL crews addressed the problem with the relay restored all affected customers. The outage resulted in a total CMI 272,000. On March 3, 2012 the OCR at grid number 66457N41772 open due to a downstream vehicle accident. The outage affected 4 customers and resulted in a CMI of 207,000. A new tie line is curre engineering that will mitigate customer exposure to these outages. field engineers along with PPL's Distribution Planning department of continue to monitor future performance on the line.			ay 4, and f ripped 0 tly in PPL 11
45 Ci	rcuit ID: 25502 M	ADISONVILLE 55-02			Location:	Pocono	CPI:	500
10/1 prec	11/2012: Circuit outage da ceding qtr. list.	ta analy s is - WPC not on	Scheduled for	11/15/2012				
46 Ci	rcuit ID: 28403 H	ARTLAND 84-03			Location:	Central	CPI:	494
10/1 prec	11/2012: Circuit outage da ceding qtr. list.	ta analysis - WPC not on	Scheduled for	11/15/2012				
47 Ci	rcuit ID: 18501 C	ANADENSIS 85-01			Location:	Pocono	CPI:	484
10/1	8/2010: Improve sectiona	lizing capability.	Completed	6/15/2011	Existing air bre	eaks and OCRs will be upgraded to auto	mated device:	S.
10/1 pred	11/2012: Circuit outage da ceding qtr. list.	ta analysis - WPC not on	Scheduled for	11/15/2012				

Ra	nk Action	Status	Due/Comple	te Result		
48	Circuit ID: 27101 GREENFIELD 71-01			Location: Scranton	CPI:	482
	12/1/2010: Tree trimming.	Completed	12/30/2010	Reduced outage risk. This line was completely trimme	d in 2010.	
	12/8/2010: Improve sectionalizing capability. Install equipment to allow remote operation of switches and OCRs	Completed	12/17/2010	Reduced outage duration. All three phase switches an updgraded to allow remote operation.	d OCRs were	
	1/28/2011: Install tie. A tie for 1,350 radial customers is currently being engineered by the field personnel.	Completed	6/30/2011	The tie line was engineered. Construction postponed due to budget constraints.		
	4/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list. In response to these major outages, a project is currently being reviewed by PPL which would build a tie line with the East Carbondale 12-6 line.	Completed	5/30/2012	Customers on the Greenfield 71-1 12 kV line experienced several circuit breaker and OCR outages. During the July 7th PUC-recordable storm, the substation breaker opened due to equipment failure. PPL crews responded promptly and restored all 2000 customers in 50 minutes which resulted in a CMI of 98,150. On June 22nd approximately 1400 customers on the 71-1 line experienced an outage lasting approximately hours with 182,033 CMI. In response to these major outages, a project i currently being reviewed by PPL which would build a tie line with the Eas Carbondale 12-6 line. Field engineers, along with Distribution Planning		
	7/24/2012: Install tie. A tie line for 1,350 radial customers was engineered by field personnel. Project was not constructed due to budget constraints. Distribution Planning will review the justification and place the project into the ISR budget.	Scheduled for	12/31/2013	The Greenfield new line and terminal is expected to rece exposure to outages. The projects required in service of November 31, 2011. PPL's Distribution Planning depar future circuit performance and determine if a tie line is reduce customer outage exposure in the future.	and terminal is expected to reduce customer e projects required in service date is set to be L's Distribution Planning department will monitor e and determine if a tie line is required to further exposure in the future.	
49	Circuit ID: 45302 WEST BERWICK 53-02			Location: Sunbury	CPI:	479
	3/23/2005: Monitor future performance.	Completed	12/31/2010	Scheduled tree trimming and other in-progress work is improve this circuit's performance.	expected to	
	7/19/2007: Install 1 phase OCR(s). WR 434454	Scheduled for	2/4/2013			
	7/19/2007: Install fuse(s). Ebenezer Church Tap WR 434441.	Scheduled for	11/25/2012	Reduced customer count affected by each outage.		
	1/11/2010: Expanded Operational Review.	Completed	12/31/2010	Inconclusive. Monitor future performance.		
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012			

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Ra	nk Action	Status	Due/Complete	e Result	
50	Circuit ID: 43401 BENTON 34-01			Location: Sunbury	CPI: 471
	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	5/31/2013		
	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 interruptions accounted for more than 60% The longest outage was due to a tree taking circuit breaker to open. The other two break equipment failures.	SAIDI. Three circuit breaker of the customer minutes lost. down the lines causing the er interruptions were due to
51	Circuit ID: 29402 BELTZVILLE 94-02			Location: Central	CPI: 469
	10/11/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Scheduled for	11/15/2012		

Rank	Action	Status	Due/Comple	te Result	
52 C	Circuit ID: 57403 SPANGLER 74-03			Location: West Shore	CPI: 469
10 au cir	0/1/2010: Install automation devices. Add several utomation devices to tie points along the Spangler 74-3 rcuit. This will improve restoration times.	Completed	6/1 /2 011	Reduced outage duration.	
10 ph tra 3 :	0/1/2010: Reconductor line. Reconductor part of the three hase line along Fishing Creek Road. This will improve the ansfer capabilities of a tie between the Spangler 74-1 and 74 lines.	Scheduled for	12/31/2013		
1/	26/2011: Thermographic inspection-OH line.	Completed	2/28/2011	Inconclusive. Monitor future performance.	
1/	26/2011: Expanded Operational Review.	Completed	3/28/2011	Inconclusive. Monitor future performance.	
10 pr	0/12/2011: Circuit outage data analysis - WPC not on receding qtr. list.	Completed	11/21/2011	The Spangler 74-03 line is a long radial distribution edge of PPL territory. The feeder has approximal across 58 circuit miles. The largest CPI contribution percentage of customers with greater than 3 outs experienced three interruptions in the past year. two of the interruptions, and the CB held for test Both outages occurred during storm weather, so limb may have made extended contact. The third caused by an equipment failure on a downstream.	on circuit at the southern tely 1,500 customers tor has been the ages. The circuit breaker Nothing was found for when closed back in. it is suspected that a tree d breaker outage was 1 OCR.
				In addition to the three breaker outages, an OCR also experienced three interruptions in the past y a tree from outside the trimming right of way, a v nothing found. A failed circuit board has since bo	earving 1,050 customers ear. The causes include ehicle pole hit, and een replaced in the OCR.
11 Ci sc	1/21/2011: Relocate a normally open point on a single phas EMI tap. This will transfer approximately 40 customers to a ource closer to the substation.	e Completed	4/2/2012	Reduced outage risk.	
11 pa	1/21/2011: Tree trimming. Trim the Spangler 74-03 line as art of its four year vegetation management cycle.	Completed	5/1/2012	Reduced outage risk.	
11 ne Sp to	1/21/2011: Install remote operator controlled switch. Install a ew normally open remote operator controlled switch on the pangler 74-3 in order to transfer approximately 100 custome a more reliable source at Mount Allen Substation.	a Scheduled for rs	12/31/2012		
3/ cc	/12/2012: Load balancing. Extend second phase to alleviate old load pickup & operator response.	e Scheduled for	12/31/2012		
رد ar	/14/2012: Thermographic inspection-OH line. Inspected all and 3 phase primary lines with infrared camera.	2 Completed	3/14/2012	Inconclusive. Monitor future performance.	
5/ te Fi	/22/2012: Install 3 phase OCR(s). Install a new three phase elemetric recloser to protect a heavily wooded section along ishing Creek Road.	Scheduled for	12/31/2012		
7/	/16/2012: Expanded Operational Review.	Scheduled for	12/31/2012		
10 O	0/4/2012: Investigate fusing scheme near the intersection of Id Quaker Rd and Hick Hill road for improvements.	f Scheduled for	12/31/2012		

Rai	nk Action	Status	Due/Comple	te Result	
53	Circuit ID: 14801 TREICHLERS 48-01			Location: Lehigh	CPI: 467
	7/19/2012: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2012	Determined that this circuit lacks 3 phase protect sectionalizing. Circuit Breaker lockout zone is too reduce customers affected by each outage.	ive devices and large. Created WO's to
	10/9/2012: Install 3 phase OCR(s). Will install 3-phase OCRs at grid locations 60515S52286 and 60859S52757. WRs 12033320 and 12033321.	Scheduled for	4/30/2013		
	10/9/2012: Line inspection-equipment. Will perform line walkdown to identify possible trouble spots for trimming and potential projects.	Scheduled for	12/31/2012		
	10/10/2012: Line inspection-equipment. Will perform line walkdown to identify possible trouble spots for trimming and potential projects.	Scheduled for	12/28/2012		
54	Circuit ID: 12301 LANARK 23-01			Location: Lehigh	CPI: 467
	1/9/2010: Tree trimmed circuit.	Completed	12/9/2010	Reduced outage risk.	
	6/29/2011: Monitor future performance.	Completed	6/29/2011	 Intelligent switching scheme has been turned off and will be removed entirely to be replaced with traditional recloser controls. Monitor future performance for improvement. Customers with greather than 3 Outages was the largest contributor to poor CPI. Trees falling from outside the right of way, conductor failure misoperation of SISRS devices caused a large number of outages as as long rostorations. 	
	10/12/2011: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	3/31/2012		
	1/9/2012: Replacing old circuit automation controls. Improve fault location, restoration time, and communication with devices	Scheduled for	12/9/2014		
	8/21/2012: Install tie. Installing 3 phase tie from COOP 9-03 to LANA 23-01. Will provide restoration capabilities in many outage situations. WR# 590257	Scheduled for	5/3/2013		
	9/6/2012: Line inspection-equipment. Performed line walkdown to identify possible spots for trimming and potential projects.	Completed	9/30/2012	Reduced outage risk. Generated 1 WR	
55	Circuit ID: 44702 MUNCY 47-02			Location: Susquehanna	CPI: 456
	10/11/2012: Circuit outage data analysis - WPC not on preceding gtr. list.	Scheduled for	11/15/2012		

Rank	Action		Status	Due/Comple	te Result		
56 C	ircuit ID: 45002	LIMESTONE 50-02			Location: Sunbury	CPI: 4	454
1/5 In s 20	5/2011: Thermographic spection of 2 and 3 phas	inspection-OH line. Thermovision e sections to be completed early	Completed	2/7 <i>1</i> 2011	Reduced outage risk. Completed 2/7/2011 - All ne completed.	cesary repairs	
1/5 20	5/2011: Expanded Oper 011	ational Review. EOR Planned for	Completed	12/31/2011	Reduced outage risk. A defective stem connector Thermographic Inspection. Repairs were made on 641816.	was identified during 4/7/11 under WR	l
1/1 pro	11/2012: Circuit outage eceding qtr. list.	data analysis - WPC not on	Completed	3/19/2012	This circuit was reviewed at the Susquehanna WP On March 10, 2011 and December 28, 2011 the ci lockout due to failed insulators. The failed insulato circuit was not on the WPC list since 2004. PPL w this circuit's performance.	C meeting on 3/19/12 rcuit breaker tripped l rs were replaced. Thi ill continue to monitor	2. to is r
10 pre)/11/2012: Circuit outage eceding qtr. list.	e data analysis - WPC not on	Scheduled for	11/15/2012			
57 C	ircuit ID: 43102	SOUTH MILTON 31-02			Location: Sunbury	CPI: 4	148
1/0 ins	6/2011: Thermographic spection of 2 and 3 phas	inspection-OH line. Thermovision e completed early 2010.	Completed	10/30/2010	Reduced outage risk. Minor maintenance repairs transformers.	completed on three	
58 C	Sircuit ID: 62602	ENGLESIDE 26-02			Location: Lancaster	CPI: 4	448
5/ ins lin	19/2008: Perform line m spection. LMI Inspection e - 4.4 miles total	aintenance identified by line I performed on 2 phase and 3 phase	Completed	12/31/2011	Reduced outage risk.		
1/0	6/2011: Expanded Oper	ational Review. Squirrel Guard.	Completed	12/30/2011	Reduced outage risk.		
1/	13/2011: Line inspection	n-equipment.	Completed	5/10/2011	Reduced outage risk.		
1/*	13/2011: Thermographic	c inspection-OH line.	Completed	3/31/2011	Reduced outage risk.		
10 pr	0/11/2012: Circuit outage eceding qtr. list.	ə data analysis - WPC not on	Completed	10/26/2012	inconclusive. Monitor future performance. The En approximately 510 customers across 10 circuit mil contributor to the CPI (Circuit Performance Index) breaker experienced two outages in the past year. needed to be de-energized for safety reason and i 67 minutes. On 06/22/12, the circuit breaker expe operation and interrupted customers for 13 minute severe T&L storm, an OCR opened interrupting 9 minutes. Also on 7/7/12, a fuse opened interrupting 727 minutes. The circuit is due to be trimmed on time this line has been on the worst performing circuits.	gleside 26-2 line has es. The largest was SAIDI. The circu On 06/21/12, the lin nterrupted customers rienced an improper es. On 7/7/12, during 6 customer for 2271 ing 107 customers for 2014. This is the first	uit e ; for a

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, Tree Related, and Animals), which are based on the percent of cases of trouble, are highlighted in the table. Service interruption definitions are provided in Appendix B. PPL Electric's maintenance programs focus on corrective actions to address controllable service interruptions (e.g., trees and equipment failure).

Cause Description	Trouble Cases ⁷	Percent of Trouble Cases	Customer Interruptions ⁸	Percent of Customer Interruptions	Customer Minutes	Percent of Customer Minutes
Animals	3,020	18.14%	56,862	3.95%	4,498,515	2.09%
Contact/Dig-In	156	0.94%	25,659	1.78%	2,122,538	0.99%
Directed by Non-PPL	179	1.08%	6,959	0.48%	602,707	0.28%
Authority						
Equipment Failures	5,315	31.93%	464,197	32.28%	55,966,186	25.99%
Improper Design	1	0.01%	1,375	0.10%	205,329	0.10%
Improper Installation	1	0.01%	1	0.00%	121	0.00%
Improper Operation	25	0.15%	22,033	1.53%	848,279	0.39%
Nothing Found	1,428	8.58%	105,638	7.35%	8,686,088	4.03%
Other-Controllable	88	0.53%	15,885	1.10%	490,345	0.23%
Other-Non Control	410	2.46%	90,304	6.28%	7,859,022	3.65%
Other-Public	65	0.39%	8,578	0.60%	572,767	0.27%
Tree Related	5,230	31.42%	499,404	34.73%	117,204,270	54.42%
Vehicles	727	4.37%	141,117	9.81%	16,316,873	7.58%
Total	16,645	100.00%	1,438,012	100.00%	215,373,040	100.00%

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

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

Analysis of causes contributing to the majority of service interruptions:

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

Tree 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. For trees within the right-of-way, PPL Electric is currently analyzing and re-evaluating its trimming strategy.

Animals: Animals accounted for about 18.1% of PPL Electric's cases of trouble. Although this represents a significant number of cases, the effect on SAIFI and CAIDI is small because approximately 80% of the number of cases of trouble was associated with individual distribution transformers. However, when animal contacts affect substation equipment, the effect may be widespread and potentially can interrupt thousands of customers on multiple circuits. In addition to guarding new distribution transformers and substations, in 2009, PPL Electric initiated distribution and substation animal guarding programs to focus systematically on protecting existing facilities most at risk of incurring animal-caused interruptions.

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

Equipment Failure: Equipment failure is one of the largest single contributors to the number of cases of trouble, customer interruptions and customer minutes. However, approximately 43% of the cases of trouble, 44% of the customer interruptions and 52% 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		3rd Quarter		Year-to-date	
		Budget	Actual	Budget	Actual
Transmission					
Transmission C-tag poles (# of poles)	240	70	52	172	155
Transmission arm replacements (# of sets)	50	20	31	56	53
Transmission air break switch inspections (# of switches)	64	0	0	26	10
Transmission lightning arrester installations (# of sets)	0	0	0	0	1
Transmission pole inspections (# of poles)	0	0	0	0	0
Transmission tree side trim-Bulk Power (linear feet)	N/A				
Transmission herbicide-Bulk Power (# of acres)	N/A				
Transmission reclearing (# of miles) BES Only	637.34	21.34	6.95	637.34	636.49
Transmission reclearing (# of miles) 69 kV	865.95	422.28	369.07	538.91	519.04
Transmission reclearing (# of miles) 138 kV	296.60	144.76	190.81	166.39	210.11
Transmission danger tree removals-Bulk Power (# of trees)	N/A			1	
Substation					
Substation batteries (# of activities)	885	127	109	727	719
Circuit breakers (# of activities)	1495	350	326	943	874
Substation inspections (# of activities)	5227	1313	1328	4002	4039
Transformer maintenance (# of activities)		422	412	1508	1543
Distribution		 .	ĺ		
Distribution C-tag poles replaced (# of poles)	2,126	522	313	1,817	1,591
C-truss distribution poles (# of poles)	6,092	1,242	1,504	4,035	4,035
Capacitor (MVAR added)	80	16	21	77	74
OCR replacements (# of)	644	117	103	548	516
Distribution pole inspections (# of poles)	90,000	22,503	15,158	67,518	72,184
Distribution line inspections (# of miles)	5,040	1,509	2,773	3,531	5,274
Group re-lamping (# of lamps)	26,869	9,869	9,631	24,869	25,262
Test sections of underground distribution cable	493	147	164	393	337
Distribution tree trimming (# of miles)	7087.50	2170.63	1511.68	5434.74	5207.31
Distribution herbicide (# of acres)	N/A				
Distribution >18" removals within R/W (# of trees)	N/A	ļ	ļ		
Distribution hazard tree removals outside R/W (# of trees)	N/A				
LTN manhole inspections (# of)	132	36	23	128	116
LTN vault inspections (# of)	774	243	227	609	662
LTN network protector overhauls (# of)	71	15	7	43	30
LTN reverse power trip testing (# of)	141	56	32	127	85

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.)

	3rd Q	uarter	Year-t	o-date
Activity	Budget (\$000)	Actual (\$000)	Budget (\$000)	Actual (\$000)
Provide Electric Service	2,472	2,470	6,816	7,873
Vegetation Management	10,946	10,837	32,767	33,515
Customer Response	19,112	23,728	47,770	51,328
Reliability & Maintenance	18,176	16,460	51,598	48,610
System Upgrade	190	158	905	767
Customer Services/Accounts	36,145	35,489	95,152	94,902
Others	15,694	13,921	47,287	45,151
Total O&M Expenses	102,735	103,063	282,295	282,146

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).

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 Q	uarter	Year-to-date	
	Budget (\$000)	Actual (\$000)	Budget (\$000)	Actual (\$000)
New Service/Revenue	19,332	19,587	55,133	58,195
System Upgrade	66,493	68,455	184,032	155,120
Reliability &	48,790	55,844	154,939	147,010
Customer Response	3,138	5,951	7,042	6,942
Other	7,327	4,675	18,068	12,793
Total	145,080	154,512	419,214	380,060

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

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

Transmission and Distribution	(T&D)
Lineman Leader	75
Journeyman Lineman	185
Journeyman Lineman-Traince	116
Helper	23
Groundhand	4
Troubleman	52
T&D Total	455
Electrical	
Elect Leaders-UG	6
Elect Leaders-Net	10
Elect Leaders-Sub	22
Journeyman Elect-UG	28
Journeyman Elect-Net	13
Journeyman Elect-Sub	61
Journeyman Elect Trainee-UG	1
Journeyman Elect Traince-Net	15
Journeyman Elect Trainee	21
Helper	12
Laborer-Network	0
Laborer-Substation	0
Electrical Total	189
Overall Total	644

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.

PPL Electric Utilities Corporation Service Interruption Definitions

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

10 – Improper Design	Controllable	• 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 ⁹	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.

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

Appendix **B**

51 – Contact/Dig-in	Public	 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 Electric Problem – Other	Non-PPL Electric	• Where no PPL Electric or customer facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
78 – Non-PPL Electric Problem – Customer Facility	Non-PPL Electric	 Where no PPL Electric facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
80 – Scheduled Outage ¹⁰	Controllable	• Interruptions under the control of a PPL Electric switchman or direction of a PPL Electric System Operator for the purpose of performing <u>scheduled</u> maintenance, repairs and capacity replacements for the safety of personnel and the protection of equipment.
		 Includes requests from customers for interruption of PPL Electric facilities.

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

Appendix B

85 – Directed by Non- PPL Electric 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-	• When no cause for the interruption can be found.
	Controllable	• 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.

<u>Appendix B</u>

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.
	1 1 1	• 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-Traince	• 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.

Appendix C

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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 - Traince - 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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