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FEDERAL EXPRESS

May 1, 2012

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

RECEIVED

MAY 01 2012

PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

**Re: PPL Electric Utilities Corporation
2011 Annual Reliability Report**

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 2012 Annual Reliability Report to the Pennsylvania Public Utility Commission. This report is being filed pursuant to the Commission's regulations at 52 Pa. Code § 57.191, et seq.

As required by the Commission's regulations, copies of the enclosed report have been served upon the Office of Consumer Advocate ("OCA") and the Office of Small Business Advocate ("OSBA").

Pursuant to 52 Pa. Code § 1.11, the enclosed document is to be deemed filed on May 1, 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.

Rosemary Chiavetta

- 2 -

May 1, 2012

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

Very truly yours,

A handwritten signature in black ink that reads "Paul E. Russell". The signature is written in a cursive, flowing style.

Paul E. Russell

Enclosures

cc: Irwin A. Popowsky, Esquire
Steven C. Gray, Esquire
Mr. Paul T. Diskin
Mr. Darren Gill

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PPL Electric Utilities

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

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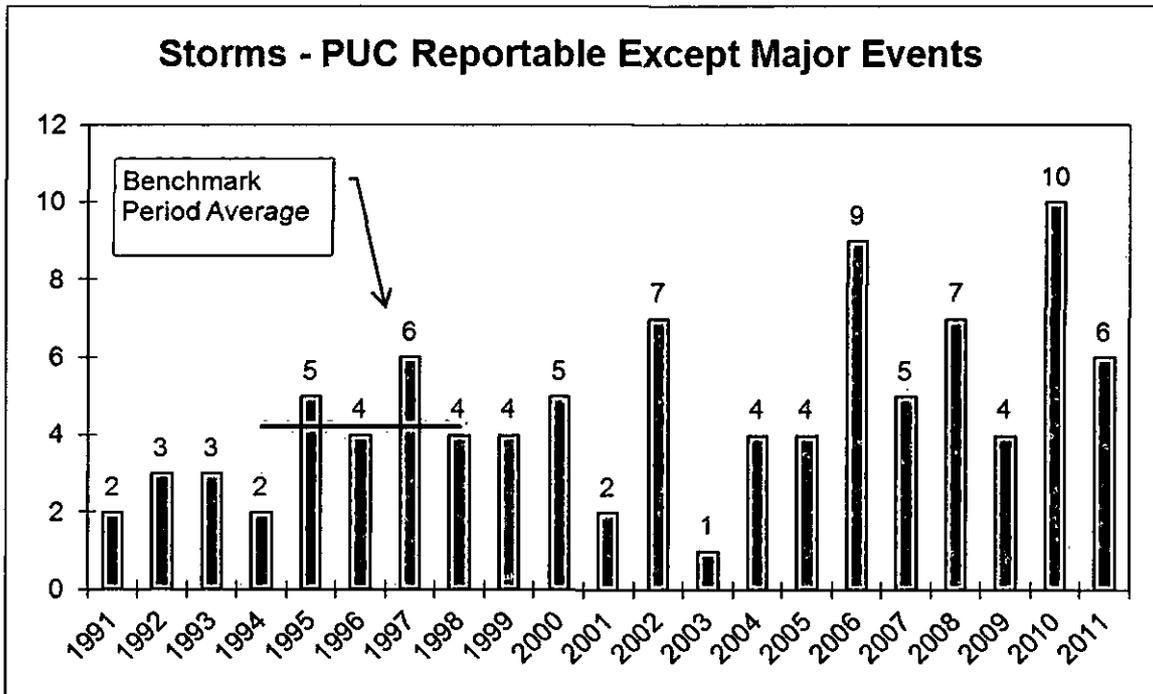
May 1, 2012

1) *An overall current assessment of the state of the system reliability in the EDC's service territory including a discussion of the EDC's current programs and procedures for providing reliable electric service.*

In 2011, SAIDI and CAIDI values increased versus the prior year, but remained below their 12-month standards for PPL Electric Utilities Corporation ("PPL Electric"). SAIFI decreased versus 2010 and also remains below the 12-month standard.

The three-year rolling average for SAIFI, CAIDI and SAIDI remained below the three-year standard, as well as the rolling 12-month standard. Additionally, the three-year rolling average for SAIDI and CAIDI remained below the benchmark standard, while the three-year SAIFI was 9% over the benchmark standard.

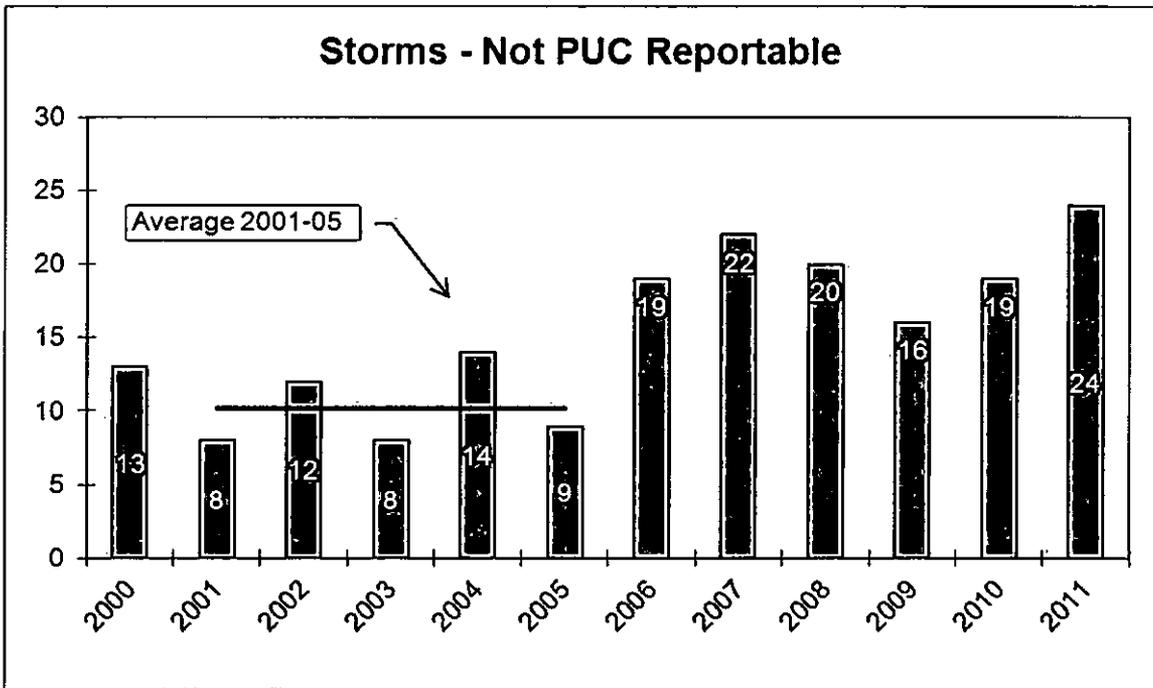
All metrics were negatively impacted due to a substantial increase in total storm activity as compared to the three previous years. Specifically, PPL Electric experienced an average of 25.3 PUC-reportable and non-reportable storms per year during the three years from 2008 through 2010. The number of storms jumped to 30 in 2011, a 19% increase.



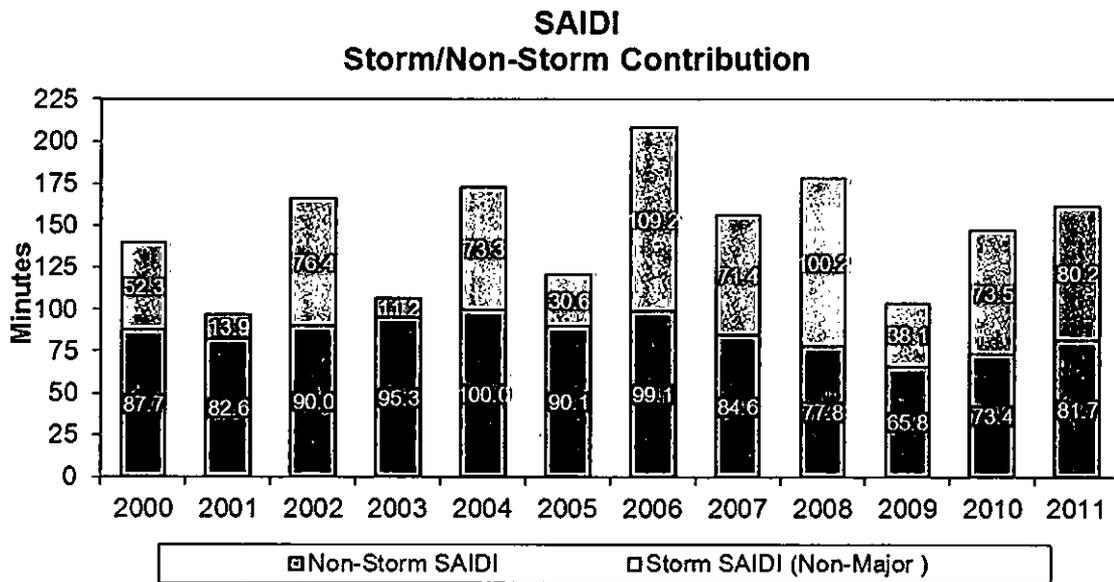
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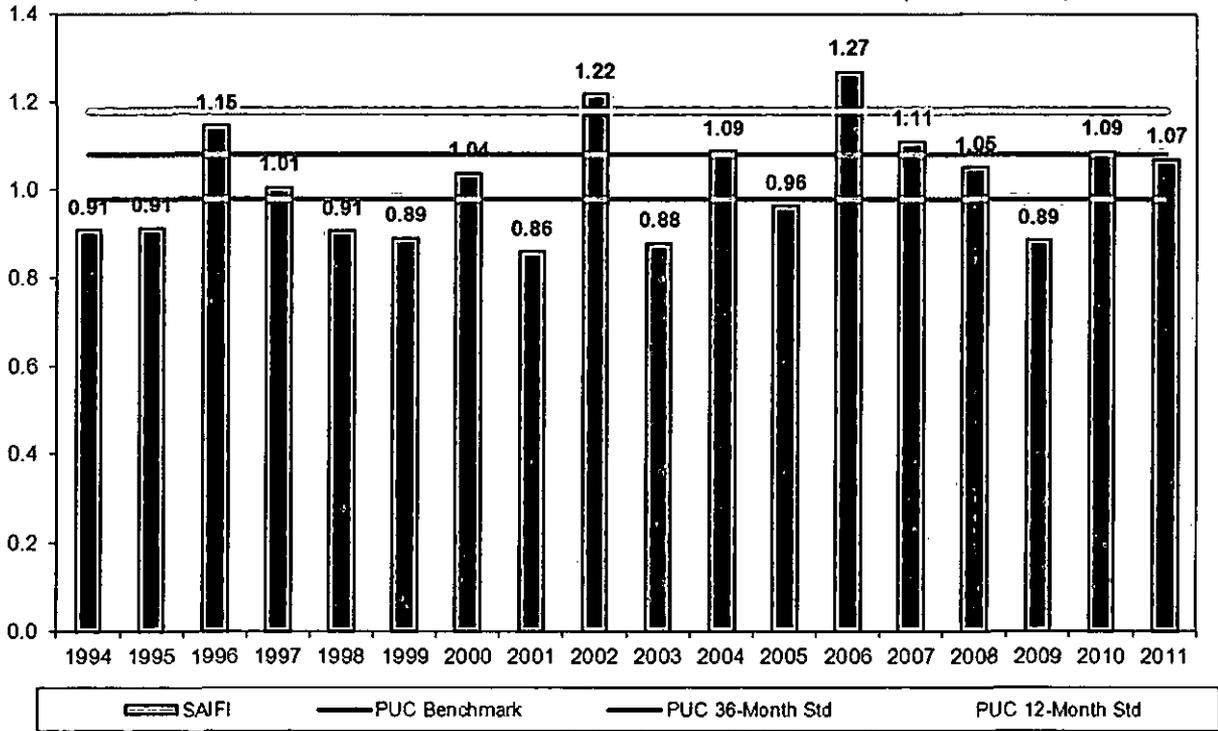


In a year with an average number of storms, customer service interruptions during storms typically contribute about one-third to the total SAIDI value. In 2011, storm interruptions contributed 49% of the SAIDI value.

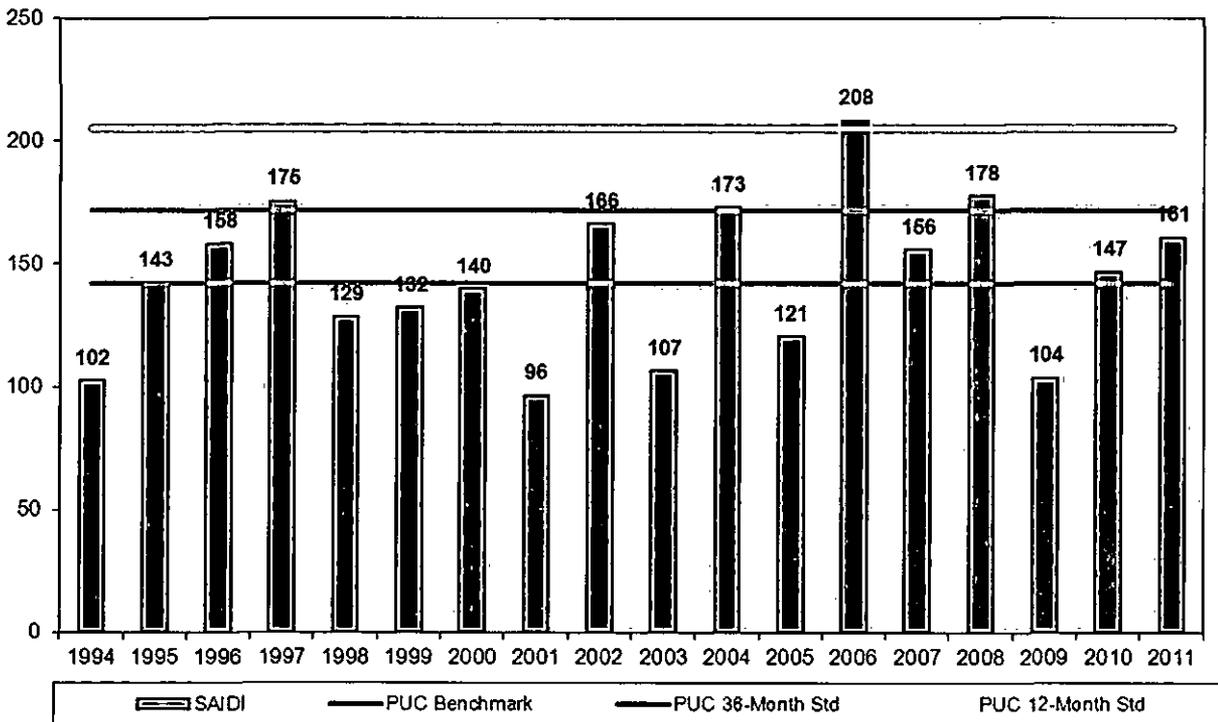


With the exception of the extraordinarily active storm years, SAIFI, CAIDI and SAIDI generally have been maintained at benchmark levels since the benchmark years of 1994 through 1998, as evidenced by the following three charts:

System SAIFI vs. PUC Standards & Benchmark (1994-2011)



System SAIDI vs. PUC Standards & Benchmark (1994-2011)



PPL Electric is committed to maintaining acceptable levels of electric delivery service to its customers. Maintenance programs are one of the key elements that focus on maintaining system and circuit reliability, equipment performance and interruption prevention. The scope of these maintenance programs, procedures and activities covers all areas of the electrical infrastructure.

These programs include:

Transmission

Transmission inspection programs include aerial and foot patrols. These patrols focus on comprehensive inspections, routine inspections and identification of emergency work. These patrols include inspection of all equipment, including poles, arms, line switches, interrupters, arresters, grounding, guying, anchors and other key transmission components.

Substation

Substation maintenance programs include inspections and overhauls of equipment, such as breakers, disconnects, power cables, and security equipment. Some equipment is maintained on a time basis; other equipment is condition-monitored. These two methods help ensure that maintenance work is performed in a timely manner. Besides time and condition-based maintenance, thermo-graphic inspections help ensure that substation equipment does not operate at elevated temperature levels for an extended period of time, which could lead to a catastrophic failure.

Distribution

Distribution encompasses many maintenance aspects similar to transmission and substations, and also includes load surveys that help engineers determine peak load requirements, circuit analyses that help engineers identify lines requiring maintenance work, voltage relief, or other capital improvements. Overhead line inspections identify the weak links in the system so that damaged or deteriorated equipment can be repaired or replaced. In addition, distribution maintenance includes inspections of poles, voltage regulators, line switches, capacitors, and other key distribution equipment. PPL Electric also tests underground cable for integrity to determine if the cable needs to be replaced, repaired or cured to prevent future failures.

Vegetation

The vegetation on PPL Electric's transmission and distribution rights-of-way (ROW) is maintained utilizing a combination of several management techniques. These include tree pruning, tree removal, re-clearing and herbicide application. Lines are field-surveyed on a regular basis. The work is scheduled/budgeted based on the conditions observed and past performance.

Each of these programs is more fully described in Appendices A through D.

- 2) *A description of each major event that occurred during the year being reported on, 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.*

May 26 Thunderstorm

A severe thunderstorm affected PPL Electric's service area beginning during the early evening of Thursday, May 26, 2011, and continued into the early morning hours of Friday, May 27, 2011. The severe storm event consisted of heavy wind gusts up to 58 mph, heavy rain, thunder, lightning, and three tornadoes with wind speeds between 90-110 mph. PPL Electric's service territory experienced a total of 1,341 cases of trouble resulting in 182,478 customer service interruptions. A total of 97,325 customers experienced a service interruption lasting longer than six hours; 62,831 customers were without service for more than 12 hours; and 31,101 customers were without service for 24 hours or longer. There were three permanent 69 kV line failures, one as a result of trees and tree branches contacting lines, and two were a result of broken poles. In addition, numerous 12 kV line outages occurred. The last customers were returned to service at 9:00 PM on Tuesday, May 31, 2011.

Hurricane Irene

On the evening of Saturday, August 27, 2011, PPL Electric'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.

PPL Electric's service 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.

Halloween Snowstorm

During the morning of Saturday, October 29, 2011, PPL Electric's 29-county service area began to feel the effects of an unusual fall nor'easter. Heavy, wet snow began falling on Saturday, October 29, 2011, and continued until the early evening. In the southern portions of the PPL Electric service area, snowfall of up to 13 inches was reported by the National Weather Service. The heavy, wet snow accumulated on trees and their leaves, resulting in significant vegetation damage. Large trees and branches from outside PPL Electric's rights-

of-way made contact with transmission and distribution facilities resulting in many downed conductors. Restoration efforts were often hampered by the need for tree removal.

PPL Electric's entire service territory experienced sustained customer service interruptions. The territory experienced a total of 2,882 cases of trouble resulting in 388,318 customer service interruptions. The first case of trouble was reported on October 29, 2011, at approximately 10:00 AM. A total of 226,945 customers experienced a service interruption lasting longer than six hours; 176,652 customers were without service for more than 12 hours; 131,493 customers were without service for 24 hours or longer. The last customers were returned to service at 12:10 PM on November 5, 2011. This event is the third most damaging storm event to impact the PPL Electric service territory since 1991

Actions Underway

To minimize the impact of similar future events, PPL Electric is taking the following steps:

PPL Electric updated and revised 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 have been made to help ensure more accurate service outage data and more efficient processing of service 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 were completed in November 2011.
- The OMS database was tuned to speed up overall processing and user interface.
- OMS system patches were applied to resolve OMS model corruption issues.

PPL Electric has several communication improvement initiatives either completed or in progress to increase the effectiveness of its IVR system. The improvements include:

- Modifications to the service outage reporting path in the IVR system were completed to increase call handling capability.
- The capability to "suppress" (not provide) ERTs at the beginning of major storm outage events was completed. This will accomplish two objectives. First, customers will not receive ERTs during in the initial stages of large storm outage events when there is a very low degree of accuracy. Second, this capability will significantly reduce the processing burden on OMS and will allow the system to more efficiently perform its basic functions of service outage reporting and analysis.
- High-volume outbound calling capability was instituted to provide service outage update messages to those customers who report their service outage via the IVR system. This capability will be of particular value to those calling while the ERT is suppressed.
- Capacity from a high-volume IVR firm is being leased which will reduce the probability of a customer receiving a busy signal.
- 92 additional AT&T lines were installed, bringing the total to 506 lines, to maximize the current telephony platform capacity.
- An initiative has been launched to improve ERT accuracy by developing an enhanced damage assessment process that will enable the Company to more quickly obtain and more accurately interpret damage assessment data.
- PPL Electric has added self-service offerings to include smart telephone applications for both service outage reporting and ERT communications to further reduce in-bound telephone calls.

- 3) *A table showing the actual values of each of the reliability indices (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the EDC's service territory for each of the preceding 3 calendar years. 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 number of customer momentary interruptions shall also be reported.*

<i>Year</i>	2009	2010	2011¹	3 Yr. Avg.
SAIFI (Benchmark = 0.98; Rolling 12-month Std. = 1.18; Rolling 3-yr. Std. = 1.08)	0.885	1.087	1.071	1.0143
CAIDI (Benchmark = 145; Rolling 12-month Std. = 174; Rolling 3-yr. Std. = 160)	117	135	151.14	134.38
SAIDI (Benchmark = 142; Rolling 12-month Std. = 205; Rolling 3-yr. Std. = 172)	104	147	161.95	137.65
MAIFI²	4.994	4.960	5.033	4.996
Customers Served³	1,384,072	1,388,192	1,389,884	1,387,383
Number of Sustained Customer Interruptions (Trouble Cases)	17,470	20,081	18,414	18,651
Number of Customers Affected⁴	1,225,421	1,508,319	1,489,151	1,407,648
Customer Minutes of Interruptions	143,351,898	203,963,698	225,097,160	190,801,164
Number of Customer Momentary Interruptions	6,912,711	6,510,312	6,994,790	6,805,938

¹ Any slight variations from data provided in the 2011 fourth quarter report are the result of error corrections.

² MAIFI data are obtained at the substation breaker and do not include momentaries 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.

A breakdown and analysis of outage causes during the year being reported on, 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 table shows a breakdown of service outage causes for 2010.⁵ The top three causes (Equipment Failure, Trees - Not Trimming Related, and Animals), based on percent of cases, are highlighted in the table. Service interruption definitions are provided in Appendix E. PPL Electric has maintenance programs to address controllable service outages. Those programs are detailed in Appendices A through D.

Cause Description	Trouble Cases ⁶	Percent of Trouble Cases	Customer Interruptions ⁷	Percent of Customer Interruptions	Customer Minutes	Percent of Customer Minutes
Animals	2,915	15.83%	50,648	3.40%	5,078,343	2.26%
Contact/Dig-In	159	0.86%	17,219	1.16%	1,169,890	0.52%
Directed by Non-PPL Authority	235	1.28%	9,126	0.61%	3,834,645	1.70%
Equipment Failures	6,189	33.61%	499,538	33.55%	61,194,786	27.19%
Improper Design	2	0.01%	1,580	0.11%	44,438	0.02%
Improper Installation	3	0.02%	2,056	0.14%	362,374	0.16%
Improper Operation	3	0.02%	1,646	0.11%	124,933	0.06%
Nothing Found	1,558	8.46%	164,166	11.02%	10,769,409	4.78%
Other-Controllable	107	0.58%	23,718	1.59%	6,869,579	3.05%
Other-Non Control (Explain)	499	2.71%	36,904	2.48%	8,244,261	3.66%
Other-Public	84	0.46%	20,076	1.35%	2,550,727	1.13%
Trees-Not Trimming Related	5,066	27.51%	448,489	30.12%	92,789,585	41.22%
Trees-Trimming Related	824	4.47%	51,214	3.44%	13,919,693	6.18%
Vehicles	770	4.18%	162,771	10.93%	18,144,497	8.06%
Total	18,414	100.00%	1,489,151	100.00%	225,097,160	100.00%

⁵ Any slight variations from data provided in the 2011 fourth quarter report are the result of error corrections.

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 increased level of both reportable and non-reportable storms during 2010 as compared to the previous three years.

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 PPL Electric's northern territory and four years for all circuits in PPL Electric's southern territory. 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. However, these outages provide an indication of the level of storm activity because they are predominantly weather-related. During storm conditions these outages typically are responsible for over 50% of the cases of trouble and 70% of customer minutes lost.

Animals: Animals accounted for about 16% of PPL Electric's cases of trouble. Although this represents a significant number of cases, the effect on SAIFI and CAIDI is small because nearly 80% of the number of cases of trouble is 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 systematically focus on protecting existing facilities most at risk of incurring animal-caused interruptions.

Vehicles: Although vehicles caused a small percentage of the number of cases of trouble, they accounted for a large percentage of customer service interruptions and customer minutes, because main distribution lines generally are located along major thoroughfares with higher traffic densities. In addition, vehicle-related cases of trouble 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 roads. 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 service interruptions and customer minutes. However, approximately 50% of the cases of trouble, 54% of the customer service 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 service 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, implementation of 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.

(5) A list of the major remedial efforts taken to date and planned for circuits that have been on the worst performing 5% of circuits list for a year or more.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
8	Circuit ID: 47703 BLOOMSBURG 77-03			Location: Sunbury
				CPI: 1116
	8/26/2010: Install tie. A project was placed into the budget to create a tie between Bloomsburg 47703 and Bloomsburg 47704. This will enhance the reliability of both Bloomsburg circuits by providing additional operating flexibility through use of remotely operated interrupting and switching devices.	Scheduled for	11/30/2014	
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list. This line will be inspected for vegetation encroachment and potential equipment failure risks.	Completed	11/11/2010	The Bloomsburg 77-03 circuit was reviewed at Susquehanna Region's Q3 2010 WPC meeting on November 11, 2010. This circuit is classified as a worst-performer due to the number of customers experiencing multiple outages. Over the last 4 quarters, the substation breaker was interrupted three times, twice due to off-right-of-way trees contacting the line. Based on the performance of this line in the last 2 quarters, this circuit will likely remain a WPC for 2 - 3 more quarters.
	11/11/2010: Line inspection-equipment.	Completed	5/2/2011	Reduced outage risk. The line inspection revealed the following problems: 2 Blown Lightning Arrestors, Broken Strands on the Primary, 1 Broken Wire Tie, Broken Insulators and Broken Guy Wires.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
13	Circuit ID: 54701 NEW BLOOMFIELD 47-01			Location: West Shore
				CPI: 952
	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 misoperation of recloser. Check settings and swap controls.	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.	Completed	3/15/2011	Inconclusive. Monitor future performance.
	4/20/2011: Tree trimming. Trim circuit as part of four year vegetation management cycle.	Completed	12/30/2011	Reduced outage risk.
	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 greater than 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	A new circuit project has been approved and placed into the capital budget.
	5/25/2011: Install fuse(s). Install additional fusing on a CEM1 tap to reduce the exposure seen by customers.	Completed	1/5/2012	Reduced outage risk.
	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	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
	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.
	3/14/2012: Thermographic inspection-OH line. Inspected all 2 and 3 phase primary lines with infrared camera.	Completed	3/14/2012	Reduced outage risk.
14	Circuit ID: 10803 CHERRY HILL 08-03			Location: Bethlehem CPI: 950
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/31/2010	This circuit had several long duration outages. However, all events on this circuit in the past year have affected under 100 customers. Outages have been due to tree related issues and equipment failures. The circuit was last trimmed in 2009.
	11/30/2010: Install tie. A project has been placed into the budget to create a 5 mile tie between the Cherry Hill 08-03 line and a new area substation, Factoryville.	Scheduled for	12/31/2012	
	1/9/2012: A project has been placed into the budget to install a new area substation, Factoryville. This will improve the reliability of the Cherry Hill 8-3 and the Mt Bethel 29-2 area.	Scheduled for	3/29/2013	
	1/9/2012: Install three single phase voltage regulators near the Cherry Hill 8-3 Met-Ed tie.	Completed	12/20/2011	These voltage regulators will provide a balance of voltage between the three phases on the main line to improve the power quality of the circuit.
	1/9/2012: Install a remotely operated control switch on the three phase line just before the three customers at the beginning of the circuit. WR 680982	Scheduled for	6/1/2013	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
16 Circuit ID: 13704 SCHNECKSVILLE 37-04				Location: Lehigh
				CPI: 910
	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.

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
25 Circuit ID: 11001 EAST GREENVILLE 10-01				Location: Bethlehem
				CPI: 795
	4/9/2009: Improve sectionalizing capability. Project being developed to resectionalize trouble spots and add better fusing scheme to limit customer exposure. Inaccessible portion of the line will be re-fed from a new single phase section.	Canceled	2/24/2011	
	4/9/2009: Reconductor line. Reconductor and relocate 20 spans to the road.	Completed	11/30/2010	Reduced outage risk. Line relocated to reduce risk of outage for customers
	4/9/2009: Improve sectionalizing capability. Install new OCR, replace existing OCR with telemetric OCR.	Completed	8/20/2010	Reduced outage risk.
	7/13/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	8/30/2010	Customers experiencing greater than three outages was the greatest contributor to the CPI. This was due to several tree related outages (due to non-tree trimming related outages) and one instance of equipment failure on the line. Tree trimming is planned for the line in 2011.
	8/20/2010: Line Inspection and Maintenance	Completed	12/31/2011	Two new projects have been identified and are currently being engineered.
	4/18/2011: Tree trimming. Trim East Greenville 10-01 circuit as part of 4 year vegetation management cycle. Efforts are being made to ensure circuit is at the top of the spring 2011 trim priority.	Completed	12/30/2011	Reduced outage risk.
	5/17/2011: Quarterly WPC Meeting	Completed	5/17/2011	Discussed reliability options and the idea of a new substation to improve reliability in the area. Verified that a new remote controlled switch was installed at 62085S42120.
	6/17/2011: Install telemetric recloser at 62160S41744, WR608684. Improve sectionalizing and add fault detection.	Scheduled for	12/17/2012	
	6/17/2011: Install new remotely operated control switch near 61799S42443. Improve sectionalizing and fault detection. WR 500785	Scheduled for	5/1/2012	
	6/17/2011: Install new substation near the end of the feeder.	Scheduled for	11/30/2015	
	1/9/2012: Reconfigure circuit by removing a single phase recloser and installing two new ones down stream. WR 603059. Improve reliability by reducing the number of customer that experience an outage.	Scheduled for	5/1/2013	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
29	Circuit ID: 12701 MACUNGIE 27-01			Location: Lehigh
				CPI: 730
	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 separate action item has been taken out for the replacement. One outage was due to animal contact and another outage was due to the circuit breaker failing to reclose.
	4/20/2011: Replace UG getaway. Due to recent performance issues, the Macungie 27-01 UG getaway has been identified for replacement as part of the 2011 Asset Optimization Strategy (AOS) plan.	Completed	12/30/2011	A new getaway will provide increased reliability to the entire circuit.
	6/17/2011: Animal guard being installed on entire substation.	Scheduled for	12/31/2015	
	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	
	1/9/2012: Install a remotely operated control switch on the three phase line at the tie point with the East Greenville 10-1. WR 500785. Improve restoration time by being able to transfer customers to another circuit by the system operators.	Scheduled for	5/1/2012	
	1/9/2012: Install a new remotely operated control switch just north of the tie line near 61929S42778. WR 661962. Improve restoration time by being able to transfer customers by system operator control.	Scheduled for	12/1/2012	
	1/9/2012: Install remotely operated control switch outside of substation. WR 662012. Improve restoration time and improve fault location.	Scheduled for	12/1/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
32 Circuit ID: 43202 MILLVILLE 32-02				Location: Sunbury
				CPI: 705
	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: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	6/7/2010	Inconclusive. Monitor future performance. This circuit was reviewed at Susquehanna Region's WPC meeting on 6/7/10. This circuit is categorized as a worst performer due to the number of customers experiencing more than 3 outages within the 12 month period. The causes of each of the high customer outages have been mitigated (off right of way tree, customer equipment, and substation CB maintenance). The line will be monitored for future issues.
	6/7/2010: 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	7/16/2012	
	8/26/2010: Install tie. A project was placed into the budget to create a tie between Benton 34-1 and Millville 32-2, and a 12 kV tie between Millville 32-2 and Hughesville 70-1. This will enhance the reliability of all three circuits by providing additional operating flexibility through use of remotely operated interrupting and switching devices. The project expects to save approximately 0.3 system SAIDI minutes.	Scheduled for	5/31/2012	
	4/18/2011: Install new line and terminal. Reconductor sections of the circuit to 3 phase 477 AL and install ROCS devices.	Completed	1/31/2011	Reduced outage risk. This circuit has been on the WPC list the last 11 quarters. In January of 2011 half of the customers from this circuit were transferred to the new MVIL 43201 circuit. In the third quarter of 2011 the performance of this circuit noticeably improved due to the reduced customer count and the reduced line exposure.
33 Circuit ID: 22602 KIMBLES 26-02				Location: Pocono
				CPI: 691
	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	
	3/9/2012: Improve sectionalizing capability. The Twin Lakes New Line and Terminal project will relieve around 200 customers from the Kimbles 26-2 line. In addition to the customers transfered, this project will also improve tie and sectionalizing capabilities between the Kimbles 26-2 line and Twin Lakes Substation.	Scheduled for	5/31/2014	
	3/9/2012: Tree trimming. The Kimbles substation circuit lines is scheduled for tree trimming in 2012.	Scheduled for	12/31/2012	

<i>Rank</i>	<i>Action</i>	<i>Status</i>	<i>Due/Complete</i>	<i>Result</i>
53	Circuit ID: 17902 BARTONSVILLE 79-02			Location: Pocono
				CPI: 522
	10/11/2010: Circuit outage data analysis - WPC not on preceding qtr. list.	Completed	11/30/2010	Five circuit breaker outages contributed to the high CPI of this circuit. Two were caused by transmission outages, one was a tree from outside the ROW, one pole hit, and one animal contact.
	4/20/2011: Improve sectionalizing capability. This substation feeder will be a part of the 2013 Pocono Smart Grid Project. All sectionalizing devices will be switched to automated devices that will help reduce customer outage durations.	Scheduled for	12/31/2013	
	4/20/2011: Reconductor line. Project SP51313 will reconductor a quarter mile of 2 phase line to 3 phase. This will allow a poor performing section of line to be bypassed and isolated.	Completed	6/30/2011	Reduced outage duration.

- 6) *A comparison of established transmission and distribution inspection and maintenance goals/objectives versus actual results achieved during the year being reported on. Explanations of any variances shall be included.*

Inspection & Maintenance Goals/Objectives	2011 Budget	2011 Actual	Variance (%)
<i>Transmission</i>			
Transmission C-tag poles (# of poles)	400	398	-1
Transmission arm replacements (# of sets)	100	120	20
Transmission air break switch inspections (# of switches)	0	2	
Transmission lightning arrester installations (# of sets)	38	33	-13
Transmission pole inspections (# of poles)	5,200	5,363	3
Transmission tree side trim-Bulk Power (linear feet)	NA		
Transmission herbicide-Bulk Power (# of acres)	NA		
Transmission re-clearing (# of miles) BES Only	503	503	0
Transmission re-clearing (# of miles) 69/138 kV	745.73	745.73	0
Transmission danger tree removals-Bulk Power (# of trees)	NA		
<i>Substation</i>			
Substation batteries (# of activities)	844	850	1%
Circuit breakers (# of activities)	1270	596	-53
Substation inspections (# of activities)	2,637	1,411	-46
Transformer maintenance (# of activities)	2,190	1,150	-47
<i>Distribution</i>			
Distribution C-tag poles replaced (# of poles)	1,600	1,583	-1
C-truss distribution poles (# of poles)	5,500	4,342	-21
Capacitor (MVAR added)	57	59	4
OCR replacements (# of)	644	449	-30
Distribution pole inspections (# of poles)	130,000	121,489	-7
Distribution line inspections (# of miles)	3,000	4,805	60
Group re-lamping (# of lamps)	16,000	10,046	-37
Test sections of underground distribution cable	500	617	23
Distribution tree trimming (# of miles)	5,127	4,980	-3
Distribution herbicide (# of acres)	NA		
Distribution >18" removals within R/W (# of trees)	NA		
Distribution hazard tree removals outside R/W (# of trees)	NA		

Inspection & Maintenance Goals/Objectives	2011 Budget	2011 Actual	Variance (%)
LTN manhole inspections (# of)	423	121	-71
LTN vault inspections (# of)	758	170	-78
LTN network protector overhauls (# of)	101	11	-89
LTN reverse power trip testing (# of)	119	18	-85

Explanation of variances greater than 10%:

Transmission arm replacements - Additional work on the Auburn Tap approved after helicopter patrol identified series of critical arms. Scope added to the 2011 working budget.

Lightning Arresters - Availability of resources - KT Power focused on Cellon Pole & C-Tag Pole replacements, leaving Q4 lightning arresters unfinished.

All Under Budget Substation Work - All distribution substation and LTN maintenance work below budget due to resource constraints.

C-truss distribution poles – Due to increased costs in the overall pole program, lower priority c-truss candidates were backlogged to allow for more critical work.

OCR replacements – In an effort to upgrade reclosers, newer models were installed at a higher unit rate, thereby reducing budgeted units.

Distribution line inspections – Additional miles were inspected as a result of the condition-based identification process.

Test sections of underground distribution cable – Resource availability allowed for work scope to be increased.

Group re-lamping – Additional overhead costs not identified in contract and extra additional work/material costs (e.g. fuel costs, extra photocells and head replacements) not identified in the contract were required during 2011; causing more dollars to be spent which reduced what was available for re-lamping.

- 7) *A comparison of budgeted versus actual transmission and distribution operation and maintenance expenses for the year being reported on in total and detailed by the EDC's own functional account code or FERC account code as available. Explanations of any variances 10% or greater shall be included.*

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

Activity	2011 Budget (\$1,000s)	2011 Actual (\$1,000s)	Variance (%)
<i>Provide Electric Service</i>	10,163	9,289	-8.6
<i>Vegetation Management</i>	28,484	34,037	19.5
<i>Customer Response</i>	61,239	83,879	37.0
<i>Reliability & Maintenance*</i>	67,581	48,656	-28.0
<i>System Upgrade</i>	3,702	869	-76.5
<i>Customer Services/Accounts*</i>	119,369	120,244	0.7
<i>Other</i>	37,127	56,914	53.3
Total O&M Expenses	327,665	353,888	2.6

Explanation of variances of 10% or greater:

Vegetation Management is above budget by 19.5% due to higher than budgeted storms in 2011.

Customer Response is higher than budget due to higher than budgeted storm response in 2011.

Reliability & Maintenance is lower than budget by 28.0% due to under run in Area Sub Planned/Unplanned Maintenance, Regional & Bulk Power Plan Maintenance, LTN Planned/Unplanned Maintenance and UG Res Dev Cable Testing.

System Upgrade is lower than budget by 76.5% primarily due to greater work performed within Customer Response and Other.

Other is over budget due to increase in Development and Support.

*Certain projects reclassified from Other into this Activity.

- 8) *A comparison of budgeted versus actual transmission and distribution capital expenditures for the year being reported on in total and detailed by the EDC's own functional account code or FERC account code as available. Explanations of any variances 10% or greater shall be included.*

The following table provides capital expenditures for PPL Electric, as a whole, which includes transmission and distribution activities.

Activity	2011 Budget (\$1,000s)	2011 Actual (\$1,000s)	Variance (%)
New Service/Revenue	53,822	74,973	39.2%
System Upgrade	132,833	122,964	-7.4%
Reliability & Maintenance	161,804	190,688	17.9%
Customer Response	20,550	26,198	27.5%
Other	20,907	19,601	-6.2%
Total	389,917	434,424	11.4%

Explanation of variances of 10% or greater:

New Service/Revenue was higher than budget due to Foreign Utility and PennDot relocation work, which was budgeted in Customer Response, but actuals are now included in New Service/Revenue.

Reliability & Maintenance was higher than budget as a result of increased spending on reliability programs, including replacement of failed cable and equipment, distribution pole inspections/replacement, and reliability preservation.

Customer Response was higher than budgeted due to increased number of PUC reportable storms during the year.

9) *Quantified transmission and distribution inspection and maintenance goals/objectives for the current year detailed by system area (that is, transmission, substation and distribution).*

Inspection & Maintenance Goals/Objectives	2012 Budget
<i>Transmission</i>	
Transmission C-tag poles (# of poles)	240
Transmission arm replacements (# of sets)	50
Transmission air break switch inspections (# of switches)	64
Transmission lightning arrester installations (# of sets)	0
Transmission tree side trimming (# of linear feet)	N/A
Transmission herbicide (# of acres)	
Transmission reclearing (# of miles) BES Only	637.34
Transmission reclearing (# of miles) 69 kv	865.95
Transmission reclearing (# of miles) 138 kv	296.60
Transmission danger tree removals (# of trees)	N/A
<i>Substation</i>	
Substation batteries (# of activities)	885
Circuit breakers (# of activities)	1495
Substation inspections (# of activities)	5227
Transformer maintenance (# of activities)	2186
<i>Distribution</i>	
Distribution C-tag poles replaced (# of poles)	1,600
C-truss distribution poles (# of poles)	5,500
Capacitor (MVAR added)	57
OCR replacements (# of)	644
Distribution pole inspections (# of poles)	130,000
Distribution line inspections (# of miles)	3,000
Group relamping (# of lamps)	16,000
Test sections of underground distribution cable	500
Distribution tree trimming (# of miles)	7087.50
Distribution herbicide (# of acres)	N/A
Distribution >18" removals within R/W (# of trees)	N/A
Distribution hazard tree removals outside R/W (# of trees)	N/A
LTN manhole inspections (# of)	132
LTN vault inspections (# of)	774
LTN network protector overhauls (# of)	71
LTN reverse power trip testing (# of)	141

10) Budgeted transmission and distribution operation and maintenance expenses for the current year in total and detailed by the EDC's own functional account code or FERC account code as available.

The following table provides budgeted operation and maintenance expenses for PPL Electric, as a whole, and includes the work identified in the response to Item (9).

Activity	2012 Budget (\$1,000s)
Provide Electric Service	9,132
Vegetation Management	43,674
Customer Response	64,865
Reliability & Maintenance	68,994
System Upgrade	979
Customer Services/Accounts	128,684
Other	63,880
Total O&M Expenses	380,208

11) Budgeted transmission and distribution capital expenditures for the current year in total and detailed by the EDC's own functional account code or FERC account code as available.

The following table provides budgeted capital expenditures for PPL Electric, as a whole, and includes transmission and distribution activities.

Activity	2012 Budget (\$1,000s)
New Service/Revenue	71,277
System Upgrade	257,307
Reliability & Maintenance	207,874
Customer Response	9,790
Other	25,160
Total	571,408

12) Significant changes, if any, to the transmission and distribution inspection and maintenance programs previously submitted to the Commission.

There were no significant changes to inspection and maintenance programs in 2011 other than the scope changes discussed in the response to Item (6).

***PPL Electric Utilities Corporation
Transmission Programs & Procedures***

Program	Activity
Helicopter Inspections – Routine	Aerial linemen perform annual routine transmission line patrols from a helicopter. They identify damaged or deteriorated equipment. Engineers review the findings and develop plans for repair or replacement.
Helicopter Inspections – Comprehensive	Aerial linemen perform an overhead comprehensive inspection of transmission line facilities on a four year cycle. Detailed condition reports with close up digital photos are prepared for each specific component problem found along the transmission line and <i>right of way</i> . Engineers review the findings and schedule corrective maintenance as needed.
Helicopter Inspections – Emergency	Aerial linemen perform patrols of transmission lines that operate abnormally. This inspection focuses on identifying damage that may have been caused by lightning, inclement weather, equipment failure or vandalism. Because of the nature of this work, corrective actions are usually expedited.
Field Inspections – Emergency	Line personnel perform emergency foot patrols to inspect transmission lines that operated abnormally. This inspection focuses on identifying damage that may have been caused by lightning, inclement weather, equipment failure or vandalism. Due to the nature of this damage, corrective actions are generally expedited.
Wood Pole – Inspection, Treatment, Replacement, Trussing (reinforcement)	Line personnel examine wood poles for deterioration and measure the degree of rot. Based on the results, the pole is either scheduled for a future inspection, reinforcement for extended life or replacement.
Equipment Maintenance	During helicopter and foot patrols, equipment and facilities are identified that require repairs. Based on need and criticality, repairs are either scheduled or completed as soon as possible.
Planned Replacement Programs	Line personnel and aerial linemen have completed the planned replacement of all deteriorated spacers and dampers on 500kV circuits. Line personnel also replace deteriorated wood arms identified during condition monitoring inspections.
Line Switches – Maintenance & Inspection	Line personnel inspect, maintain and perform operational tests on 138kV and 69kV line air break switches to assure proper operation.

Appendix A

Program	Activity
Line Switch Upgrades	Line personnel install lightning arresters on 138kV and 69kV line switches to increase system reliability.
Circuit Analysis	Engineers analyze circuit loading and performance to identify areas needing increased line capacity or improved line reliability.

***PPL Electric Utilities Corporation
Substation Programs & Procedures***

Program	Activity
Load Survey	Automatic monitoring devices such as SCADA provide continuous, real-time loading information. Engineers review equipment loading and identify facilities and transfer capabilities approaching capacity limits. A portion of the load may be supplied from a different source, the existing facilities may be upgraded, new lines and equipment may be added, or a new substation may be built to address capacity deficiencies.
Substation Inspection/Repair	Electricians inspect substations for security and equipment reliability on a time based maintenance cycle. They attempt to identify and correct potential equipment problems before a failure or interruption of service occurs.
Equipment Service	Electricians perform operational tests on power transformers, load tap changers ("LTC"), voltage regulators, circuit breakers, circuit switchers, vacuum switches, air break switches and transformer protective switches on a time based maintenance cycle to assure that equipment is operating within established parameters. Equipment serviced includes batteries, battery chargers, protective relays, HV fuses and high-speed automatic grounding switches. Depending on the type of equipment, "service" can include actions other than operational testing.
Inspection & Overhaul	Electricians inspect and overhaul circuit breakers, wave traps, ground switches, stick-operated disconnects, gang-operated disconnects and motor-operated disconnects on a time based maintenance cycle to assure proper operation.
Insulation Testing	Electricians perform power factor testing on power transformer, potential transformers, lightning arresters, current transformers, circuit breakers and power cables on a time based maintenance cycle. Testing also includes other instrument transformers (CCVTs, coupling capacitors, potential devices, etc.). They also perform high-potential testing on air and vacuum circuit breakers to assure proper operation.
Condition Monitoring of Station Equipment	Technicians perform dissolved gas-in-oil, dielectric, oxygen, and oil acidity tests for oil in power transformers and impedance and capacity tests on station batteries to assure equipment is within normal parameters. Periodically, AC power factor tests, hi-potential tests, contact resistance tests and motion tests are performed on circuit breakers. Oil dielectric testing is conducted for oil circuit breakers.

Appendix B

Program	Activity
Thermographic Inspections	Technicians perform thermography surveys of substation facilities to identify components operating at elevated temperature. Based on the findings, engineers develop plans to repair or replace the component(s) prior to failure.
Minor Improvements	Maintenance activities may identify conditions where additions or upgrades are needed to assure reliability. Engineers evaluate need and develop action plans and schedules to complete the work.
DC Station Service Improvements	Repairmen identify deteriorated station batteries, battery chargers and battery components. Engineers schedule repair or replacement as necessary.
Capacitor Bank Protection	Engineers monitor the need for synchronous closing schemes on vacuum switches on 69kv capacitor banks. They plan and schedule installations as needed.
Area/Regional Supply	Engineers develop specific projects aimed at improving capacity shortfalls or replacing deteriorated or substandard station equipment.
SCADA Replacement	Engineers identify deteriorating substation SCADA equipment and develop plans to repair or replace it.

***PPL Electric Utilities Corporation
Distribution Programs & Procedures***

Program	Activity
Load Survey – of equipment that is not continuously monitored	Line personnel measure the loading of facilities during peak periods. Engineers use this data for system studies.
Load Survey – by automatic monitoring devices	Automatic monitoring devices such as SCADA provide continuous, real-time loading information. Operators use this data to assure that loads do not exceed design limits. Engineers use this data for system studies.
Circuit Analysis	Engineers analyze circuit voltage profiles to balance loads and to identify areas requiring voltage support to maintain required voltage at the customer facility.
Capacitor – Inspection & Maintenance	Line personnel inspect existing capacitor installations for potential failure, and inspect and maintain associated electronic control equipment to assure proper operation. Line personnel repair or replace any defective equipment.
Voltage Regulator – Inspection & Maintenance	Line personnel inspect existing equipment for potential failure, and inspect and maintain controls and tap changers to assure proper operation. Line personnel repair or replace any defective equipment.
Overhead Line Switch – Inspection & Maintenance	Line personnel inspect switch installations to identify cracked or broken insulators / bushings, stuck or misaligned blades, insulation or gasket deterioration or other operational problems. Line personnel repair or replace any defective equipment.
Transformer Maintenance	Engineers analyze customer usage data to identify overloaded transformers. Transformers that are heavily loaded are replaced with higher capacity units or part of the load is transferred to other nearby transformers.
Wood Pole – Inspection, Maintenance, Replacement, Trussing, Fiber Wrap (reinforcement)	Inspectors examine wood poles for deterioration and measure the degree of rot. Based on the results, the pole is either scheduled for a future inspection, reinforcement for extended life or replacement.
Overhead Line Inspection	Line inspectors examine overhead facilities to identify damaged, deteriorated or substandard equipment. Line personnel repair or replace any defective equipment. Includes visual and thermo-graphic inspections.

Appendix C

Program	Activity
Circuit Performance Review	Engineers use the PPL Electric's Circuit Performance Index to ascertain the need for additional circuit reviews / inspections. The index is a composite of SAIFI, CAIDI, and Trouble Cases.
Underground Primary Cable – Testing, Maintenance, Replacement, Curing	Line personnel perform insulation and neutral tests on cable in residential developments with potential problems to identify <i>deteriorated cable</i> . Based on the results, the cable is placed back in service, repaired or replaced.
LTN Maintenance	Electricians will inspect, service, maintain and overhaul LTN vaults, manholes, cables, transformers, low voltage network protectors and primary transformer disconnect switches. Based on results, defective equipment is either repaired or replaced.
Public Damaged Facilities Review	A program aimed at identifying the locations of facilities that have been damaged by public contact more than once. Technicians evaluate those installations and, if relocation is possible, schedule work to move the facilities.
Underground Service Cable	Engineers resolve customer service problems that are due to deteriorated service conductors.
Oil Circuit Reclosers	Line personnel replace in-service oil circuit reclosers on a time based maintenance cycle. Removed units are overhauled, tested and returned to service.
Line Protection Equipment	Engineers perform load calculations to identify line protection devices that are approaching their capacity limits. Devices are replaced or upgraded to assure that they function properly.
Capacitor Installation	Engineers perform voltage profiles to determine the need, location and size of any new voltage support equipment required to maintain adequate service voltage levels at customer facilities and provide needed reactive support for system stability. Line personnel install the required equipment.
Upgrade System Facilities	Engineers determine the need for additional capacity and design new and upgraded facilities to assure system reinforcements are constructed by the time they are needed.

***PPL Electric Utilities Corporation
Vegetation Programs & Procedures***

Program	Activity
Tree Pruning	Tree pruning is scheduled based on field conditions observed and/or a system prioritization process. All pruning is done in accordance with <u>American National Standard for Tree Care Operations-Tree, Shrub and Other Woody Plant Maintenance – Standard Practices (ANSI A300)</u> .
Tree Removal	Trees located both within the right-of-way corridor and outside the right-of-way that may be a threat to line performance/ safety are removed when it is feasible to do so.
Herbicide Application	Tall-growing, undesirable vegetation growing within the rights-of-way corridors is selectively treated with herbicides. Low-growing vegetation that does not represent a hazard to the safe, reliable operation of PPL Electric's facilities is preserved wherever possible.
Reclearing	Tall-growing, undesirable vegetation growing within the rights-of-way corridors is selectively removed in those situations where herbicides can't be utilized. Low-growing vegetation that does not represent a hazard to the safe, reliable operation of PPL Electric's facilities is preserved wherever possible.

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

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

10 – Improper Design	Controllable	<ul style="list-style-type: none">• When an employee or agent of PPL Electric is responsible for an error of commission or omission in the engineering or design of the distribution system. (Facility Records personnel use only)
11 – Improper Installation	Controllable	<ul style="list-style-type: none">• When an employee or agent of PPL Electric is responsible for an error of commission or omission in the construction or installation of the distribution system. (Facility Records personnel use only)
12 – Improper Operation	Controllable	<ul style="list-style-type: none">• When an employee or agent of PPL Electric is responsible for an error of commission or omission in the operation or maintenance of the distribution system. (Facility Records personnel use only)
30 – Trees –Trimming Related ⁸	Controllable	<ul style="list-style-type: none">• Outages resulting from conductors contacted by tree growth within the clearance zone defined by the current trimming specification (within the Right-of-Way).
35 – Trees – Not Trimming Related	Non-Controllable	<ul style="list-style-type: none">• Outages due to trees, but not related to lack of proper tree trimming maintenance. This includes danger timber blown into PPL Electric facilities, and trees or limbs felled by the public.
40 – Animals	Controllable	<ul style="list-style-type: none">• Any outage caused by an animal directly or indirectly coming in contact with PPL Electric facilities. This includes birds, squirrels, raccoons, snakes, cows, etc.
41 – Vehicles	Public	<ul style="list-style-type: none">• When cars, trucks or other types of vehicles or their cargoes strike facilities causing a problem.

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

Appendix E

51 – Contact/Dig-in	Public	<ul style="list-style-type: none"> • When work in the vicinity of energized overhead facilities results in interruptions due to accidental contact by cranes, shovels, TV antennas, construction equipment (lumber, siding, ladders, scaffolding, roofing, etc.). • When contact is made by a non-employee with an underground facility causing interruption.
60 – Equipment Failure	Controllable	<ul style="list-style-type: none"> • Outages resulting from equipment failures caused by corrosion or contamination from build-up of materials, such as cement dust or other pollutants. • Outages resulting from a component wearing out due to age or exposure, including fuse tearing or breaking. • Outages resulting from a component or substance comprising a piece of equipment failing to perform its intended function. • Outages resulting from a failure that appears to be the result of a manufacturer’s defect or cannot be described by any other code indicating the specific type of failure.
77 – Non-PPL Problem – Other	Non-PPL	<ul style="list-style-type: none"> • Where no PPL Electric or customer facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
78 – Non-PPL Problem – Customer Facility	Non-PPL	<ul style="list-style-type: none"> • Where no PPL Electric facilities were affected, and no repair or restoration was carried out on PPL Electric equipment.
80 – Scheduled Outage ⁹	Controllable	<ul style="list-style-type: none"> • Interruptions under the control of a PPL Electric switchman or direction of a PPL Electric System Operator for the purpose of performing <u>scheduled</u> maintenance, repairs and capacity replacements for the safety of personnel and the protection of equipment. • Includes requests from customers for interruption of PPL Electric facilities.

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 scheduled outage when the interruption is postponed.

Appendix E

85 – Directed by Non-PPL Authority ¹⁰	Non-Controllable	<ul style="list-style-type: none"> • Interruptions under the control of a PPL Electric switchman or direction of a PPL Electric System Operator for the purpose of dropping load or isolating facilities upon request during emergency situations. • Interruptions which cannot be postponed or scheduled for a later time, and include situations like load curtailment during system emergencies, and requests of civil authorities such as fire departments, police departments, civil defense, etc. for interruption of PPL Electric facilities.
90 – Other -- Controllable (Lineman provides explanation)	Controllable	<ul style="list-style-type: none"> • Interruptions caused by phase to phase or phase to neutral contacts, resulting from sleet or ice dropping off conductors, galloping conductors, or any other phase to phase or phase to neutral contact where weather is a factor. • Interruptions resulting from excessive load that cause that facility to fail. • When restoration of service to a facility, which had been interrupted for repairs or other reasons, causes an additional interruption to another facility which had not been involved in the initial interruptions. • Controllable interruptions or Power Service Problems whose cause is not described by one of the previous controllable cause codes.
96 – Nothing Found	Non-Controllable	<ul style="list-style-type: none"> • When no cause for the interruption can be found. • When there is no evidence of equipment failure, damage or contact after line patrol is completed. This could be the case during a period of heavy thunder and lightning, when a line fuse blows or a single phase OCR locks open. • When closed for test, the fuse holds or the OCR remains closed. A patrol of the tap reveals nothing.
98 – Other Public (Lineman provides explanation)	Public	<ul style="list-style-type: none"> • All outages resulting from gunfire, civil disorder, objects thrown, or any other act intentionally committed for the purpose of disrupting service or damaging company facilities.

¹⁰ The title of this code has been revised for clarity. The purpose and application of the code has not changed.

Appendix E

99 – Other – Non-Controllable (Lineman provides explanation)	Non-Controllable	<ul style="list-style-type: none">• Any outage occurring because of a fire, flood or a situation that develops as a result of a fire or flood. Do not use when facilities are de-energized at the request of civil authorities.• When an interruption is caused by objects other than trees, such as kites, balls, model airplanes, roofing material, or fences, being accidentally blown or thrown into overhead facilities.• All problems caused by contact of energized equipment with facilities of other attached companies or by trouble on customer owned equipment.• Interruptions or Power Service Problems whose cause is not described by one of the previous non-controllable cause codes, but is not affected by a PPL Electric employee's decisions.
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From: (610) 774-6908
Karen Posten
PPL Corporation
2 N 9th St

Origin ID: ABEA

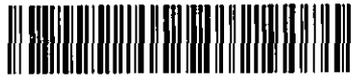


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Invoice #
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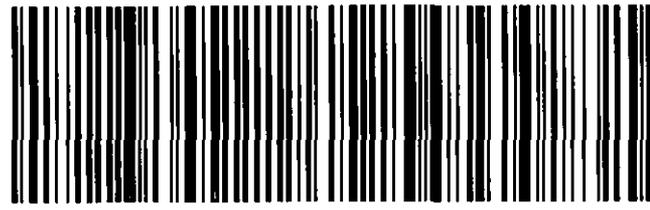
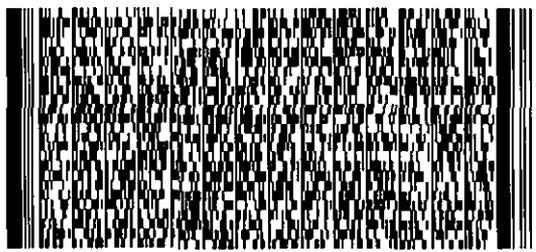
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