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PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

February 1, 2010

James J. McNulty, Secretary  
Pennsylvania Public Utility Commission  
P.O. Box 3265  
Harrisburg, PA 17120

Re: Joint 4<sup>th</sup> Quarter 2009 Reliability Report - Pennsylvania Power Company, Pennsylvania Electric Company, and Metropolitan Edison Company pursuant to 52 PA Code §57.195(d)(e)

Dear Secretary McNulty:

Enclosed for filing on behalf of the Pennsylvania Power Company, Pennsylvania Electric Company, and Metropolitan Edison Company (collectively, "Companies") is an original and six (6) copies of its Joint 4<sup>th</sup> Quarter 2009 Reliability Report – Public Version, pursuant to 52 PA Code §57.195(d)(e).

On December 22, 2004, the Companies filed an Application for Protective Order at Docket No. L-000301061. The Application was granted, allowing the Companies to file a proprietary version of the quarterly reliability report. The Proprietary Version of this report is being filed under separate cover.

Sincerely,

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cc: Office of Consumer Advocate  
Office of Small Business

**FirstEnergy**



## Joint 2009 4th Quarter Reliability Report

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PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

Pennsylvania Power Company,  
Pennsylvania Electric Company and  
Metropolitan Edison Company

Pursuant to 52 PA Code § 57.195(d)(e)

## **Joint 4<sup>th</sup> Quarter 2009 Reliability Report – Pennsylvania Power Company, Pennsylvania Electric Company and Metropolitan Edison Company**

The following Joint 4Q 2009 Reliability Report is filed on behalf of Pennsylvania Power Company (“Penn Power”), Pennsylvania Electric Company (“Penelec”), and Metropolitan Edison Company (“Met-Ed”), collectively referred to as the “Companies” for the period-ending December 31, 2009.

*Section 57.195(e)(1): A description of each major event that occurred during the preceding quarter, including the time and duration of the event, the number of customers affected, the cause of the event and any modified procedures adopted in order to avoid or minimize the impact of similar events in the future<sup>a</sup>.*

### *Major Events*

The Companies did not experience a major event during the reporting period ending December 31, 2009<sup>b</sup>.

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<sup>a</sup> For purposes of this Joint Report, all reliability reporting is based upon the Pennsylvania Public Utility Commission’s definitions for momentary outages and major events pursuant to 52 PA Code § 57.192

<sup>b</sup> On October 7, 2009 Penelec experienced a customer outage that was an indirect result of windmill installations in the territory. In most cases, alternative energy installations require opening a section of a looped transmission system for a prolonged period of time, like this one required, which in turn places our customers at risk while the line is out of service. This outage affected 7,530 customers resulting in 2,244,786 customer minutes of interruption and a SAIDI impact of 3.9 minutes.

*Section 57.195(e)(2): Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available MAIFI) for the EDC's service territory for the preceding quarter. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customer interruptions, the number of customers affected, and the customer minutes of interruption. If MAIFI values are provided, the report shall also include the number of customer momentary interruptions.*

**Reliability Index Values**

4Q 2009 (12-Mo Rolling)	Penn Power			Penelec			Met-Ed		
	Benchmark	12-Month Standard	12-Month Actual	Benchmark	12-Month Standard	12-Month Actual	Benchmark	12-Month Standard	12-Month Actual
SAIFI	1.12	1.34	0.75	1.26	1.52	1.22	1.15	1.38	1.21
CAIDI	101	121	116	117	141	117	117	140	111
SAIDI	113	162	87	148	213	143	135	194	134
Customers Served <sup>(a)</sup>	157,007			580,907			544,056		
Number of Sustained Interruptions	2,755			10,840			8,946		
Customers Affected	118,277			711,565			660,319		
Customer Minutes	13,721,657			83,155,989			73,001,005		

(a) Represents the average number of customers served during the reporting period.

Penn Power, Penelec, and Met-Ed results for 4<sup>th</sup> Quarter 2009 are:

- better than the Commission's 12-Month Standard for 9 out of 9 reliability indices (SAIFI, CAIDI, SAIDI)
- better than, or equal to, the Commission's Benchmark for 7 of the 9 reliability indices

Penn Power	
SAIFI	44% better than Commission's 12-Month Standard 33% better than Commission's Benchmark 6% improvement over 12-Month Rolling Actual for 3Q 2009
CAIDI	4% better than Commission's 12-Month Standard
SAIDI	46% better than Commission's 12-Month Standard 23% better than Commission's Benchmark
Penelec	
SAIFI	20% better than Commission's 12-Month Standard 3% better than Commission's Benchmark 9% improvement over 12-Month Rolling Actual for 3Q 2009
CAIDI	17% better than Commission's 12-Month Standard Equal to Commission's Benchmark 5% improvement over 12-Month Rolling Actual for 3Q 2009
SAIDI	33% better than Commission's 12-Month Standard 3% better than Commission's Benchmark 13% improvement over 12-Month Rolling Actual for 3Q 2009
Met-Ed	
SAIFI	12% better than Commission's 12-Month Standard 6% improvement over 12-Month Rolling Actual for 3Q 2009
CAIDI	21% better than Commission's 12-Month Standard 5% better than Commission's Benchmark 3% improvement over 12-Month Rolling Actual for 3Q 2009
SAIDI	31% better than Commission's 12-Month Standard 1% better than Commission's Benchmark 10% improvement over 12-Month Rolling Actual for 3Q 2009

*Section 57.195(e)(3): Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available, MAIFI) and other pertinent information such as customers served, number of interruptions, customer minutes interrupted, number of lockouts, and so forth, for the worst performing 5% of the circuits in the system. An explanation of how the EDC defines its worst performing circuits shall be included.*

### *Worst Performing Circuits – Reliability Indices*

Penn Power, Penelec, and Met-Ed's ranking of the 5% Worst Performing Circuits are provided in Attachment A1 of this report.

*Section 57.195(e)(4): Specific remedial efforts taken and planned for the worst performing 5% of the circuits identified in paragraph (3).*

*Worst Performing Circuits – Remedial Action*

Penn Power, Penelec, and Met-Ed's Remedial Action for Worst Performing Circuits are provided in Attachment B1 of this report.

*Section 57.195(e)(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.*

*Outages by Cause*

Outages by Cause – Penn Power

Outages by Cause				
4th Quarter 2009 12-Month Rolling	Penn Power			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Number of Outages
TREES/NOT PREVENTABLE	4,346,884	593	19,601	21.52%
ANIMAL	701,107	381	10,574	13.83%
EQUIPMENT FAILURE	2,268,345	378	19,858	13.72%
LINE FAILURE	1,796,883	305	12,706	11.07%
BIRD	243,473	285	3,776	10.34%
LIGHTNING	1,668,851	256	16,809	9.29%
UNKNOWN	342,935	141	3,988	5.12%
OVERLOAD	212,511	104	3,155	3.77%
VEHICLE	1,214,360	80	13,182	2.90%
PREVIOUS LIGHTNING	210,181	57	2,261	2.07%
FORCED OUTAGE	261,687	52	6,345	1.89%
HUMAN ERROR -NON-COMPANY	255,428	46	2,932	1.67%
TREES/PREVENTABLE	30,598	28	270	1.02%
OBJECT CONTACT WITH LINE	32,742	14	296	0.51%
UG DIG-UP	13,491	11	181	0.40%
VANDALISM	1,104	9	10	0.33%
HUMAN ERROR - COMPANY	112,216	6	2,255	0.22%
FIRE	5,000	3	16	0.11%
ICE	1,541	3	29	0.11%
CUSTOMER EQUIPMENT	2,268	2	32	0.07%
CONTAMINATION	52	1	1	0.04%
<b>TOTAL</b>	<b>13,721,657</b>	<b>2,755</b>	<b>118,277</b>	<b>100.00%</b>

## Proposed Solutions – Penn Power

### Trees Non-Preventable

Forestry Services reviews the “Trees Non-Preventable” outages to see if there has been a high frequency of occurrences on the circuit. A patrol of the circuit is conducted to identify trees that need to be trimmed or removed to avoid future outages. In addition, line and forestry personnel patrol for Danger / Priority trees as part of their daily work routine. The Danger / Priority Tree program identifies off right-of-way trees that present a hazard to power lines. Under this program all circuits that have had “Trees Non-Preventable” caused outages are prioritized based on customer outage minutes. A patrol of the three-phase backbone of each circuit is performed and foresters work with private property owners to remove any potentially dangerous tree conditions.

### Animal

Animal guards are installed on equipment where high frequencies of animal-related outages are experienced. When possible, animal guards are installed at the time service is restored for the outages caused by animals. In addition, Penn Power requires animal guards to be installed on all new overhead and underground riser installations.

### Equipment Failure

The number of equipment failures are mitigated by way of inspection and maintenance practices, such as circuit inspections and others. Further, distribution circuit protection coordination reviews and the enhanced circuit protection schemes that result will provide isolation of equipment failures and lessen the impact of outages to a smaller number of customers.

Penn Power’s review has shown an increase in the number of outages from cutouts. Porcelain cutouts were found to be the major cause for cutout-related outages, resulting in the discontinued use of porcelain cutouts for new installations, and older porcelain cutouts are being replaced with new polymer cutouts when they fail.

In 2009, all of Penn Power's main feed three phase backbone was inspected twice, once in the winter/spring and once in the fall, to identify critical problems before they cause an outage. Infrared scanning of three phase backbone occurred on 17 circuits. These scans find "hot spots" that are repaired before they can cause an outage.

Outages by Cause – Penelec

Outages by Cause				
4th Quarter, 2009 12-Month Rolling	Penelec			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Number of Outages
EQUIPMENT FAILURE	22,187,956	3328	220,569	30.70%
TREES/NOT PREVENTABLE	29,158,766	1716	135,939	15.83%
UNKNOWN	6,004,750	1480	71,489	13.65%
ANIMAL	2,337,884	1233	34,758	11.37%
LINE FAILURE	10,631,161	866	107,914	7.99%
LIGHTNING	2,206,687	426	20,219	3.93%
FORCED OUTAGE	2,279,619	389	27,304	3.59%
VEHICLE	4,252,043	330	34,272	3.04%
BIRD	793,961	275	14,373	2.54%
HUMAN ERROR - COMPANY	367,507	122	12,379	1.13%
OVERLOAD	742,893	117	8,545	1.08%
PREVIOUS LIGHTNING	219,287	102	842	0.94%
HUMAN ERROR -NON-COMPANY	596,527	97	5,800	0.89%
UG DIG-UP	146,855	68	679	0.63%
OTHER ELECTRIC UTILITY	366,366	61	2,081	0.56%
ICE	16,318	50	120	0.46%
VANDALISM	282,257	39	3,460	0.36%
OBJECT CONTACT WITH LINE	248,590	32	4,362	0.30%
FIRE	158,992	29	2,252	0.27%
TREES/PREVENTABLE	45,427	29	628	0.27%
CUSTOMER EQUIPMENT	58,020	28	2,115	0.26%
WIND	18,314	10	218	0.09%
CONTAMINATION	13,554	6	150	0.06%
SWITCHING ERROR	18,549	4	1,037	0.04%
OTHER UTILITY-NON ELEC	3,644	2	59	0.02%
CALL ERROR	62	1	1	0.01%
	<b>83,155,989</b>	<b>10,840</b>	<b>711,565</b>	<b>100.00%</b>

## Proposed Solutions – Penelec

### Equipment Failure

Penelec has identified porcelain cutout failures to be a large contributor to equipment failure outages and, as such, has been replacing porcelain cutouts with polymer cutouts as a preventive measure in conjunction with existing work plans, as a part of the targeted mainline equipment replacement program.

The number of equipment failures are further mitigated by way of inspection and maintenance practices, such as circuit inspections and others. Penelec's entire main feed three-phase backbone was inspected during 2008 to identify and repair critical problems before they caused an outage. Inspections of the main feed three-phase was performed again on 50% of the circuits during 2009. Infrared scanning on the main feed three-phase has been completed on 46% of Penelec's circuits since 2008.

In addition, distribution circuit protection coordination reviews and the enhanced circuit protection schemes that result will provide isolation of equipment failures and lessen the impact of outages. Engineering Services continually monitors and investigates devices experiencing three or more outages in thirty days to identify causes and trends of equipment failures and other outages.

### Trees Non-Preventable

Forestry Services reviews the "Trees Non-Preventable" outages to see if there has been a high frequency of occurrences on the circuit. A patrol of the circuit is conducted to identify dead or diseased trees that need to be trimmed or removed to avoid future outages. In addition, line and forestry personnel patrol for Danger / Priority trees as part of their daily work routine. The Danger / Priority Tree inspections identify off right-of-way trees that present a hazard to power lines. Circuits are then prioritized by customer minutes due to "Trees Non-Preventable" outages. A patrol of the entire circuit is performed and Forestry Services works with private property owners to remove any potentially dangerous tree conditions. This practice has been adopted as part of our normal tree trimming maintenance program.

### Unknown Outages

Outage-by-cause analysis is one of the tools used to analyze and develop circuit and system reliability improvement plans. If the troubleshooter cannot accurately identify the cause of an outage, that outage is coded with an unknown cause. To limit the number of unknown outages, and to identify the outage cause, troubleshooters are directed to continue to patrol a circuit, even after service has been restored, as long as those patrols will not interfere with restoration of other customers. Significant unknown outages are reviewed by reliability engineering, with post outage circuit inspections being completed as needed by reliability inspectors.

Outages by Cause – Met-Ed

Outages by Cause				
4th Quarter 2009 12-Month Rolling	Met-Ed			
Cause	Customer Minutes	Number of Sustained Interruptions	Customers Affected	% Based on Number of Outages
EQUIPMENT FAILURE	18,698,629	2518	195,578	28.15%
TREES/NOT PREVENTABLE	26,393,276	1823	166,661	20.38%
ANIMAL	1,336,792	1139	17,839	12.73%
UNKNOWN	3,268,326	1082	37,005	12.09%
LINE FAILURE	6,444,961	637	43,625	7.12%
LIGHTNING	2,203,077	485	21,777	5.42%
VEHICLE	7,200,057	328	60,123	3.67%
FORCED OUTAGE	2,070,899	268	49,394	3.00%
TREES/PREVENTABLE	604,538	129	4,945	1.44%
BIRD	241,980	110	4,660	1.23%
OVERLOAD	797,315	101	8,931	1.13%
HUMAN ERROR -NON-COMPANY	436,039	77	9,686	0.86%
HUMAN ERROR - COMPANY	1,162,013	59	23,728	0.66%
PREVIOUS LIGHTNING	51,328	56	421	0.63%
UG DIG-UP	120,230	41	706	0.46%
OBJECT CONTACT WITH LINE	440,247	26	6,618	0.29%
CUSTOMER EQUIPMENT	85,562	21	1,637	0.23%
FIRE	150,560	15	809	0.17%
WIND	1,207,629	11	3,739	0.12%
VANDALISM	55,160	9	1,733	0.10%
ICE	1,963	4	5	0.04%
OTHER UTILITY-NON ELEC	24,775	3	671	0.03%
OTHER ELECTRIC UTILITY	5,623	3	27	0.03%
CONTAMINATION	26	1	1	0.01%
<b>TOTAL</b>	<b>73,001,005</b>	<b>8,946</b>	<b>660,319</b>	<b>100.00%</b>

## Proposed Solutions – Met-Ed

### Equipment Failure

The number of equipment failures are mitigated by way of inspection and maintenance practices, such as circuit inspections and others. Further, distribution circuit protection coordination reviews and the enhanced circuit protection schemes that result will provide isolation of equipment failures and lessen the impact of outages to a smaller number of customers. In addition, the Engineering Department periodically conducts a multi-operation device review to identify causes and trends of equipment failures and other outage causes. Engineering then plans accordingly to repair or replace facilities.

### Trees Non-Preventable

Forestry Services reviews areas where “Trees Non-Preventable” outages occur to see if there has been a high frequency of occurrence. A patrol of the circuit is conducted to identify trees that need to be trimmed or removed to avoid future outages. In addition, line and forestry personnel patrol for Danger / Priority trees as part of their daily work routine. The Danger / Priority Tree program identifies off right-of-way trees that present a hazard to power lines.

Under the Danger / Priority Tree program, circuits identified by engineering that have had “Trees Non-Preventable” caused outages are prioritized based on customer outage minutes. A patrol of the three-phase backbone of each circuit is performed and foresters identify any potentially dangerous tree conditions. If the tree cannot be removed, overhang at the location is removed.

### Animal

Animal guards are installed on equipment where high frequencies of animal-related outages are experienced. When possible, animal guards are installed at the time service is restored for the outages caused by animals. In addition, Met-Ed requires animal guards to be installed on all new overhead and underground riser installations.

*Section 57.195(e) (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).*

*T&D Inspection and Maintenance Programs*

Information is not required for the 4<sup>th</sup> Quarter Report.

*Section 57.195(e)(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).*

*Budgeted vs. Actual T&D Operation & Maintenance Expenditures*

Information is not required for the 4<sup>th</sup> Quarter Report.

*Section 57.195(e)(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).*

*Budgeted vs. Actual T&D Capital Expenditures*

Information is not required for the 4<sup>th</sup> Quarter Report.

*Section 57.195(e)(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).*

*Staffing Levels*

Penn Power 2009					
Department	Staff	1Q	2Q	3Q <sup>(a)</sup>	4Q <sup>(a)</sup>
Line	Leader / Chief	29	29	27	29
	Lineman	65	67	63	59
Substation	Technician	6	6	6	6
	Construction & Maintenance (C&M)	12	14	14	14
<b>Total</b>		<b>112</b>	<b>116</b>	<b>110</b>	<b>108</b>

Penelec 2009 <sup>c</sup>					
Department	Staff	1Q	2Q	3Q	4Q
Line	Leader / Chief	146	146	145	134
	Lineman	183	209	199	194
Substation	Technician	10	8	9	8
	Construction & Maintenance (C&M)	73	79	76	69
<b>Total</b>		<b>412</b>	<b>442</b>	<b>429</b>	<b>405</b>

Met-Ed 2009					
Department	Staff	1Q	2Q	3Q <sup>(a)</sup>	4Q <sup>(a)</sup>
Line	Leader / Chief	60	59	48	52
	Lineman	160	167	160	157
Substation	Technician	14	14	13	12
	Construction & Maintenance (C&M)	57	58	58	57
<b>Total</b>		<b>291</b>	<b>298</b>	<b>279</b>	<b>278</b>

<sup>c</sup> The Companies offered an early retirement program to its employees that impacted 3Q and 4Q 2009 staffing levels

*Section 57.195(e)(10): Quarterly and year-to-date information on contractor hours and dollars for transmission and distribution operation and maintenance.*

### *Contractor Expenditures*

This portion of the report is confidential per Docket L-00301061.

*Section 57.195(e)(11): Monthly call-out acceptance rate for transmission and distribution maintenance workers presented in terms of both the percentage of accepted calls-out and the amount of time it takes the EDC to obtain the necessary personnel. A brief description of the EDC's call-out procedure should be included when appropriate.*

### *Call-out Acceptance Rate*

This portion of the report is confidential per Docket L-00301061.

*Call-out Response*

This portion of the report is confidential per Docket L-00301061.

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ATTACHMENT A1

Worst Performing Circuits - Reliability Indices

The Companies define their 5% worst performing circuits based on SAIDI. The Companies use SAIDI as a measure of circuit performance. The SAIDI index is a measure of the total customer minutes of distribution outages on the circuit. Beginning in 2006, distribution circuits were ranked based on SAIDI contribution to the overall Company SAIDI (customer minutes).

Penn Power													
Circuit Rank	Substation	Circuit Desc	District	Average Customers (1)	Outages (2)	Lockouts (3)	Customer Minutes (4)	Customers Affected (5)	SAIDI Impact (6)	SAIDI (7)	SAIFI (7)	CAIDI (7)	MAIFI (7)
1	HARTSTOWN	WV-126	CLARK	2,164	59	1	1,296,609	7,419	8.26	599	3.43	174.8	2.2
2	JACKSON	WV730	ZELI	1,839	18	1	349,241	2,343	2.22	190	1.27	149.1	3.0
3	CASTLEWOOD	D-326	CLARK	1,077	25	1	307,517	2,192	1.96	286	2.04	140.3	2.1
4	MERCER	WV-167	CLARK	1,375	39	0	262,490	1,592	1.67	191	1.16	164.9	3.9
5	EVANS CITY	D611	ZELI	1,009	33	1	254,180	3,092	1.62	252	3.06	82.2	5.5
6	PERRY	WV-156	CLARK	1,035	40	0	248,161	827	1.58	240	0.80	300.1	0.0
7	CANAL	WV-104	CLARK	1,662	8	1	244,596	2,406	1.56	145	1.43	101.7	2.4
8	CONNEAUT	WV-173	CLARK	1,914	43	0	241,062	2,514	1.54	126	1.31	95.9	0.2
9	PERRY	WV-155	CLARK	435	23	1	227,166	1,064	1.45	522	2.49	209.6	0.3

- (1) Average number of customers served by the circuit for the 12-month period.
- (2) Number of unique outages experienced by one or more customers on the circuit during the period, due to distribution outage causes.
- (3) Number of circuit lockouts during the period.
- (4) Total customer minutes of outage during the period due to distribution outage causes.
- (5) Number of customer outages during the period due to distribution outage causes.
- (6) Impact of the distribution outages on this circuit to Penn Power's SAIDI.
- (7) Distribution circuit SAIDI, SAIFI, CAIDI and MAIFI 12-Month Rolling due to distribution outage causes.

Penelec													
Circuit Rank	Substation	Circuit Desc	District	Average Customers (1)	Outages (2)	Lockouts (3)	Customer Minutes (4)	Customers Affected (5)	SAIDI Impact (6)	SAIDI (7)	SAIFI (7)	CAIDI (7)	MAIFI (7)
1	Philipsburg	00162-22	Philipsburg	3,260	97	0	2,010,855	14,086	3.46	617	4.32	142.8	20.4
2	Springboro	00237-52	Meadville	2,865	54	0	1,438,079	3,341	2.48	502	1.17	430.4	36.0
3	Madera	00166-22	Philipsburg	2,226	47	0	1,135,254	5,356	1.95	510	2.41	212.0	11.2
4	Powell Avenue	00513-31	Erie	1,719	17	1	901,863	2,169	1.55	525	1.26	415.8	9.0
5	Madera	00165-22	Philipsburg	763	31	1	888,160	5,104	1.53	1,164	6.69	174.0	30.2
6	Birmingham	00168-22	Philipsburg	1,047	43	1	840,666	4,677	1.45	803	4.47	179.7	7.3
7	DuBois	00137-23	DuBois	2,845	65	0	796,188	8,050	1.37	280	2.83	98.9	3.0
8	Grover	00527-63	Mansfield	1,097	71	1	780,140	1,978	1.34	711	1.80	394.4	10.6
9	Athens	00514-61	Sayre	777	25	1	690,876	1,651	1.19	889	2.12	418.5	0.5
10	French Road	00550-31	Erie	1,320	25	2	685,195	4,482	1.18	519	3.40	152.9	6.1
11	Powell Avenue	00237-31	Erie	2,261	34	0	649,075	4,302	1.12	287	1.90	150.9	6.8
12	North Meshoppen	00534-65	Tunkhannock	834	44	0	623,313	2,382	1.07	747	2.86	261.7	4.9
13	Tunkhannock	00533-65	Tunkhannock	1,238	35	1	616,587	3,187	1.06	498	2.57	193.5	5.7
14	Philipsburg	00164-22	Philipsburg	2,320	26	0	608,005	4,996	1.05	262	2.15	121.7	7.6
15	Elkland	00625-63	Mansfield	869	4	1	593,963	899	1.02	684	1.03	660.7	0.9
16	Erie East	00234-31	Erie	933	62	1	591,088	3,468	1.02	634	3.72	170.4	6.9
17	Warren South	00220-41	Warren	2,954	75	0	548,562	5,469	0.94	186	1.85	100.3	8.5
18	Avery	00791-65	Montrose	351	13	2	544,317	1,043	0.94	1,551	2.97	521.9	5.7
19	Union City	00206-43	Corry	3,732	93	0	527,816	6,352	0.91	141	1.70	83.1	14.4
20	Oxbow	00555-65	Tunkhannock	680	12	0	522,305	866	0.90	768	1.27	603.1	6.7
21	Lake City	00429-34	Erie	710	12	0	513,456	1,490	0.88	723	2.10	344.6	1.0
22	Lowell Avenue	00518-31	Erie	979	23	2	465,958	2,868	0.80	476	2.93	162.5	41.8
23	Walnut Street	00520-31	Erie	1,773	15	0	455,027	9,596	0.78	257	5.41	47.4	4.0
24	Greenwood	00003-71	Altoona	1,601	11	1	454,238	1,939	0.78	284	1.21	234.3	5.0
25	Shawville	00151-21	Clearfield	2,335	43	1	450,838	9,580	0.78	193	4.10	47.1	15.6
26	Boyer	00583-31	Erie	1,566	36	1	431,212	3,680	0.74	275	2.35	117.2	5.6
27	Rolling Meadows	00310-31	Erie	3,080	30	1	427,527	7,885	0.74	139	2.56	54.2	21.1
28	Clearfield	00148-21	Clearfield	1,693	54	1	416,605	5,967	0.72	246	3.52	69.8	27.0
29	Alexandria	00097-82	Huntingdon	899	31	1	413,958	1,633	0.71	460	1.82	253.5	1.1
30	Tionesta Jct. Sw. Sta.	00498-51	Oil City	1,134	28	0	410,649	2,496	0.71	362	2.20	164.5	10.7

Penelec													
Circuit Rank	Substation	Circuit Desc	District	Average Customers (1)	Outages (2)	Lookouts (3)	Customer Minutes (4)	Customers Affected (5)	SAIDI Impact (6)	SAIDI (7)	SAIFI (7)	CAIDI (7)	MAIFI (7)
31	Two Mile	00127-42	Bradford	1,297	18	0	396,928	1,406	0.68	306	1.08	282.3	5.2
32	Page Road	00445-43	Corry	536	43	0	365,009	2,829	0.66	718	5.28	136.1	5.1
33	Phillipsburg	00161-22	Phillipsburg	769	23	0	383,023	1,305	0.66	498	1.70	293.5	1.8
34	Erie South	00259-31	Erie	2,424	46	0	376,091	4,425	0.65	155	1.83	85.0	3.7
35	Knox	00323-51	Oil City	1,324	27	0	367,483	2,686	0.63	278	2.03	136.8	12.6
36	West Tunkhannock	00231-65	Tunkhannock	373	15	1	358,132	1,018	0.62	960	2.73	351.8	2.0
37	Lewis Run	00409-42	Bradford	719	28	0	337,766	1,738	0.58	470	2.42	194.3	13.7
38	Roxbury Transmission	00620-83	Shippensburg	945	19	1	329,809	2,205	0.57	349	2.33	149.6	16.1
39	Lake Como	00788-65	Montrose	618	40	0	325,309	2,689	0.56	526	4.35	121.0	21.1
40	Laurel Lake	00449-65	Montrose	937	33	1	321,088	3,214	0.55	343	3.43	99.9	8.2
41	Fairview East	00216-34	Erie	1,000	15	0	317,750	1,304	0.55	318	1.30	243.7	4.8
42	Glory	00105-13	Indiana	427	14	0	309,280	557	0.53	724	1.30	555.3	13.3
43	Blairsville East	00080-13	Indiana	995	21	0	301,306	3,718	0.52	303	3.74	81.0	6.0
44	Northeast	00592-31	Erie	1,546	46	0	293,732	1,470	0.51	190	0.95	199.8	3.9
45	Fairview East	00216-34	Erie	571	9	0	287,037	762	0.49	503	1.33	376.7	1.9
46	Green Garden	00224-31	Erie	2,136	18	1	282,050	2,722	0.49	132	1.27	103.6	3.0
47	North Meshoppen	00437-65	Tunkhannock	466	26	0	277,593	825	0.48	596	1.77	336.5	1.4
48	Mercer Pike	00474-52	Meadville	459	36	0	276,521	1,014	0.48	602	2.21	272.7	2.3
49	Shawville	00153-21	Clearfield	1,082	50	1	275,651	2,277	0.47	255	2.10	121.1	7.6
50	Eagles Mere	00777-62	Towanda	518	25	1	272,207	745	0.47	525	1.44	365.4	6.0
51	East Sayre	00518-61	Sayre	499	16	3	272,044	1,654	0.47	545	3.31	164.5	7.0
52	McKean	00411-34	Erie	1,071	51	1	268,962	2,372	0.46	251	2.21	113.4	8.1
53	Erie South	00312-31	Erie	1,423	25	0	268,074	3,627	0.46	188	2.55	73.9	4.0
54	East Pike	00095-13	Indiana	3,386	32	0	267,233	1,712	0.46	79	0.51	156.1	14.1
55	Eagles Mere	00686-62	Towanda	311	27	1	265,661	886	0.46	854	2.85	299.8	7.7
56	Russell Hill	00282-65	Tunkhannock	1,054	25	0	260,352	416	0.45	247	0.39	625.8	16.2
57	Madera	00167-22	Phillipsburg	1,638	35	0	257,470	2,436	0.44	157	1.49	105.7	9.8
58	Tunkhannock	00695-65	Tunkhannock	526	17	0	257,249	302	0.44	489	0.57	851.8	3.0
59	Port Allegany	00151-42	Bradford	500	21	1	255,819	937	0.44	512	1.87	273.0	2.0

- (1) Average number of customers served by the circuit for the 12-month period.
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- (3) Number of circuit lockouts during the period.
- (4) Total customer minutes of outage during the period due to distribution outage causes.
- (5) Number of customer outages during the period due to distribution outage causes.
- (6) Impact of the distribution outages on this circuit to Penn Power's SAIDI.
- (7) Distribution circuit SAIDI, SAIFI, CAIDI and MAIFI 12-Month Rolling due to distribution outage causes.

Met-Ed													
Circuit Rank	Substation	Circuit Desc	District	Average Customers (1)	Outages (2)	Lockouts (3)	Customer Minutes (4)	Customers Affected (5)	SAIDI Impact (6)	SAIDI (7)	SAIFI (7)	CAIDI (7)	MAIFI (7)
1	Fox Hill Substation	00816-3	STROUDSBURG	3,675	70	1	1,731,450	12,722	3.18	471	3.46	136.1	12.5
2	Walker Sub	00885-3	STROUDSBURG	2,043	70	0	1,499,329	5,309	2.76	734	2.60	282.4	9.3
3	No Bangor	00826-3	EASTON	3,173	122	1	1,347,397	15,163	2.48	425	4.78	88.9	9.4
4	Bath Sub	00873-3	EASTON	2,109	57	2	1,235,847	5,817	2.27	586	2.76	212.4	3.5
5	Yorkana Substation	00715-4	YORK	2,342	61	1	1,098,879	3,824	2.02	469	1.63	287.4	6.0
6	Shawnee Sub	00895-3	STROUDSBURG	3,706	74	0	1,050,056	6,922	1.93	283	1.87	151.7	13.0
7	19th And Cotton	00153-1	READING	1,586	12	1	1,037,314	2,711	1.91	654	1.71	382.6	1.0
8	Birdsboro	00756-1	READING	1,533	75	6	1,027,532	9,827	1.89	670	6.41	104.6	24.6
9	Newberry Sub	00576-4	YORK	1,784	64	0	906,105	5,529	1.67	508	3.10	163.9	24.0
10	Mountain Substation	00744-4	DILLSBURG	1,787	71	0	699,248	5,503	1.28	391	3.08	127.1	4.0
11	Shawnee Sub	00837-3	STROUDSBURG	1,194	32	4	671,584	4,834	1.23	562	4.05	138.9	19.2
12	Dillsburg Substation	00749-4	DILLSBURG	1,781	47	2	646,895	5,917	1.19	363	3.32	109.3	4.0
13	Gardners	00752-4	GETTYSBURG	1,323	60	2	633,250	5,445	1.16	479	4.12	116.3	4.0
14	S Nazareth	00809-3	EASTON	2,858	42	2	626,824	8,568	1.15	219	3.00	73.2	3.6
15	North Lebanon	00712-2	LEBANON	2,094	32	3	602,620	8,310	1.11	288	3.97	72.5	18.7
16	Bridgeton Sub	00117-3	EASTON	297	10	2	558,417	876	1.03	1880	2.95	637.5	1.0
17	Mt Rose Sub	00564-4	YORK	1,035	14	3	545,744	4,242	1.00	527	4.10	128.7	0.0
18	Ringing Rocks Sub	00708-1	BOYERTOWN	2,185	48	1	534,596	4,258	0.98	245	1.95	125.6	13.6
19	Pine Lane Sub	00720-1	BOYERTOWN	1,091	29	2	524,521	2,448	0.96	481	2.24	214.3	9.2
20	Pine Lane Sub	00713-1	BOYERTOWN	652	22	0	520,039	1,174	0.96	798	1.80	443.0	6.3
21	No Bangor	00838-3	EASTON	1,632	31	3	505,012	5,531	0.93	309	3.39	91.3	8.2
22	Bern Church Sub	00789-1	READING	1,424	58	1	490,589	3,630	0.90	345	2.55	135.2	14.1
23	River View Sub	00793-1	READING	3,065	21	2	488,487	6,113	0.90	159	1.99	79.9	5.1
24	Barto Sub	00706-1	BOYERTOWN	2,541	70	0	476,166	2,158	0.88	187	0.85	220.7	11.4
25	Shawnee Sub	00822-3	STROUDSBURG	3,694	79	0	474,211	5,182	0.87	128	1.40	91.5	13.5
26	Ferndale Sub	00871-3	EASTON	472	27	0	464,971	865	0.85	985	1.83	537.5	0.0
27	Annville Substation	00743-2	LEBANON	374	30	0	462,495	2,625	0.85	1237	7.02	176.2	13.1
28	Shawnee Sub	00899-3	STROUDSBURG	1,783	39	2	440,158	4,144	0.81	247	2.32	106.2	8.7
29	Belfast Sub	00817-3	EASTON	941	51	0	434,732	2,747	0.80	462	2.92	158.3	16.3

Met-Ed													
Circuit Rank	Substation	Circuit Desc	District	Average Customers (1)	Outages (2)	Lockouts (3)	Customer Minutes (4)	Customers Affected (5)	SAIDI Impact (6)	SAIDI (7)	SAIFI (7)	CAIDI (7)	MAIFI (7)
30	Swatara Hill Sub	00764-2	LEBANON	1,512	29	1	431,685	2,811	0.79	286	1.86	153.6	5.7
31	Menges Mills	00543-4	HANOVER	1,369	23	1	411,837	2,937	0.76	301	2.15	140.2	8.0
32	Dillsburg Substation	00746-4	DILLSBURG	2,312	33	1	407,160	4,017	0.75	176	1.74	101.4	2.0
33	Gardners	00750-4	GETTYSBURG	1,297	29	2	406,249	3,394	0.75	313	2.62	119.7	4.0
34	Birchwood Sub	00622-3	STROUDSBURG	1,835	33	2	377,930	4,567	0.69	206	2.49	82.8	7.0
35	Adamstown	00754-1	READING	1,081	34	0	366,881	908	0.67	339	0.84	404.1	4.7
36	Taxville	00575-4	YORK	1,951	33	1	365,295	4,467	0.67	187	2.29	81.8	5.4
37	Berrville Sub	00786-1	HAMBURG	1,824	69	1	364,933	3,753	0.67	200	2.06	97.2	4.9

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SECRETARY'S BUREAU

ATTACHMENT B1

Worst Performing Circuits – Remedial Action

In addition to specific remedial efforts taken and planned for the worst performing 5% of circuits identified in 52 PA Code § 57.195(3)(e), the Companies have identified circuits that have been on this list for one year or more, or in four out of six quarters, in accordance with the Stratified Management and Operations Audit Implementation Plan dated February 14, 2007, Recommendation XI-4.

Penn Power						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
1	Hartstown	W-126	<b>Performance was driven by three outages caused by a vehicle accident, a line failure and a non-preventable tree. Two of the three outages were downstream of a recloser and the third was downstream of the station breaker.</b>			3Q 2008 4Q 2008 1Q 2009 2Q 2009 3Q 2009 4Q 2009
			Complete reliability improvement work downstream of two reclosers	Complete	Sep-08	
			Engineering field review of the section of circuit served by a recloser. No additional work identified.	Complete	Aug-08	
			Engineering field review of the section of circuit served by a recloser. No additional work identified.	Complete	Oct-08	
			Engineering field review of the section of circuit served by a recloser. No additional work identified	Complete	Jul-09	
			Engineering field review of the section of circuit served by substation breaker. No additional work identified	Complete	May-09	
			Complete reliability work identified	Complete	Sep-09	
			A targeted engineering review was conducted on the circuit and a capital project was developed from the review aimed at improving the reliability of a portion of the circuit, which has been experiencing line and equipment failures, through the replacement of identified conductors and equipment.	To be completed in 2010		
Forestry to trim circuit in 2010	To be completed in 2010					
2	Jackson	W-730	<b>Performance was driven by one outage caused by a non-preventable tree.</b>			
			Problem tree was removed at time of restoration	Complete	Dec-09	
3	Castlewood	D-326	<b>Performance was driven by one outage caused by a vehicle accident near the substation.</b>			
			Broken equipment to be repaired	Complete	Sep-09	

<b>Penn Power</b>						
<b>Rank</b>	<b>Substation</b>	<b>Circuit</b>	<b>Remedial Action Planned or Taken</b>	<b>Status of Remedial Work</b>	<b>Date Remedial Work Completed</b>	<b>Appeared in 4 of 6 Quarters</b>
4	Mercer	W-167	<b>Performance was driven by one outage downstream of a recloser and one downstream of a fuse. The outages were caused by non-preventable trees.</b>			3Q 2008 4Q 2008 1Q 2009
			Engineering field review of the section of circuit served by the recloser	Complete	Jul-09	2Q 2009 3Q 2009
			Problem tree was removed at time of restoration	Complete	Dec-09	4Q 2009
5	Evans City	D-611	<b>Performance was driven by one occasion of lightning.</b>			
			Equipment that was hit by lightning was replaced at time of restoration.	Complete	Aug-09	
6	Perry	W-156	<b>Performance was driven by one outage caused by a non-preventable tree.</b>			
			Problem tree was removed at time of restoration	Complete	Dec-09	
7	Canal	W-104	<b>Performance was driven by one outage downstream of the substation.</b>			3Q 2008 4Q 2008 1Q 2009
			Engineering field review of the section of circuit served by the substation	Complete	Aug-09	2Q 2009 3Q 2009 4Q 2009
8	Conneaut	W-173	<b>Performance was driven by one outage downstream of a recloser. The outage was caused by a non-preventable tree.</b>			
			Complete reliability improvement work downstream of a recloser	Complete	Oct-09	
			Forestry to trim circuit in 2010	To be completed in 2010		
9	Perry	W-155	<b>Performance was driven by outages caused by non-preventable trees.</b>			
			Problem tree was removed at time of restoration	Complete	Dec-09	

<b>Penelec</b>							
<b>Rank</b>	<b>Substation</b>	<b>Circuit</b>	<b>Remedial Action Planned or Taken</b>	<b>Status of Remedial Work</b>	<b>Date Remedial Work Completed</b>	<b>Appeared in 4 of 6 Quarters</b>	
1	Philipsburg	00162-22	<b>Performance was driven by trees non-preventable during a minor storms, equipment failures, overload and car-pole accidents.</b>				3Q 2008
			Engineering review of full circuit coordination	Complete	Jan-09	4Q 2008	
			Performed mainline reliability inspection	Complete	Feb-09	1Q 2009	
			Repaired damage from car-pole accident	Complete	Aug-09	2Q 2009	
			Targeted Mainline Reliability Equipment Replacement	Complete	Sep-09	3Q 2009	
			Repaired damage from minor storm	Complete	Oct-09	4Q 2009	
			Repaired damage from minor storm	Complete	Dec-09		
2	Springboro	00237-52	<b>Performance was driven by non-preventable trees during a minor storm.</b>				3Q 2008
			Repaired damage to line during minor storm	Complete	Aug-09	4Q 2008	
			Engineering review of full circuit coordination	Complete	Aug-09	1Q 2009	
			Targeted Mainline Reliability Equipment Replacement	Complete	Nov-09	2Q 2009	
3	Madera	00166-22	<b>Performance was driven by non-preventable trees during minor storm and equipment failures.</b>				3Q 2009
			Repaired broken conductor during minor storm	Complete	Jan-09	4Q 2008	
			Engineering review of equipment caused outages	Complete	Mar-09	1Q 2009	
			Repair damage from minor storm	Complete	Jul-09	2Q 2009	
			Targeted Mainline Reliability Equipment Replacement	Complete	Aug-09	3Q 2009	
Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010		4Q 2009				
4	Powell Avenue	00513-31	<b>Performance was driven by non-preventable trees during minor storm.</b>				
			Repair damage to line from minor storm	Complete	Oct-09		
			Targeted Mainline Reliability Equipment Replacement	Complete	Nov-09		
5	Madera	00165-22	<b>Performance was driven by non-preventable tree damage during minor storms.</b>				
			Repaired damage from minor storm	Complete	May-09		
			Repaired damage from minor storm	Complete	Jul-09		
			Perform mainline Reliability Inspection	Complete	Nov-09		
Repair Conditions found by previous reliability inspection	To be completed in 2010						

Penelec						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
6	Birmingham	00168-22	<b>Performance was driven by non-preventable trees during minor storm, animal contact, line failure and failed equipment.</b>			3Q 2008
			Performed mainline reliability inspection	Complete	Jan-09	4Q 2008
			Engineering review of full circuit coordination	Complete	Sep-09	1Q 2009
			Repaired damage from minor storm	Complete	Oct-09	2Q 2009
			Field review animal prone outage areas for additional animal guards	Complete	Nov-09	3Q 2009
					4Q 2009	
7	DuBois	00137-23	<b>Performance was driven by non-preventable trees during minor storm, line failure and equipment failure.</b>			3Q 2008
			Targeted Mainline Reliability Equipment Replacement	Complete	Sep-09	4Q 2008
			Engineering review of full circuit coordination	Complete	Sep-09	1Q 2009
			Repaired damage from minor storm	Complete	Oct-09	2Q 2009
			Perform mainline Reliability Inspection	Complete	Dec-09	3Q 2009
		Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010		4Q 2009	
8	Grover	00527-63	<b>Performance was driven by non-preventable trees and damage during minor storms.</b>			
			Repair damage from minor storm	Complete	Aug-09	
			Targeted Mainline Reliability Equipment Replacement	Complete	Aug-09	
			Repair damage from minor storm	Complete	Dec-09	
9	Athens	00514-61	<b>Performance was driven by non-preventable trees during minor storm and line failure.</b>			3Q 2008
			Targeted Mainline Reliability Equipment Replacement	Complete	Sep-09	4Q 2008
			Repair damage from minor storm	Complete	Dec-09	4Q 2009
10	French Road	00550-31	<b>Performance was driven by equipment failure during minor storm, animal contact and line failure.</b>			
			Repaired equipment due to minor storm	Complete	Dec-09	
11	Powell Avenue	00237-31	<b>Performance was driven by equipment failure, minor storm damage and overload.</b>			3Q 2008
			Repaired equipment due to minor storm	Complete	Apr-09	4Q 2008
			Engineering review of full circuit coordination	Complete	Sep-09	1Q 2009
			Repair non-preventable tree damage from minor storm	Complete	Oct-09	2Q 2009
			Engineering review of overload caused outages for corrective actions	Complete	Dec-09	3Q 2009
		Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010		4Q 2009	

Penelec						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
12	North Meshoppen	00534-65	<b>Performance was driven by minor storm damage.</b>			
			Full cycle tree clearing	Complete	Jan-09	
			Repaired damage from minor storm	Complete	Jun-09	
13	Tunkhannock	00533-65	<b>Performance was driven by non-preventable tree during minor storm, equipment and line failure.</b>			1Q 2009 2Q 2009 3Q 2009 4Q 2009
			Full cycle tree clearing	Complete	Apr-09	
			Repaired damage from minor storm	Complete	Jun-09	
			Targeted Mainline Reliability Equipment Replacement	Complete	Jun-09	
14	Philipsburg	00164-22	<b>Performance was driven by lightning and equipment failure during minor storm.</b>			
			Performed mainline reliability inspection	Complete	Mar-09	
			Repaired damage from lightning	Complete	Jun-09	
			Repaired equipment from minor storm damage	Complete	Dec-09	
			Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010		
15	Elkland	00625-63	<b>Performance was driven by non-preventable trees during a minor storm.</b>			
			Repaired conductor due to non-preventable tree during minor storm	Complete	Aug-09	
16	Erie East	00234-31	<b>Performance was driven by non-preventable trees, line failure, equipment failure and equipment failure during minor storm.</b>			
			Full cycle tree clearing	Complete	Jun-09	
			Engineering review of full circuit coordination	Complete	Aug-09	
			Repaired equipment from minor storm damage	Complete	Dec-09	
			Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010		
17	Warren South	00220-41	<b>Performance was driven by non-preventable tree damage during minor storm and equipment failure.</b>			3Q 2008 4Q 2008 1Q 2009 2Q 2009 3Q 2009 4Q 2009
			Engineering review of full circuit coordination	Complete	May-09	
			Targeted Mainline Reliability Equipment Replacement	Complete	Oct-09	
			Repaired damage from minor storm	Complete	Oct-09	
18	Avery	00791-65	<b>Performance was driven by non-preventable trees during minor storm.</b>			
			Repaired damage from minor storm	Complete	Jun-09	

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters	
19	Union City	00206-43	<b>Performance was driven by equipment failure, non-preventable trees, bird contact and damage during minor storms.</b>				3Q 2008
			Repaired damage from minor storm	Complete	May-09	4Q 2008	
			Repaired damage from minor storm	Complete	Aug-09	1Q 2009	
			Engineering review of full circuit coordination	Complete	Oct-09	2Q 2009	
			Targeted Mainline Reliability Equipment Replacement	Complete	Nov-09	3Q 2009	
20	Oxbow	00555-65	<b>Performance was driven by non-preventable trees during minor storm.</b>				
			Repair damage from minor storm	Complete	Jun-09	4Q 2009	
21	Lake City	00429-34	<b>Performance was driven by underground failure.</b>				
			Underground mapping changed to reflect field conditions to improve trouble shooting in case of future failures	Complete	Jun-09		
22	Lowell Avenue	00518-31	<b>Performance was driven by damage from minor storms and equipment failure.</b>				
			Repair damage from minor storm	Complete	Apr-09		
			Repair damage from minor storm	Complete	Oct-09		
			Repair damage from minor storm	Complete	Dec-09		
23	Walnut Street	00520-31	<b>Performance was driven by line failure, unknown cause, equipment failure and human error-non company.</b>			3Q 2008	
			Full cycle tree clearing	Complete	Aug-09	4Q 2008	
			Engineering to review unknown outages for possible causes and corrective measures	Complete	Dec-09	1Q 2009	
			Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010		2Q 2009	
24	Greenwood	00003-71	<b>Performance was driven by non-preventable trees during minor storm.</b>			3Q 2009	
			Repair damage from minor storm	Complete	Oct-09	4Q 2009	
25	Shawville	00151-21	<b>Performance was driven by animal contact and unknown outages.</b>				
			Engineering to review unknown outages for possible causes and corrective measures	Complete	Dec-09		
			Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010			
26	Boyer	00583-31	<b>Performance was driven by trees non-preventable during a minor storm, equipment and line failure.</b>				
			Install additional fusing	Item was mistakenly entered will have to be corrected. Protection previously completed.			
			Full cycle tree clearing	Complete	Dec-09		
			Repair damage from minor storm	Complete	Oct-09		

Penelec						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
27	Rolling Meadows	00310-31	<b>Performance was driven by line failure, equipment failure and car-pole accident.</b>			
			Repaired minor storm damage	Complete	Apr-09	
28	Clearfield	00148-21	<b>Performance was driven by line failure, equipment failure and an unknown cause.</b>			
			Engineering review of full circuit coordination	Complete	Oct-09	
			Perform mainline reliability inspection	Complete	Dec-09	
			Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010		
			Repair conditions found by previous reliability inspection	To be completed in 2010		
29	Alexandria	00097-82	<b>Performance was driven by equipment failure, car-pole accident and non-preventable trees.</b>			
			Repaired damage due to car-pole accident	Complete	Mar-09	
30	Tionesta Jct. Sw. Sta.	00498-51	<b>Performance was driven by non-preventable trees during minor storms, car-pole accident and equipment failure.</b>			1Q 2009
			Repaired damage from minor storm	Complete	May-09	2Q 2009
			Repair damage from car-pole accident	Complete	May-09	3Q 2009
			Targeted Mainline Reliability Equipment Replacement	Complete	Aug-09	4Q 2009
			Engineering review of full circuit coordination	Complete	Sep-09	
31	Two Mile	00127-42	<b>Performance was driven by equipment failure.</b>			3Q 2008
			Replaced failed insulator	Complete	Mar-09	4Q 2008
			Targeted Mainline Reliability Equipment Replacement	Complete	May-09	1Q 2009
			Engineering review of full circuit coordination	Complete	Sep-09	2Q 2009
						3Q 2009
						4Q 2009
32	Page Road	00445-43	<b>Performance was driven by line failure, equipment failure, animal contact and minor storm damage.</b>			3Q 2008
			Repair damage from line failure	Complete	Mar-09	2Q 2009
			Engineering review of full circuit coordination	Complete	Aug-09	3Q 2009
			Repaired damage from minor storm	Complete	Oct-09	4Q 2009
33	Philipsburg	00161-22	<b>Performance was driven by non-preventable trees during minor storm.</b>			
			Repaired damage from minor storm	Complete	Dec-09	
34	Erie South	00259-31	<b>Performance was driven by equipment failure, minor storm damage, human error-non company and line failure.</b>			3Q 2008
			Repaired damage to line during minor storm	Complete	Aug-09	4Q 2008
			Engineering review of full circuit coordination	Complete	Sep-09	1Q 2009
			Full cycle tree clearing	Complete	Sep-09	2Q 2009
			Targeted Mainline Reliability Equipment Replacement	Complete	Sep-09	3Q 2009
			Repair conditions found by previous reliability inspection	To be completed in 2010		4Q 2009

Penelec							
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters	
35	Knox	00323-51	<b>Performance was driven by non-preventable trees, unknown cause, line failure and equipment failure during minor storms.</b>				
			Repaired damage from minor storm	Complete	Jan-09		
			Repaired damage from minor storm	Complete	May-09		
			Repaired damage from minor storm	Complete	Aug-09		
			Repaired damage from minor storm	Complete	Dec-09		
			Engineering to review unknown outages for possible causes and corrective measures	Complete	Dec-09		
			Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010			
36	West Tunkhannock	00231-65	<b>Performance was driven by non-preventable trees and equipment failures during minor storms.</b>				
			Repair damage from minor storm	Complete	Jun-09		
			Full cycle tree clearing	Complete	Nov-09		
			Repair damage from minor storm	Complete	Dec-09		
			Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010			
37	Lewis Run	00409-42	<b>Performance was driven by non-preventable trees during minor storms, equipment failure and overload.</b>				
			Repair damage from minor storm	Complete	Oct-09		
38	Roxbury Transmission	00620-83	<b>Performance was driven by a car-pole accident and lightning.</b>				1Q 2009
			Repair damage due to CPA	Complete	Jan-09	2Q 2009	
			Repair damage due to lightning	Complete	Jul-09	3Q 2009	
						4Q 2009	
39	Lake Como	00788-65	<b>Performance was driven by equipment failure.</b>				4Q 2008
			Full cycle tree clearing	Complete	Jul-09	1Q 2009	
			Repaired damage from minor storm	Complete	Aug-09	2Q 2009	
						3Q 2009	
						4Q 2009	
40	Laurel Lake	00449-65	<b>Performance was driven by non-preventable trees, line failure and an unknown cause.</b>				4Q 2008
			Performed mainline reliability thermography inspection	Complete	May-09	1Q 2009	
			Targeted Mainline Reliability Equipment Replacement	Complete	Jun-09	2Q 2009	
			Full cycle tree clearing	Complete	Oct-09	3Q 2009	
						4Q 2009	
41	Fairview East	00218-34	<b>Performance was driven by equipment failure.</b>				
			Repair damage from blown arrester	Complete	Dec-09		

<b>Penelec</b>						
<b>Rank</b>	<b>Substation</b>	<b>Circuit</b>	<b>Remedial Action Planned or Taken</b>	<b>Status of Remedial Work</b>	<b>Date Remedial Work Completed</b>	<b>Appeared in 4 of 6 Quarters</b>
42	Glory	00105-13	<b>Performance was driven by minor storm damage.</b>			
			Repair damage from minor storm	Complete	May-09	
43	Blairsville East	00080-13	<b>Performance was driven by minor storm damage, non-preventable trees, line failure and lightning.</b>			
			Repair damage from minor storm	Complete	Jan-09	
			Repair damage from minor storm	Complete	Dec-09	
44	Northeast	00592-31	<b>Performance was driven by non-preventable trees during minor storm, equipment failure and animal contact.</b>			
			Repair damage from minor storm	Complete	Dec-09	
			Repair Conditions found by previous reliability inspection	To be completed in 2010		
45	Fairview East	00216-34	<b>Performance was driven by non-preventable trees during minor storm.</b>			
			Repair damage from minor storm	Complete	Oct-09	
46	Green Garden	00224-31	<b>Performance was driven by equipment failure during minor storm.</b>			
			Repair damage from minor storm	Complete	Dec-09	
47	North Meshoppen	00437-65	<b>Performance was driven by non-preventable trees during minor storm and equipment failure.</b>			
			Repair damage from minor storm	Complete	Jun-09	
			Engineering review of overload caused outages for corrective actions	Complete	Dec-09	
48	Mercer Pike	00474-52	<b>Performance was driven by non-preventable tree during minor storms and an unknown cause.</b>			
			Repair damage from minor storm	Complete	Aug-09	
			Repair damage from minor storm	Complete	Dec-09	
49	Shawville	00153-21	<b>Performance was driven by car-pole accident, equipment and line failure and non-preventable trees during minor storm.</b>			1Q 2009 2Q 2009 3Q 2009 4Q 2009
			Repair damage from CPA	Complete	Mar-09	
			Repair damage from CPA	Complete	May-09	
			Engineering review of full circuit coordination	Complete	Sep-09	
			Target Mainline Reliability Equipment Replacement	Complete	Sep-09	
			Repair damage from minor storm	Complete	Dec-09	
			Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010		
Repair Conditions found by previous reliability inspection	To be completed in 2010					
50	Eagles Mere	00777-62	<b>Performance was driven by damage during minor storm and car-pole accident.</b>			
			Repair damage from minor storm	Complete	Aug-09	

Penelec								
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters		
51	East Sayre	00518-61	<b>Performance was driven by equipment failure, line failure and a minor storm.</b>					
			Review circuit for additional fault indicators	Complete	Mar-09			
			Repair damage from minor storm	Complete	Jun-09			
52	McKean	00411-34	<b>Performance was driven by non-preventable tree during minor storms, equipment and line failure, car-pole accident and an unknown cause.</b>					
			Repair damage from minor storm	Complete	Dec-09			
53	Erie South	00312-31	<b>Performance was driven by car-pole accident, unknown cause, lightning and line failure.</b>					
			Repair damage from car-pole accident	Complete	Sep-09			
54	East Pike	00095-13	<b>Performance was driven by lightning and trees non-preventable during minor storm, equipment failure, unknown cause and line failure</b>				3Q 2008 4Q 2008 1Q 2009 4Q 2009	
			Repair damage from minor storm	Complete	Aug-09			
			Repair damage from minor storm	Complete	Dec-09			
55	Eagles Mere	00686-62	<b>Performance was driven by non-preventable trees and equipment failure during minor storms, car-pole accident and equipment failure.</b>					
			Repair damage from minor storm	Complete	Aug-09			
			Repair damage from minor storm	Complete	Dec-09			
56	Russell Hill	00282-65	<b>Performance was driven by non-preventable trees during minor storm and equipment failure.</b>				3Q 2008 2Q 2009 3Q 2009 4Q 2009	
			Repaired damage from minor storm	Complete	Jun-09			
			Engineering review of full circuit coordination	Complete	Sep-09			
			Repair Conditions found by previous reliability inspection	To be completed in 2010				
57	Madera	00167-22	<b>Performance was driven by line and equipment failure and non-preventable trees and equipment failure during minor storms.</b>					
			Repair damage from minor storm	Complete	May-09			
			Repair damage from minor storm	Complete	Dec-09			
			Reliability Coordinator to inspect circuit based on outage history	To be completed in 2010				
58	Tunkhannock	00695-65	<b>Performance was driven by non-preventable trees during minor storm and equipment failure.</b>					
			Full cycle tree trimming	Completed	Mar-09			
			Repair damage from minor storm	Completed	Jun-09			
59	Port Allegany	00151-42	<b>Performance was driven by equipment failure and non-preventable trees/equipment failure during minor storm.</b>					
			Repair damage from minor storm	Completed	Oct-09			

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Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
1	Fox Hill Substation	00816-3	<b>Performance was driven by overload, non-preventable tree and equipment related outages.</b>			4Q2009
			Install 3ph electronic recloser @ Chipperfield Dr	Complete	Sep-08	3Q2009
			Routine Tree Maintenance in 2008	Complete	Sep-08	2Q2009
			UG backbone Fault locators	Complete	Sep-08	1Q2009
			Perform accelerated three phase and backbone assessment, repair items	Complete	Oct-08	4Q2008
			Circuit Automation (Radio controlled equipment)	Complete	Jun-09	3Q2008
			Study Additional Backbone Protection	Complete	Aug-09	
2	Walker Sub	00865-3	<b>Performance driven by single storm and access/traffic issues</b>			4Q2009
			Overloaded XFMR and fuses replacement	Complete	Nov-08	3Q2009
			Review Additional Main Line Tap Fusing	Complete	Feb-09	2Q2009
			Study Circuit Configuration	Complete	Aug-09	1Q2009
			Study Primary Customer Tap Fusing	Complete	Aug-09	4Q2008
3	No Bangor	00826-3	<b>Performance was driven by non-preventable trees and vehicle related outages</b>			4Q2009
			Perform accelerated three phase and backbone assessment, repair items	Complete	Aug-08	3Q2009
			Install Radio Control on 812 tie switch	Complete	Nov-08	2Q2009
			Overloaded fuses replacement	Complete	Feb-09	1Q2009
			Forestry to perform on cycle comprehensive circuit Tree Trimming	To be completed in 2010		4Q2008
						3Q2008
4	Bath	00873-3	<b>Performance was driven by vehicle accidents, non-preventable trees and equipment failure</b>			4Q2009
			Study Downtown Bath Sectionalization	Complete	Jul-09	3Q2009
			Study Bath Substation Automation	Complete	Jul-09	2Q2009
			Forestry to perform on cycle comprehensive circuit Tree Trimming	To be completed in 2010		1Q2009
						4Q2008
			3Q2008			
5	Yorkana Substation	00715-4	<b>Performance driven by non-preventable tree cause outages (91% of minutes).</b>			4Q2009
			2009 vegetation management - condition based	Complete	Feb-09	3Q2009
			Repair critical items identified from Comprehensive Circuit Patrol	Complete	Sep-09	4Q2008
			Install 5 additional sectionalizing switches	Complete	Nov-09	3Q2008
			Repair 5 critical items identified from backbone assessment	Complete	Dec-09	
			Repair critical items identified from backbone assessment	Complete	Dec-09	
			Perform removal of danger trees	Complete	Dec-09	
			Install additional fuses to protect the circuit backbone	Complete	Dec-09	
Install three radio controlled switches with fault indicators	To be completed in 2010					

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Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
6	Shawnee Sub	00895-3	<b>Performance was driven by lightning, car pole accidents and non-preventable tree-related outages</b>			4Q2009
			Install Radio Controlled Switches	Complete	Dec-08	3Q2009
			Comprehensive Tree Trimming	Complete	Dec-08	2Q2009
			Repair critical items identified from backbone assessment & circuit patrol	Complete	Mar-09	1Q2009
			Install radio control communication equipment on existing automation	Complete	Aug-09	4Q2008
			Main Line Back Bone protection (lateral fusing)	Complete	Nov-09	3Q2008
7	19th and Cotton	00153-1	<b>Performance driven by Switch (Cutout) equipment failure</b>			
			Pole Replacement	Complete	Oct-08	
			Perform accelerated three phase and backbone assessment	Complete	Dec-09	
			Replace Switch T1-156 w/ 600 A Disc.	To be completed in 2010		
			Replace Switch T3-153 w/ 600 A Disc.	To be completed in 2010		
			Replace Switch 15336 w/ 600 A Disc.	To be completed in 2010		
			Replace Switch T1-153 w/ 600 A Disc.	To be completed in 2010		
Replace Switches 13629 & 13659 w/ 600 A Disc.	To be completed in 2010					
Install Fuse Bypass Switch	To be completed in 2010					
8	Birdsboro	00756-1	<b>Performance driven by non-preventable trees (48%), unidentified causes during high wind conditions (24%) and a forced outage due to a car pole accident (16%).</b>			
			Install Substation Animal Protection	Complete	Nov-08	
			Crossarm and Guy Wire Repairs	Complete	May-09	
			Perform backbone assessment	Complete	Feb-09	
			Perform three phase assessment	Complete	Feb-09	
			Perform Fault Current Indicator Installation Engineering Study	Complete	Oct-09	
			Install Fault Current Indicators at six locations	Complete	Dec-09	
Forestry to perform on cycle comprehensive circuit Tree Trimming	To be completed in 2010					
9	Newberry Sub	00576-4	<b>Performance driven by non-preventable tree cause outages (68% of minutes) and by line failure outages (23% of minutes)</b>			4Q2009
			Perform Accelerated circuit three phase backbone assessment	Complete	Feb-09	3Q2009
			Perform Accelerated circuit main three phase assessment	Complete	Feb-09	2Q2009
			Perform tree patrol on the tree problem areas of the circuit	Complete	Apr-09	1Q2009
			Perform line patrol of high line failure area of the circuit	Complete	Dec-09	
			Repair critical items identified from the Backbone Assessment	Complete	Dec-09	
			Forestry to perform on cycle comprehensive circuit Tree Trimming	To be completed in 2010		
10	Mountain Substation	00744-4	<b>Performance driven by trees as cause of 61% of circuit minutes and related equipment issues accounting for 30% of minutes. At least 44% of circuit minutes were directly attributable to trees in the radially served Pine Grove Rd - Michaux State Forest area.</b>			4Q2009
			Forestry Patrol Pine Grove State Forest area	Complete	Oct-08	3Q2009
			Forestry perform spot trims in Pine Grove State Forest area	Complete	Oct-08	2Q2009
			Replaced one pole and one crossarm identified during patrol	Complete	Dec-08	1Q2009
			Perform accelerated circuit reliability assessment including Pine Grove Rd - no Priority 1 findings	Complete	Feb-09	4Q2008
			Install digital recording ammeters on Pine Grove Road and study W/inter loading	Complete	Mar-09	3Q2008
			Installed 3 phase fault indicators 2 locations	Complete	Mar-09	
			Forestry patrol Pine Grove Road	Complete	Apr-09	
			Forestry off cycle trim Pine Grove Rd & State Forest area, removed 11 trees and spot trimmed multiple locations	Complete	Apr-09	
			Replaced 5 poles, 10 crossarms, and 6 other items found during patrol	Complete	Jun-09	
			Engineering study to install additional fault indicators	Complete	Oct-09	
			Install fault indicators 12 locations	Complete	Nov-09	
			Forestry to perform on cycle comprehensive circuit Tree Trimming	To be completed in 2010		

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Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
11	Shawnee Sub	00837-3	<b>Performance was driven by tree contacts and equipment failure related outages.</b>			4Q2009
			Forestry Patrol of Lockout Zone	Complete	Jul-09	3Q2009
			Repair critical items identified from backbone assessment & circuit patrol	Complete	Apr-09	2Q2009
			Install radio control communication equipment and automation	Complete	Dec-09	1Q2009
12	Dillsburg Substation	00749-4	<b>Performance driven by trees as cause at 92% of minutes, 59% of minutes from the October 7, 2009 tree on mainline incident.</b>			4Q2009
			Perform accelerated circuit reliability assessment of three phase	Complete	Feb-09	2Q2009
			Perform accelerated circuit reliability assessment of mainline	Complete	May-09	1Q2009
			Repaired one Priority 1 finding on mainline	Complete	May-09	4Q2008
			Installed additional fusing or re-coordinated fusing at 3 locations	Complete	Sep-09	3Q2008
			Upgrade recloser one location	Complete	Sep-09	
			Replaced 2 poles 1 crossarm 7 insulators and 5 other items identified during patrols	Complete	Sep-09	
Forestry to perform on cycle comprehensive circuit Tree Trimming	To be completed in 2010					
13	Gardners	00752-4	<b>Performance driven by vehicle contacts (13) as cause at 65% of circuit minutes and trees at 26% of minutes. 19% of minutes from tree trouble during the Jan 7, 2009 ice storm and 25% of minutes from one vehicle contact on Feb 3, 2009.</b>			4Q2009
			Repaired 5 items found during reliability assessment	Complete	Oct-08	3Q2009
			Replaced 6 poles, 4 crossarms, and 13 other items identified during patrol	Complete	Oct-08	2Q2009
			Perform mainline Forestry Patrol as followup to 1/7/09 ice storm	Complete	Jan-09	1Q2009
			Perform hot spot pine tree removals on mainline near Gardners sub	Complete	Jan-09	
			Perform accelerated circuit reliability assessment of three phase	Complete	Apr-09	
			Perform accelerated circuit reliability assessment of mainline	Complete	Sep-09	
Forestry to perform on cycle comprehensive circuit Tree Trimming in 2011, evaluating for spot trimming in 2010	To be completed in 2011					
14	S Nazareth	00809-3	<b>Performance driven by trees non-preventable, line failure and equipment failure.</b>			4Q2009
			Main Line Enhanced Tree Clearing	Complete	Feb-09	3Q2009
			Install Fault Indicators	Complete	Jun-09	2Q2009
			Install Fused Bypass	Complete	Jul-09	1Q2009
			Install 3ph electronic recloser	To be completed in 2010		4Q2008
			3Q2008			
15	North Lebanon	00712-2	<b>Performance was driven by a tree-caused outage, an equipment problem (splice), a company tree contractor contacting mainline conductors, a squirrel contact at a mainline recloser, and a vehicle accident.</b>			4Q2009
			Install Animal Protection Mainline Recloser	Complete	Feb-09	3Q2009
			Replace Lightning Arrestors	Complete	Jun-09	2Q2009
			Install Additional Mainline Switch	Complete	Jul-09	1Q2009
			Comprehensive Tree Trimming	Complete	Nov-09	4Q2008
Reconfigure Circuit/Minimize Exposure	To be completed in 2010		3Q2008			
16	Bridgeton Sub	00117-3	<b>Performance was driven by single storm and tree-related outages.</b>			
			Comprehensive Tree Trimming	Complete	Dec-09	

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17	Mt Rose Sub	00564-4	<b>Performance driven by non-preventable tree cause outages (84% of minutes)</b>			
			Perform tree patrol on the tree problem areas of the circuit	Complete	Apr-09	
			Repair critical items identified from the Backbone Assessment	Complete	Jul-09	
			Forestry perform off cycle patrol and trim/remove any required trees	Complete	Oct-09	
			Forestry to perform on cycle comprehensive circuit Tree Trimming	To be completed in 2010		
			Install additional fuse to protect the circuit backbone	To be completed in 2010		
			Install addition main line switch for additional sectionalizing capability to the circuit	To be completed in 2010		
			Install an additional main line recloser.	To be completed in 2010		
18	Ringing Rocks Sub	00708-1	<b>Performance driven by company human error during tree trimming (47%) and trees non preventable (34%).</b>			
			Perform accelerated three phase assessment.	Complete	Mar-09	
			Crossarm and arrestor repairs	Complete	Jul-09	
			Comprehensive Tree Trimming	Complete	Jul-09	
			Perform accelerated backbone assessment.	Complete	Nov-09	
19	Pine Lane Sub	00720-1	<b>Performance driven by single minor storm.</b>			
			Perform accelerated three phase assessment	Complete	Mar-09	
			Arrester repair	Complete	Jun-09	
			Perform fault current indicator installation engineering study	Complete	Oct-09	
			Perform accelerated backbone assessment	Complete	Nov-09	
			Install fault current indicators at ten locations	Complete	Dec-09	
			Install recloser	To be completed in 2010		
			Forestry to perform on cycle comprehensive circuit tree trimming in 2011, evaluating for spot trimming in 2010	To be completed in 2011		
20	Pine Lane Sub	00713-1	<b>Performance driven by single minor storm.</b>			
			Perform accelerated backbone assessment	Complete	Feb-09	
			Perform accelerated three phase assessment	Complete	Feb-09	
			Install main-line tap fuses	Complete	Jun-09	
			Perform fault current indicator installation engineering study	Complete	Oct-09	
			Install fault current indicators at ten locations	Complete	Dec-09	
			Forestry to perform on cycle comprehensive circuit tree trimming in 2011, evaluating for spot trimming in 2010	To be completed in 2011		
21	No Bangor	00838-3	<b>Performance was driven by minor storm and non-preventable tree outages.</b>			
			Arrester/crossarm repair	Complete	Feb-09	
			Fuse link changes	Complete	Nov-09	
22	Bern Church Sub	00789-1	<b>Performance driven by car-pole accident and five tree caused outages.</b>			
			Install overhead fault indicators at three locations	Complete	Sep-08	
			Spot tree trimming at three locations	Complete	Oct-08	
			Perform accelerated three phase and backbone assessment	Complete	Apr-09	
			UG cable replacement Sunny Slopes	Complete	Aug-09	
			Install overhead fault indicators at two locations	To be completed in 2010		
			Guy wire repairs at three locations	To be completed in 2010		
			Forestry to perform on cycle comprehensive circuit tree trimming	To be completed in 2010		

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Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
23	River View Sub	00793-1	<b>Performance driven by two equipment failures (crossarm, cutout) and one animal outage.</b>			
			Comprehensive tree trimming	Complete	Jun-09	3Q 2008
			Install fault indicators at two existing switch locations	Complete	Jun-09	4Q 2008
			Perform circuit three phase backbone assessment	Complete	Jul-09	1Q 2009
			Pole repair/replace	Complete	Dec-09	2Q 2009
			Additional fusing	Complete	Dec-09	3Q 2009
			Two new mainline switch installations w/ fault indicators	To be completed in 2010		4Q 2009
24	Barto Sub	00706-1	<b>Performance driven by non-preventable trees (50%) and a forced outage due to a car pole accident (26%).</b>			
			Comprehensive tree trimming	Complete	Mar-09	
			Perform accelerated three phase assessment	Complete	Mar-09	
			Perform accelerated backbone assessment	Complete	Oct-09	
25	Shawnee Sub	00822-3	<b>Performance driven by ice and equipment failure.</b>			
			Install vertical radio controlled bridges switch	Complete	Dec-08	3Q 2008
			Replace overloaded fuses	Complete	Oct-08	4Q 2008
			Install SCADA and radio controls	Complete	Feb-09	1Q 2009
			Repair critical items identified from backbone assessment and circuit patrol	Complete	Sep-09	2Q 2009
26	Ferndale Sub	00871-3	<b>Performance driven by tree-related outages.</b>			
			Comprehensive tree trimming	Complete	Mar-09	3Q 2009
27	Annville Substation	00743-2	<b>Performance was primarily driven by tree caused outages and cutout failures.</b>			
			Forestry patrol of backbone and all of three-phase along Lancaster Ave	To be completed in 2010		
			Perform accelerated circuit reliability assessment	To be completed in 2010		
28	Shawnee Sub	00899-3	<b>Performance was driven by non-preventable trees, equipment and line failure related outages.</b>			
			Perform accelerated circuit reliability assessment	Complete	Sep-08	3Q 2008
			Retire three-phase sectionalizer	Complete	Nov-08	4Q 2008
			Routine tree maintenance	Complete	Mar-09	1Q 2009
			Study additional backbone protection	Complete	Nov-09	2Q 2009
			PM/CM items repair	Complete	Dec-09	3Q 2009
29	Belfast Sub	00817-3	<b>Performance driven by single minor storm</b>			
			Perform backbone assessment	Complete	Feb-09	
			Install main-line tap fuses	Complete	Jun-09	
			Install three-phase electronic recloser	To be completed in 2010		
30	Swatara Hill Sub	00764-2	<b>Performance was driven by tree caused outages, two vehicle accidents, a raccoon on a capacitor bank, lightning strikes and a failed cutout.</b>			
			Comprehensive tree trimming	Complete	Dec-09	
			Install mainline recloser	To be completed in 2010		
			Install GOAB and fault indicators	To be completed in 2010		

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Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
31	Menges Mills	00543-4	<b>Performance driven by trees at 52% of total minutes and vehicle contacts at 35% of minutes. 32% of minutes from a single car-pole accident on 3/1/08. 43% of minutes from the 12/2/09 Lake Rd tree incident.</b>			
			Perform accelerated circuit reliability assessment of three phase	Complete	Mar-09	
			Replaced 3 pole, 4 crossarms, and 1 other item found during line patrol	Complete	Apr-09	
			Perform accelerated circuit reliability assessment of mainline	Complete	Oct-09	
			Forestry to perform on cycle comprehensive circuit tree trim in 2009	Complete	Nov-09	
			Engineering Patrol following Lake Rd outage	Complete	Dec-09	
			Spot forestry trims following engineering patrol	Complete	Dec-09	
			Replaced 1 pole following engineering patrol	Complete	Dec-09	
32	Dillsburg Substation	00746-4	<b>Performance driven by tree as cause at 84% of minutes. 40% of minutes from the 10/7/09 tree incident.</b>			
			Replaced nine poles found during line patrol	Complete	Dec-08	
			Replace one pole found during line patrol	Complete	Jan-09	
			Installed three-phase fault locators one location	Complete	Jan-09	
			Replace two crossarms, three bell insulators, three cutouts and one misc item found during patrol	Complete	May-09	
			Perform accelerated circuit reliability assessment of mainline	Complete	Oct-09	
			Perform accelerated circuit reliability assessment of three phase	Complete	Dec-09	
Forestry to perform on cycle comprehensive circuit tree trimming	To be completed in 2010					
33	Gardners	00750-4	<b>Performance driven by vehicle contact at 62% of minutes, equipment failure at 20% and line failure at 17% of minutes. 60% of minutes from one car-pole accident, 19% of equipment failure due to one mainline cutout failure and 13% of minutes from wire down during the 2/12/09 windstorm.</b>			
			Replaced 14 poles, 8 crossarms, 2 sets of insulators, 2 guys, one arrester	Complete	Oct-08	
			Animal guarded 2 locations	Complete	Nov-08	
			Perform accelerated circuit reliability assessment of three phase	Complete	Apr-09	
			Perform accelerated circuit reliability assessment of mainline	Complete	Sep-09	
			Forestry to perform on cycle comprehensive circuit tree trimming in 2011, evaluating for spot trimming in 2010	To be completed in 2011		
34	Birchwood Sub	00622-3	<b>Performance driven by non-preventable tree, animal contact and wind related outages.</b>			3Q 2008
			Performs distribution automation feasibility study	Complete	Dec-08	4Q 2008
			Study further backbone protection	Complete	Aug-09	1Q 2009 2Q 2009
35	Adamstown	00754-1	<b>Performance driven by two tree caused outages &amp; five underground equipment problems.</b>			3Q 2009
			Comprehensive tree trimming	Complete	Dec-08	4Q 2009
			Upgraded StepBank	Complete	Sep-09	
			Perform accelerated three phase and backbone assessment	Complete	Nov-09	
			Weish Meadows underground cable replacement (3-Spans), elbow, and 3-way feed-thru	To be completed in 2010		
Install fault indicators (4 Locations)	To be completed in 2010					

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
36	Taxville	00575-4	<b>Performance driven by vehicle contact cause outages (51% of minutes), with one vehicle caused outage accounting for 57% of those minutes and by line failure outages (44% of minutes).</b>			
			Install additional fuses to protect the circuit main three phase	Completed	Mar-09	
			Perform accelerated circuit three phase backbone assessment	Completed	Mar-09	
			Perform accelerated circuit main three phase assessment	Completed	May-09	
			Repair critical items identified from backbone assessment	Completed	Jun-09	
			Forestry to perform on cycle comprehensive circuit tree trimming	Completed	Oct-09	
37	Bernville Sub	00786-1	<b>Performance driven by (2) Equipment Problems (1st cutout, 2nd Line Recloser), line Problem, animal, and tree caused outages.</b>			
			Replace lightning arresters, crossarms and crossarm brace	Complete	May-09	
			Pole replacements	Complete	May-09	
			Install fault indicators (5 mainline switch locations)	Complete	May-09	
			Perform accelerated three phase and backbone assessment	Complete	Oct-09	
			Guy wire repairs	Complete	Dec-09	
			Comprehensive tree trimming	Complete	Dec-09	
Install fault indicators at existing main-line switch	To be completed in 2010					
	Birchwood	00624-3	<b>Performance was driven by non-preventable trees and vehicle related outages.</b>			
			Replace overloaded fuses	Complete	Aug-08	3Q 2008
			Install animal guards on Reclosers	Complete	Aug-08	4Q 2008
			Install animal guards on three reclosers	Complete	Sep-08	1Q 2009
			Performed CRC maintenance inspections & repair	Complete	Oct-08	2Q 2009
			Tap changes, overloaded fuses	Complete	Mar-09	3Q 2009
			Primary customer tap fusing	Complete	Mar-09	
Mainline backbone protection (lateral fusing)	Complete	Nov-09				
	Glendon	00818-3	<b>Performance was driven by line failure, non-preventable trees and lightning related outage.</b>			3Q 2008
			Install GOAB Switch	Complete	Oct-08	4Q 2008
			Replace conductors	Complete	Oct-08	1Q 2009
			Install Fault Indicators	Complete	Feb-09	2Q 2009
	Northwood	00821-3	<b>Performance was driven by single equipment failure event.</b>			4Q 2008
			Install lightning arrestors	Complete	Oct-08	1Q 2009
			Perform backbone assessment	Complete	Apr-09	2Q 2009
			Upgrade fuse links	Complete	Apr-09	3Q 2009
	Yorkana	00708-4	<b>Performance driven by human-error company during tree trimming and non-preventable trees (34%).</b>			3Q 2008
			Crossarm and arresor repairs	Complete	Jul-09	4Q 2008
			Comprehensive tree trimming	Complete	Mar-09	1Q 2009
						2Q 2009

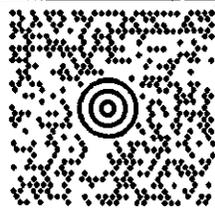
Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
	Barto	00704-1	<b>Performance driven by an outage caused by a lightning related outage.</b>			
			Install Additional Tap Fuses	Complete	Jan-08	3Q 2008
			Repair Mainline Spacer Cable	Complete	Jul-08	4Q 2008
			Condition Based Tree Trimming	Complete	Mar-09	1Q 2009
			Install Additional Mainline Switch	Complete	Jun-09	2Q 2009
			Install Additional Mainline Fault Indicators	Complete	Jun-09	
	Rosedale	00155-1	<b>Performance driven by a tree-caused and vehicle outages.</b>			4Q 2008
			Crossarm Replacement	Complete	Aug-08	1Q 2009
			Install Additional Fusing	Complete	Dec-09	2Q 2009
	Birdsboro	00757-1	<b>Performance driven by three tree-caused outages, an outage caused by a mainline switch problem and an outage caused by a squirrel contact in Birdsboro Substation.</b>			
			Spot Forestry Inspection	Complete	Aug-08	3Q 2008
			Replace Mainline Switch	Complete	Aug-08	4Q 2008
			Spot Tree Trimming	Complete	Sep-08	1Q 2009
			Install Substation Animal Protection	Complete	Nov-08	2Q 2009
			Comprehensive Circuit Inspection Repairs	Complete	May-09	
		Perform backbone assessment	Complete	Feb-09		

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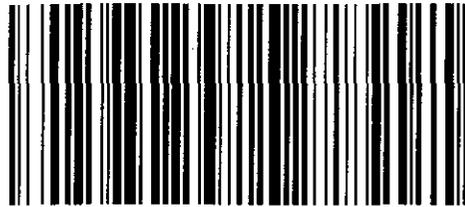
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