

February 1, 2011

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L-00030161

Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
P.O. Box 3265  
Harrisburg, PA 17120

PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

Re: Joint 4<sup>th</sup> Quarter 2010 Reliability Report – Pennsylvania Power Company, Pennsylvania Electric Company and Metropolitan Edison Company - Pursuant to 52 Pa. Code § 57.195(d)and(e)

Dear Secretary Chiavetta,

Enclosed for filing on behalf of Pennsylvania Power Company, Pennsylvania Electric Company, and Metropolitan Edison Company (collectively, the “Companies”) is an original and six (6) copies of their Joint 4<sup>th</sup> Quarter 2010 Reliability Report – Public Version, pursuant to 52 Pa. Code § 57.195(d) and (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 proprietary versions of the quarterly reliability reports. The Proprietary Version of this report is being filed under separate cover.

Sincerely,



Douglas S. Elliott  
President, Pennsylvania Operations  
(610) 921-6060  
elliottd@firstenergycorp.com



Eric J. Dickson  
Director, Operations Services  
(330) 384-5970  
dicksone@firstenergycorp.com

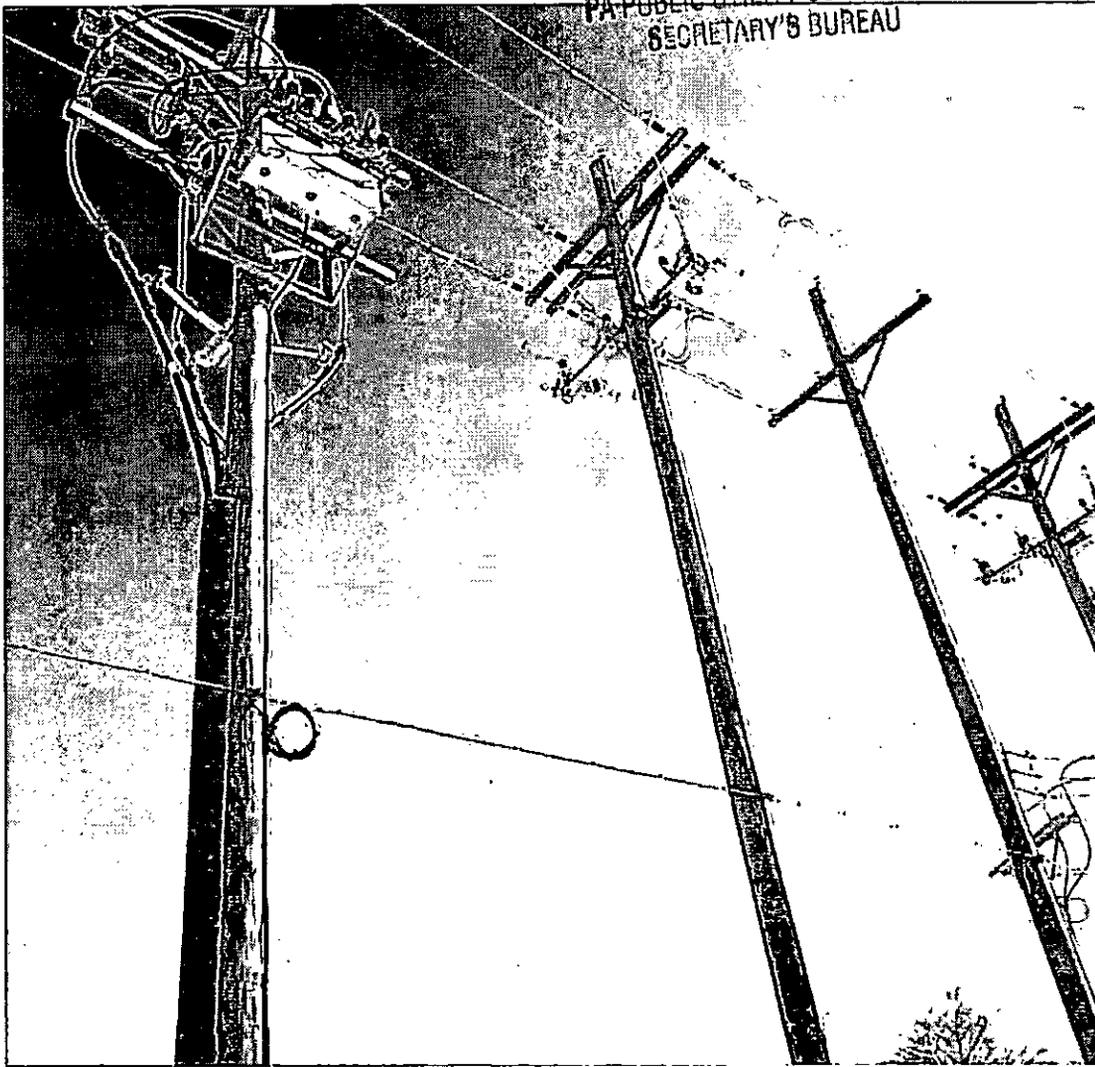
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PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU



## Joint 2010 4th Quarter Reliability Report

Pennsylvania Power Company  
Pennsylvania Electric Company and  
Metropolitan Edison Company

Pursuant to 52 Pa. Code § 57.195(d) and (e)



2800 Pottsville Pike  
P.O. Box 16001  
Reading, PA 19612-6001

610-929-3601

February 1, 2011

Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
P.O. Box 3265  
Harrisburg, PA 17120

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## Joint 4<sup>th</sup> Quarter 2010 Reliability Report – Pennsylvania Power Company, Pennsylvania Electric Company and Metropolitan Edison Company

The following Joint 4Q 2010 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, 2010.

*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, 2010<sup>a</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

*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 2010 (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	1.01	1.26	1.52	1.31	1.15	1.38	1.51 <sup>b</sup>
CAIDI	101	121	95	117	141	124	117	140	120
SAIDI	113	162	95	148	213	162	135	194	181
Customers Served <sup>(a)</sup>	158,102			583,914			546,740		
Number of Sustained Interruptions	3,038			11,325			13,002		
Customers Affected	159,615			763,846			823,797		
Customer Minutes	15,086,521			94,759,008			98,740,558		

(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 2010 are:

- better than the Commission's 12-Month Standard for 8 out of 9 reliability indices (SAIFI, CAIDI, SAIDI)
- better than, or equal to, the Commission's Benchmark for 3 of the 9 reliability indices

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Penn Power	
SAIFI	25% better than Commission's 12-Month Standard 10% better than Commission's Benchmark
CAIDI	21% better than Commission's 12-Month Standard 6% better than Commission's Benchmark 15% improvement over 12-Month Rolling Actual for 3Q 2010
SAIDI	41% better than Commission's 12-Month Standard 16% better than Commission's Benchmark 13% improvement over 12-Month Rolling Actual for 3Q 2010
Penelec	
SAIFI	14% better than Commission's 12-Month Standard 3% improvement over 12-Month Rolling Actual for 3Q 2010
CAIDI	12% better than Commission's 12-Month Standard 5% improvement over 12-Month Rolling Actual for 3Q 2010
SAIDI	24% better than Commission's 12-Month Standard 8% improvement over 12-Month Rolling Actual for 3Q 2010
Met-Ed	
CAIDI	14% better than Commission's 12-Month Standard 3% improvement over 12-Month Rolling Actual for 3Q 2010
SAIDI	7% better than Commission's 12-Month Standard

<sup>b</sup> Met-Ed's higher-than-normal SAIFI is directly attributed to several non-excludable storm events. In 2011, Met-Ed plans to continue a series of reliability improvement initiatives to "harden" the three-phase distribution backbone. Examples of these SAIFI initiatives include SAIFI engineering analysis on the high SAIFI circuits and installing additional fuses and reclosers as well as continued emphasis on improved handling of Forestry Management to target overhang and off-corridor danger trees.

*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

<b>Outages by Cause</b>				
<b>4th Quarter 2010 12-Month Rolling</b>	<b>Penn Power</b>			
<b>Cause</b>	<b>Customer Minutes</b>	<b>Number of Sustained Interruptions</b>	<b>Customers Affected</b>	<b>% Based on Number of Outages</b>
TREES/NOT PREVENTABLE	4,802,629	579	30,368	19.06%
LIGHTNING	1,667,680	493	14,065	16.23%
EQUIPMENT FAILURE	3,299,932	420	62,602	13.82%
ANIMAL	718,010	390	10,741	12.84%
BIRD	349,639	320	4,848	10.53%
LINE FAILURE	1,483,109	236	9,661	7.77%
UNKNOWN	450,890	162	4,990	5.33%
VEHICLE	1,273,276	98	7,960	3.23%
OVERLOAD	117,029	89	1,638	2.93%
FORCED OUTAGE	346,450	56	7,318	1.84%
PREVIOUS LIGHTNING	45,248	52	799	1.71%
HUMAN ERROR -NON-COMPANY	296,133	44	1,869	1.45%
TREES/PREVENTABLE	87,948	40	696	1.32%
ICE	1,811	14	15	0.46%
CUSTOMER EQUIPMENT	99,922	13	1,377	0.43%
UG DIG-UP	5,020	12	30	0.39%
OBJECT CONTACT WITH LINE	17,102	10	290	0.33%
HUMAN ERROR - COMPANY	10,845	6	198	0.20%
VANDALISM	12,114	2	136	0.07%
CONTAMINATION	1,632	1	12	0.03%
FIRE	102	1	2	0.03%
<b>TOTAL</b>	<b>15,086,521</b>	<b>3,038</b>	<b>159,615</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.

### Lightning

The number of lightning caused outages are mitigated through Penn Power’s reliability improvement strategy. This includes the inspection and maintenance practices such as circuit inspections and annual main feed inspections. These inspections can locate blown lightning arresters, broken grounds, and other condition items which could lead to higher lightning caused outages. Substations also contain lightning protection through equipment and line arresters and grounding. These items are maintained by our substation group based on our substation practices. Distribution protection coordination reviews allow for fewer number of customers affected and quicker isolation of the affected circuit sections. In addition, Penn Power conducts periodic reviews of multi-operation devices to identify causes and trends and will engineer solutions to reduce the frequency of the outages.

### 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 2010, 92 of Penn Power's circuits main feed three phase backbone were inspected to identify critical problems before they cause an outage. Infrared scanning of three-phase backbone occurred on 9 circuits. These scans find "hot spots" that are repaired before they can cause an outage. In addition, comprehensive helicopter inspections were performed on 119 miles of 69kV lines to identify critical problems before an outage is caused.

Outages by Cause – Penelec

<b>Outages by Cause</b>				
<b>4th Quarter 2010 12-Month Rolling</b>	<b>Penelec</b>			
<b>Cause</b>	<b>Customer Minutes</b>	<b>Number of Sustained Interruptions</b>	<b>Customers Affected</b>	<b>% Based on Number of Outages</b>
EQUIPMENT FAILURE	21,673,206	3,337	212,441	29.47%
UNKNOWN	6,790,147	1,723	91,063	15.21%
TREES/NOT PREVENTABLE	27,244,159	1,529	140,645	13.50%
ANIMAL	2,832,370	1,150	25,231	10.15%
LINE FAILURE	13,017,146	858	113,765	7.58%
FORCED OUTAGE	2,548,171	643	44,191	5.68%
LIGHTNING	4,929,119	504	34,786	4.45%
BIRD	474,568	362	6,454	3.20%
VEHICLE	4,375,025	312	27,784	2.75%
OVERLOAD	968,447	168	13,311	1.48%
HUMAN ERROR - COMPANY	170,466	115	8,926	1.02%
HUMAN ERROR -NON-COMPANY	925,049	103	7,986	0.91%
ICE	54,316	89	356	0.79%
OTHER ELECTRIC UTILITY	246,941	84	1,341	0.74%
UG DIG-UP	378,451	74	1,876	0.65%
PREVIOUS LIGHTNING	18,945	71	148	0.63%
WIND	6,870,559	60	21,189	0.53%
TREES/PREVENTABLE	30,718	38	359	0.34%
OBJECT CONTACT WITH LINE	407,328	25	1,676	0.22%
VANDALISM	418,795	22	2,040	0.19%
FIRE	64,192	19	499	0.17%
CUSTOMER EQUIPMENT	22,084	16	101	0.14%
OTHER UTILITY-NON ELEC	86,177	12	1,852	0.11%
SWITCHING ERROR	193,786	7	5,597	0.06%
CONTAMINATION	18,843	4	229	0.04%
<b>TOTAL</b>	<b>94,759,008</b>	<b>11,325</b>	<b>763,846</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

<b>Outages by Cause</b>				
<b>4th Quarter 2010 12-Month Rolling</b>	<b>Met-Ed</b>			
<b>Cause</b>	<b>Customer Minutes</b>	<b>Number of Sustained Interruptions</b>	<b>Customers Affected</b>	<b>% Based on Number of Outages</b>
EQUIPMENT FAILURE	19,426,569	5034	233,486	38.72%
TREES/NOT PREVENTABLE	41,317,679	2273	215,128	17.48%
ANIMAL	2,926,237	1705	33,264	13.11%
UNKNOWN	4,780,093	1311	48,786	10.08%
LINE FAILURE	10,822,550	889	82,550	6.84%
LIGHTNING	2,566,969	374	16,243	2.88%
FORCED OUTAGE	3,298,165	331	55,155	2.55%
VEHICLE	6,690,576	277	53,493	2.13%
BIRD	102,531	189	1,703	1.45%
TREES/PREVENTABLE	868,086	149	8,521	1.15%
OVERLOAD	1,924,803	106	12,534	0.82%
HUMAN ERROR -NON-COMPANY	380,111	73	8,347	0.56%
HUMAN ERROR - COMPANY	885,254	66	40,059	0.51%
PREVIOUS LIGHTNING	131,897	66	1,218	0.51%
UG DIG-UP	91,271	34	480	0.26%
CUSTOMER EQUIPMENT	9,227	24	102	0.18%
ICE	1,984	23	23	0.18%
WIND	1,546,748	21	4,658	0.16%
OBJECT CONTACT WITH LINE	239,998	20	2,047	0.15%
OTHER ELECTRIC UTILITY	317,881	18	2,776	0.14%
VANDALISM	360,127	15	3,040	0.12%
FIRE	51,802	4	184	0.03%
<b>TOTAL</b>	<b>98,740,558</b>	<b>13,002</b>	<b>823,797</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 2010					
Department	Staff	1Q	2Q	3Q	4Q
Line	Leader / Chief	27	27	26	28
	Lineman	54	66	66	64
Substation	Technician	6	6	6	6
	Construction & Maintenance (C&M)	14	16	16	16
Total		101	115	114	114

Penelec 2010					
Department	Staff	1Q	2Q	3Q	4Q
Line	Leader / Chief	140	138	143	146
	Lineman	189	199	208	202
Substation	Technician	8	7	6	6
	Construction & Maintenance (C&M)	69	69	72	71
Total		406	413	429	425

Met-Ed 2010					
Department	Staff	1Q	2Q	3Q	4Q
Line	Leader / Chief	53	53	54	54
	Lineman	159	158	168	168
Substation	Technician	12	12	11	10
	Construction & Maintenance (C&M)	57	56	58	58
Total		281	279	291	290

*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.

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	ENON VALLY	D-545	New Castle	1,020	55	1	533,448	2,138	3.37	528	2.12	250	1.3
2	MERCER	W-128	Clark	1,227	34	0	455,507	1,443	2.88	372	1.18	316	0.0
3	PERRY	W-156	Clark	1,041	58	0	421,863	2,408	2.67	404	2.31	175	0.9
4	EVANS CITY	D-611	Zeli	963	26	0	421,322	2,378	2.66	479	2.71	177	4.2
5	MERCER	W-167	Clark	1,377	61	0	379,757	1,749	2.40	276	1.27	217	0.5
6	CANAL	W-101	Clark	1,499	37	1	326,211	2,294	2.06	218	1.53	142	0.3
7	MCDOWELL	W-122	Clark	649	24	1	320,806	917	2.03	494	1.41	350	2.4
8	HARTSTOWN	W-126	Clark	2,165	69	0	318,357	1,753	2.01	147	0.81	182	3.2
9	ZELIENOPLE	D-603	Zeli	1,200	34	0	318,231	1,292	2.01	262	1.06	246	6.1

- (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	Belmont	00902-11	Johnstown	1,490	7	1	3,000,340	2,486	5.14	2,014	1.67	1,207	1.00
2	Millcreek	00055-11	Johnstown	2,057	23	1	1,616,184	4,413	2.77	786	2.15	366	0.00
3	Springboro	00237-52	Meadville	2,856	82	0	1,603,054	7,693	2.75	561	2.69	208	15.30
4	Hilltop	00048-11	Johnstown	2,559	24	1	1,311,122	3,112	2.25	512	1.22	421	5.21
5	Salix	00070-11	Johnstown	2,266	36	1	1,233,800	3,107	2.11	544	1.37	397	3.89
6	Warren South	00220-41	Warren	2,969	65	0	1,033,681	6,473	1.77	348	2.18	160	5.71
7	Hilltop	00040-11	Johnstown	1,354	40	1	962,897	3,113	1.65	711	2.30	309	17.32
8	Tower 51	00051-11	Johnstown	552	16	0	849,876	857	1.46	1,540	1.55	992	18.06
9	Blairsville East	00082-13	Indiana	1,594	38	2	819,094	4,307	1.40	514	2.70	190	13.05
10	Curryville	00644-71	Altoona	1,774	54	0	769,885	2,779	1.32	434	1.57	277	5.54
11	Buffalo Road	00580-31	Erie	1,253	17	2	701,087	2,811	1.20	560	2.24	249	1.77
12	Rolling Meadows	00310-31	Erie	3,030	24	0	696,199	4,118	1.19	230	1.36	169	10.58
13	Grover	00527-63	Mansfield	1,105	60	0	692,473	2,542	1.19	627	2.30	272	6.93
14	Marienville	00328-51	Oil City	1,200	38	0	686,862	3,071	1.18	572	2.56	224	13.56
15	Powell Avenue	00237-31	Erie	1,897	21	1	641,114	4,965	1.10	338	2.62	129	0.00
16	Union City	00206-43	Corry	3,757	97	0	624,132	3,617	1.07	166	0.96	173	9.74
17	Madera	00166-22	Philipsburg	2,236	73	0	601,337	5,653	1.03	269	2.53	106	6.72
18	Scalp Level	00031-11	Johnstown	1,087	20	0	562,183	3,406	0.96	517	3.13	165	3.20
19	Millcreek	00052-11	Johnstown	1,089	17	0	539,214	2,230	0.92	495	2.05	242	11.93
20	Hammett	00504-31	Erie	1,391	24	1	526,247	5,965	0.90	378	4.29	88	7.26
21	Starrucca	00744-65	Montrose	870	24	0	526,130	2,426	0.90	605	2.79	217	8.15
22	Maitland	00149-81	Lewistown	1,312	42	1	521,331	3,373	0.89	397	2.57	155	8.27
23	Edgewood	00097-13	Indiana	1,355	10	0	494,334	2,663	0.85	365	1.97	186	8.31
24	Bay	00911-11	Johnstown	604	7	1	491,962	667	0.84	815	1.10	738	1.00
25	Curryville	00610-71	Altoona	476	16	1	487,088	699	0.83	1,023	1.47	697	6.00
26	Fairview East	00218-34	Erie	1,008	23	0	475,675	2,736	0.81	472	2.71	174	15.13
27	Erie South	00259-31	Erie	2,567	62	0	447,179	3,937	0.77	174	1.53	114	3.75
28	South Fork	00229-11	Johnstown	617	3	0	437,194	654	0.75	709	1.06	668	0.00

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)	CARDI (7)	MAIFI (7)
29	Cooper	00069-11	Johnstown	669	23	1	421,718	2,558	0.72	630	3.82	165	23.73
30	Nesta Junction Sw 5	00498-51	Oil City	1,121	28	0	421,143	1,700	0.72	376	1.52	248	5.12
31	Eldred	00119-42	Bradford	857	16	2	420,934	2,088	0.72	491	2.44	202	4.73
32	Carlisle Pike	00643-83	Shippensburg	3,052	24	1	412,288	4,621	0.71	135	1.51	89	5.77
33	Green Garden	00224-31	Erie	2,203	22	1	410,537	3,979	0.70	186	1.81	103	6.05
34	St. Benedict	00057-72	Ebensburg	918	11	2	409,826	2,635	0.70	446	2.87	156	2.04
35	Ralphon	00014-12	Somerset	1,639	46	0	405,019	1,583	0.69	247	0.97	256	12.31
36	Athens	00514-61	Sayre	777	25	0	394,060	2,503	0.67	507	3.22	157	6.28
37	Hooversville	00019-12	Somerset	1,616	59	1	391,558	3,764	0.67	242	2.33	104	9.27
38	Blairsville East	00080-13	Indiana	1,081	27	0	386,355	2,594	0.66	357	2.40	149	5.03
39	Port Allegany	00151-42	Bradford	501	13	0	383,648	1,097	0.66	766	2.19	350	0.94
40	Philipsburg	00162-22	Philipsburg	3,270	66	1	358,620	5,612	0.61	110	1.72	64	7.97
41	Two Mile	00127-42	Bradford	1,307	27	1	357,502	2,946	0.61	274	2.25	121	12.22
42	Lake Como	00787-65	Montrose	853	30	0	350,892	2,439	0.60	411	2.86	144	43.83
43	Pennmar	00001-12	Somerset	383	16	1	350,388	1,514	0.60	915	3.95	231	9.58
44	Beechwood	00201-11	Johnstown	398	7	1	349,920	872	0.60	879	2.19	401	4.14
45	Millcreek	00219-11	Johnstown	798	9	0	347,626	324	0.60	436	0.41	1,073	2.00
46	Roxbury Distribution	00138-83	Shippensburg	508	20	1	345,944	1,308	0.59	681	2.57	264	0.00
47	Edinboro	00421-34	Erie	597	8	1	337,673	624	0.58	566	1.05	541	2.57
48	Saxton	00624-73	Bedford	624	9	0	332,820	430	0.57	533	0.69	774	2.09
49	Greenwood	00002-71	Altoona	914	7	0	317,742	878	0.54	348	0.96	362	5.69
50	Brady Street	00136-23	DuBois	665	3	0	301,101	1,323	0.52	453	1.99	228	2.00
51	Seward	00075-11	Johnstown	979	27	0	300,274	3,587	0.51	307	3.66	84	9.06
52	Thompson	00436-65	Montrose	1,357	65	0	295,660	2,321	0.51	218	1.71	127	13.54
53	Lake Como	00788-65	Montrose	624	23	2	289,060	1,698	0.50	463	2.72	170	10.06
54	Corry Central	00430-43	Corry	628	3	1	285,401	1,017	0.49	454	1.62	281	7.96
55	Titusville West	00394-51	Oil City	1,039	17	1	283,356	1,878	0.49	273	1.81	151	0.00
56	Somerset	00016-12	Somerset	1,213	29	1	281,172	1,468	0.48	232	1.21	192	19.07

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)
57	Birmingham	00168-22	Philipsburg	1,050	38	0	280,481	1,761	0.48	267	1.68	159	3.58
58	DuBois	00137-23	DuBois	2,873	61	0	277,217	2,030	0.47	96	0.71	137	4.40
59	Madera	00147-22	Philipsburg	1,073	37	1	274,612	2,354	0.47	256	2.19	117	7.95

- (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 Penelec's SAIDI.
- (7) Distribution circuit SAIDI, SAIFI, CAIDI and MAIFI 12-Month Rolling due to distribution outage causes.

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	ALLEN	00503-4	DILLSBURG	1,908	75	5	2,035,225	12,922	3.72	1,067	6.77	158	24.73
2	BIRDSBORO	00757-1	READING	1,919	57	3	1,515,061	8,121	2.77	790	4.23	187	7.98
3	YORKANA	00708-4	YORK	2,446	65	2	1,449,793	9,108	2.65	593	3.72	159	2.54
4	SHAWNEE	00822-3	STROUDSBURG	3,700	85	1	1,356,924	12,556	2.48	367	3.39	108	4.00
5	ALLEN	00502-4	DILLSBURG	1,029	41	3	1,272,065	2,950	2.33	1,236	2.87	431	7.02
6	MYERSTOWN	00750-2	LEBANON	1,443	23	1	1,266,587	3,173	2.32	878	2.20	399	0.00
7	NEWBERRY	00576-4	YORK	1,795	85	2	1,217,315	7,378	2.23	678	4.11	165	26.73
8	DILLSBURG	00746-4	DILLSBURG	2,130	50	0	1,156,970	3,937	2.12	543	1.85	294	1.10
9	CROSSROADS	00728-4	YORK	1,104	67	0	1,151,436	3,812	2.11	1,043	3.45	302	0.00
10	WINDSOR	00795-4	YORK	963	65	1	960,910	2,422	1.76	998	2.52	397	0.00
11	SWATARA HILL	00763-2	LEBANON	1,447	50	1	959,264	4,915	1.75	663	3.40	195	2.00
12	BARTO	00705-1	BOYERTOWN	2,084	136	2	929,944	7,253	1.70	446	3.48	128	26.07
13	BIRDSBORO	00756-1	READING	1,533	66	1	928,166	3,757	1.70	605	2.45	247	13.97
14	NORTH CORNWALL	00610-2	LEBANON	1,600	37	1	923,154	3,716	1.69	577	2.32	248	0.00
15	TOLNA	00793-4	YORK	1,494	47	1	898,965	4,933	1.64	602	3.30	182	1.27
16	FOX HILL	00816-3	STROUDSBURG	3,728	63	1	881,835	6,749	1.61	237	1.81	131	7.23
17	SHAWNEE	00860-3	STROUDSBURG	3,211	71	2	860,689	10,712	1.57	268	3.34	80	4.01
18	BATH	00873-3	EASTON	2,139	44	2	853,558	5,359	1.56	399	2.51	159	11.48
19	GRANTVILLE	00721-2	LEBANON	1,079	34	3	853,107	3,831	1.56	791	3.55	223	9.43
20	NO BANGOR	00813-3	EASTON	1,316	37	0	826,495	3,984	1.51	628	3.03	207	1.00
21	NO BANGOR	00826-3	EASTON	3,197	89	1	812,658	10,270	1.49	254	3.21	79	0.84
22	ANNVILLE	00742-2	LEBANON	1,153	19	3	764,165	5,564	1.40	663	4.83	137	0.00
23	CAMPBELLTOWN	00731-2	LEBANON	2,253	64	0	758,245	3,180	1.39	337	1.41	238	1.02
24	SHAWNEE	00895-3	STROUDSBURG	3,800	99	1	697,337	7,466	1.28	184	1.96	93	10.22
25	WINDSOR	00797-4	YORK	1,613	73	1	685,034	4,682	1.25	425	2.90	146	6.86
26	ORRTANNA	00764-4	GETTYSBURG	1,669	42	2	647,585	5,067	1.18	388	3.04	128	1.00
27	YORKANA	00715-4	YORK	2,327	64	2	646,992	4,377	1.18	278	1.88	148	4.46
28	NORTH HANOVER	00514-4	HANOVER	1,331	35	0	623,837	3,938	1.14	469	2.96	158	14.20

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)
29	FLYING HILLS	00777-1	READING	1,754	44	0	581,897	1,754	1.06	332	1.00	332	13.76
30	BIRCHWOOD	00624-3	STROUDSBURG	1,855	27	2	581,828	5,057	1.06	314	2.73	115	7.13
31	NEWBERRY	00586-4	YORK	1,599	33	1	562,331	2,556	1.03	352	1.60	220	7.99
32	PLEASUREVILLE	00710-4	YORK	929	13	1	558,125	1,011	1.02	601	1.09	552	2.00
33	STRABAN	00676-4	GETTYSBURG	1,082	52	1	557,591	3,322	1.02	515	3.07	168	2.99
34	HILL	00737-4	YORK	2,154	48	1	546,502	5,043	1.00	254	2.34	108	1.00
35	BERNVILLE	00786-1	HAMBURG	1,830	53	2	541,261	4,909	0.99	296	2.68	110	2.56
36	MOUNTAIN	00740-4	DILLSBURG	2,382	52	0	539,576	4,017	0.99	227	1.69	134	0.00
37	BARTO	00706-1	BOYERTOWN	2,592	96	0	519,702	3,912	0.95	201	1.51	133	17.56

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- (7) Distribution circuit SAIDI, SAIFI, CAIDI and MAIFI 12-Month Rolling due to distribution outage causes.

ATTACHMENT B1

Worst Performing Circuits – Remedial Action

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JAN 8 1 2011

PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

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.

<b>PennPower</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
1	Enon Valley	D-545	Performance was driven by one outage caused by a vehicle accident. Equipment that was broken due to the vehicle accident was replaced at time of restoration	Complete	Dec-10	
2	Mercer	W-128	Performance was driven by one outage caused by a vehicle accident. Equipment that was broken due to the vehicle accident was replaced at time of restoration	Complete	May-10	
3	Perry	W-156	Performance was driven by one outage caused by a non-preventable tree and one outage caused by line failure both occurring during minor storms. Cable was reattached at time of restoration Problem tree was removed at time of restoration	Complete Complete	May-10 Oct-10	4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
4	Evans City	D-611	Performance was driven by one outage caused by a non-preventable tree and one outage caused by human error non company during tree trimming incident. The out of right of way tree that was cut down by customer was removed at time of restoration Problem tree was removed at time of restoration Forestry to trim circuit in 2011	Complete Complete To be completed 2011	Jan-10 Apr-10	4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
5	Mercer	W-167	Performance was driven by one outage caused by a non-preventable tree during a minor storm. Engineering field review of the section of circuit served by the recloser Problem tree was removed at time of restoration Forestry to trim circuit in 2011	Complete Complete To be completed 2011	Jul-09 May-10	3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010

<b>Penn Power</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
6	Canal	W-101	<b>Performance was driven by one outage caused by non-preventable tree.</b>			
			Problem tree was removed at time of restoration	Complete	Sep-10	
			Forestry to trim circuit in 2011	To be completed 2011		
7	McDowell	W-122	<b>Performance was driven by one outage caused by a non-preventable tree during a minor storm.</b>			
			Problem tree was removed at time of restoration	Complete	May-10	
8	Hartstown	W-126	<b>Performance was driven by three outages caused by non-preventable trees during minor storms.</b>			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			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	
			Problem tree was removed at time of restoration	Complete	Dec-09	
			Problem tree was removed at time of restoration	Complete	Jun-10	
			Problem tree was removed at time of restoration	Complete	Jul-10	
			Forestry to trim circuit in 2010	Complete	Jun-10	
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.	Revised completion date: Capital project to be completed in 2011					
9	Zelienople	D-603	<b>Performance was driven by one outage caused by a non-preventable tree.</b>			
			Problem tree was removed at time of restoration	Complete	Jun-10	

<b>Penelec</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
1	Belmont	00902-11	Performance was driven by trees non-preventable during a minor storm.			
			Repaired damage from minor storm	Complete	Apr-10	
			Add additional protection per circuit coordination	To be completed 2011		
2	Millcreek	00055-11	Performance was driven by trees non-preventable and wind damage during a minor storm.			
			Repaired damage from minor storm	Complete	Apr-10	
			2011 Circuit Inspection	To be completed 2011		
3	Springboro	00237-52	Performance was driven by trees non-preventable during a minor storm and a car-pole accident.			
			Repaired damage from car-pole accident	Complete	Jan-10	3Q 2009
			Repaired damage from minor storm	Complete	Jun-10	4Q 2009
			Review circuit for additional fault indicators	Complete	Apr-10	1Q 2010
			2011 Circuit Inspection	To be completed 2011		2Q 2010
			Full Cycle Tree Clearing	To be completed 2011		3Q 2010 4Q 2010
4	Hilltop	00048-11	Performance was driven by wind damage during a minor storm.			
			Repaired damage from minor storm	Complete	Apr-10	
5	Salix	00070-11	Performance was driven by trees non-preventable and wind damage during a minor storm.			
			Repaired damage from minor storm	Complete	Apr-10	
			2011 Circuit Inspection	To be completed 2011		
6	Warren South	00220-41	Performance was driven by non-preventable tree damage during minor storm, animal and lightning damage.			
			Repaired lightning damage - arrester	Complete	Apr-10	3Q 2009
			Repaired equipment due to animal contact	Complete	May-10	4Q 2009
			Repaired damage from minor storm	Complete	May-10	1Q 2010
			Repaired damage from minor storm	Complete	Jan-10	2Q 2010
			Full Cycle Tree Clearing	To be completed 2011		3Q 2010 4Q 2010

<b>Penelec</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
7	Hilltop	00040-11	Performance was driven by trees non-preventable and equipment failure during a minor storm.			
			Repaired damage from minor storm	Complete	Apr-10	
			Repaired damage from minor storm	Complete	Jun-10	
			2011 Circuit Inspection	To be completed 2011		
8	Tower 51	00051-11	Performance was driven by wind damage during a minor storm.			
			Repaired damage from minor storm	Complete	Apr-10	
			2011 Circuit Inspection	To be completed 2011		
9	Blairsville East	00082-13	Performance was driven by non-preventable trees during a minor storm, unknown outage and lightning.			
			Repaired damage from minor storm	Complete	May-10	
			Repaired lightning damage from minor storm	Complete	Jun-10	
			Full Cycle Tree Clearing	To be completed 2011		
10	Curryville	00644-71	Performance was driven by car-pole accident, equipment failure and equipment failure during minor storm.			1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Repair damage from car-pole accident	Complete	Feb-10	
			Repaired damage from minor storm.	Complete	Apr-10	
			Review circuit for additional fault indicators	Complete	Oct-10	
			Targeted Mainline Reliability Equipment Replacement	Complete	Oct-10	
			Full Cycle Tree Clearing	To be completed 2011		
11	Buffalo Road	00580-31	Performance was driven by trees non-preventable during minor storm.			
			Repair damage from minor storm	Complete	May-10	
			Full Cycle Tree Clearing	To be completed 2011		
12	Rolling Meadows	00310-31	Performance was driven by line failure during minor storm.			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Repaired minor storm damage	Complete	May-10	
			Full Cycle Tree Clearing	To be completed 2011		

<b>Penelec</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
13	Grover	00527-63	Performance was driven by equipment failure and non-preventable trees during minor storms.			3Q 2009
			Repair damage from minor storm	Complete	Apr-10	4Q 2009
			Repair equipment damage	Complete	Aug-10	1Q 2010
			Full Cycle Tree Clearing	To be completed 2011		2Q 2010
						3Q 2010
						4Q 2010
14	Marienville	00328-51	Performance was driven by trees non-preventable, line failure and equipment failure during minor storm.			3Q 2009
			Repair damage from minor storm	Complete	May-10	2Q 2010
			Repair damage from minor storm	Complete	Jul-10	3Q 2010
						4Q 2010
15	Powell Ave	00237-31	Performance was driven by equipment failure and trees non-preventable during minor storm.			
			Reliability Coordinator inspected circuit based on outage history	Complete	Feb-10	
			Repaired conditions found by previous reliability inspection	Complete	Feb-10	3Q 2009
			Repaired damage from minor storm	Complete	Mar-10	4Q 2009
			Repaired equipment failure - UG terminator	Complete	Jul-10	1Q 2010
			Review circuit for additional fault indicators	Complete	Aug-10	2Q 2010
			2011 Circuit Inspection	To be completed 2011		3Q 2010
Full Cycle Tree Clearing	To be completed 2011		4Q 2010			
16	Union City	00206-43	Performance was driven by equipment failure, trees non-preventable, unknown, animal, lightning and damage during minor storms.			3Q 2009
			Targeted Mainline Reliability Equipment Replacement	Complete	Nov-09	4Q 2009
			Repaired damage from minor storm	Complete	May-10	1Q 2010
			Repaired damage from minor storm	Complete	Jul-10	2Q 2010
			Reliability Coordinator to inspect circuit based on outage history	To be completed 2011		3Q 2010
						4Q 2010
17	Madera	00166-22	Performance was driven by trees non-preventable and equipment failure.			3Q 2009
			Reliability Coordinator to inspect circuit based on outage history	Complete	Feb-10	4Q 2009
			Repair conditions found by previous reliability inspection	Complete	Feb-10	1Q 2010
			Review circuit for additional fault indicators	Complete	May-10	2Q 2010
			Add additional protection per circuit coordination	Complete	Aug-10	3Q 2010
			Full Cycle Tree Clearing	To be completed 2011		4Q 2010

<b>Penelec</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
18	Scalp Level	00031-11	Performance was driven by wind damage during a minor storm and trees non-preventable.			
			Repaired minor storm damage	Complete	Apr-10	
			2011 Circuit Inspection	To be completed 2011		
19	Milcreek	00052-11	Performance was driven by trees non-preventable during minor storm and an unknown cause.			
			Repaired damage from minor storm	Complete	Apr-10	
			Reliability Coordinator to inspect circuit based on outage history	To be completed 2011		
20	Hammett	00504-31	Performance was driven by trees non-preventable.			
			Repaired tree damage	Complete	Oct-10	
			2011 Circuit Inspection	To be completed 2011		
21	Starrucca	00744-65	Performance was driven by trees non-preventable during minor storm and line failure.			
			Repaired line failure	Complete	Feb-10	
			Repaired damage from minor storm	Complete	Nov-10	
			2011 Circuit Inspection	To be completed 2011		
			Full Cycle Tree Clearing	To be completed 2011		
22	Maitland	00149-81	Performance was driven by lightning during minor storm and equipment failure.			
			Repaired damage from minor storm	Complete	Oct-10	
23	Edgewood	00097-13	Performance was driven by tree non-preventable during minor storm and equipment failure.			
			Repair damage from minor storm	Complete	May-10	
			Repair equipment damage - cap station	Complete	Jul-10	
24	Bay	00911-11	Performance was driven by trees non-preventable and wind damage during minor storm.			
			Repair damage from minor storm	Complete	Apr-10	
25	Curryville	00610-71	Performance was driven by wind damage during minor storm.			
			Repair damage from minor storm	Complete	Apr-10	
			Review circuit for additional fault indicators	To be completed 2011		
			Full Cycle Tree Clearing	To be completed 2011		

<b>Penelec</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
26	Fairview East	00218-34	Performance was driven by line failure and equipment failure during minor storm.			4Q 2009
			Repair damage from minor storm	Complete	Jun-10	1Q 2010
			Add additional protection per circuit coordination	Complete	Oct-10	2Q 2010 3Q 2010 4Q 2010
27	Erie South	00259-31	Performance was driven by trees non-preventable during minor storm, equipment failure, and unknown.			3Q 2009
			Targeted Mainline Reliability Equipment Replacement	Complete	Sep-09	4Q 2009
			Repair damage from minor storm	Complete	Jun-10	1Q 2010
			Repair conditions found by previous reliability inspection	Complete	Jun-10	2Q 2010
			Reliability Coordinator to inspect circuit based on outage history	To be completed 2011		3Q 2010 4Q 2010
28	South Fork	00229-11	Performance was driven by line failure and wind damage during minor storm.			
			Repaired damage from minor storm	Complete	Apr-10	
			Add additional protection per circuit coordination	To be completed 2011		
29	Cooper	00069-11	Performance was driven by line failure, unknown during minor storm and trees non-preventable.			
			Repaired line failure	Complete	Oct-10	
			Reliability Coordinator to inspect circuit based on outage history	To be completed 2011		
30	Tionesta Junction SW Station	00498-51	Performance was driven by lightning damage during minor storm.			3Q 2009
			Repaired Damage from minor storm	Complete	Jun-10	4Q 2009
			Review circuit for additional fault indicators	Complete	Aug-10	1Q 2010
			Full Cycle Tree Clearing	To be completed 2011		2Q 2010 3Q 2010 4Q 2010
31	Eldred	00119-42	Performance was driven by equipment failure.			
			Repaired failed equipment	Complete	Oct-10	
			2011 Circuit Inspection	To be completed 2011		
			Full Cycle Tree Clearing	To be completed 2011		
32	Carlisle Pike	00643-83	Performance was driven by trees non-preventable during minor storm and equipment failure.			
			Repair failed equipment	Complete	Jul-10	
			Repair damage from minor storm	Complete	Sep-10	
			2011 Circuit Inspection	To be completed 2011		
			Add additional protection per circuit coordination	To be completed 2011		

Penelec						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
33	Green Garden	00224-31	Performance was driven by equipment failure, trees non-preventable and equipment failure during minor storm.			4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Repair damage from minor storm	Complete	May-10	
			Add additional protection per circuit coordination	Complete	Oct-10	
			2011 Circuit Inspection	To be completed 2011		
			Full Cycle Tree Clearing	To be completed 2011		
34	St. Benedict	00057-72	Performance was driven by non-preventable trees and line failure during minor storm.			
			Repair damage from minor storm	Complete	May-10	
			Repair damage from minor storm	Complete	Jun-10	
			2011 Circuit Inspection	To be completed 2011		
35	Ralphton	00014-12	Performance was driven by non-preventable trees during a minor storm and equipment failure.			
			Repair equipment failure - crossarm	Complete	Apr-10	
			Repair damage from minor storm	Complete	Sep-10	
36	Athens	00514-61	Performance was driven by trees non-preventable and trees non-preventable during minor storm.			4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Repair damage from minor storm	Complete	May-10	
			Repair damage due to trees non-preventable.	Complete	Sep-10	
			Repair damage from minor storm	Complete	Nov-10	
			Add additional protection per circuit coordination	Complete	Dec-10	
37	Hooversville	00019-12	Performance was driven by trees non-preventable during minor storm and line failure.			
			Repair damage due to line failure	Complete	Jan-10	
			Repair damage during minor storm	Complete	Sep-10	
			Repair damage during minor storm	Complete	Oct-10	
			Full Cycle Tree Clearing	To be completed 2011		

<b>Penelec</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
38	Blairsville East	00080-13	Performance was driven by equipment failure, trees non-preventable and lightning during minor storm.			4Q 2009
			Repair equipment damage	Complete	Jan-10	1Q 2010
			Targeted Mainline Reliability Equipment Replacement	Complete	Jan-10	2Q 2010
			Repair damage from minor storm	Complete	Sep-10	3Q 2010
			Full Cycle Tree Clearing	To be completed 2011		4Q 2010
39	Port Allegany	00151-42	Performance was driven by vehicle damage and line failure.			
			Repair damage from vehicle	Complete	Dec-10	
			2011 Circuit Inspection	To be completed 2011		
40	Philipsburg	00162-22	Performance was driven by lightning during minor storms, equipment and line failure.			3Q 2009
			Repaired lightning damaged insulator	Complete	Aug-10	4Q 2009
			Targeted Mainline Reliability Equipment Replacement	To be completed 2011		1Q 2010
			Add additional protection per circuit coordination	To be completed 2011		2Q 2010
41	Two Mile	00127-42	Performance was driven by lightning damage and equipment failure.			3Q 2009
			Engineering review of full circuit coordination	Complete	Sep-09	4Q 2009
			Repaired equipment damage	Complete	May-10	2Q 2010
42	Lake Como	00787-65	Performance was driven by lightning damage and line failure during minor storm.			3Q 2010
			Targeted Mainline Reliability Equipment Replacement	Complete	Dec-09	2Q 2010
			Repaired minor storm damage	Complete	May-10	4Q 2010
43	Pennmar	00001-12	Performance was driven by equipment failure, human error and trees non-preventable.			
			Repaired damage from customer cutting tree into primary	Complete	Nov-10	
44	Beechwood	00201-11	Performance was driven by trees non-preventable during minor storm.			
			Repair damage from minor storm	Complete	Jun-10	
			Full Cycle Tree Clearing	To be completed 2011		

<b>Penelec</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
45	Millcreek	00219-11	Performance was driven by wind and non-preventable tree damage during minor storm. Repair damage from minor storm	Complete	Apr-10	
46	Roxbury Distribution	00138-83	Performance was driven by equipment failure and unknown cause.			1Q 2010
			Repair equipment failure	Complete	Feb-10	2Q 2010
			Full Cycle Tree Clearing	Complete	Dec-10	3Q 2010 4Q 2010
47	Edinboro	00421-34	Performance was driven by equipment failure during minor storm. Repair damage from minor storm	Complete	May-10	
48	Saxton	00624-73	Performance was driven by vandalism/theft. Repair damage from vandalism/theft.	Complete	Oct-10	
49	Greenwood	00002-71	Performance was driven by equipment failure. Repair equipment damage	Complete	Jul-10	
50	Brady Street	00136-23	Performance was driven by car-pole accident.			1Q 2010
			Repair damage from car-pole accident	Complete	Feb-10	2Q 2010
			Full Cycle Tree Clearing	To be completed 2011		3Q 2010 4Q 2010
51	Seward	00075-11	Performance was driven by equipment failure and lightning damage during minor storm. Repair equipment failure	Complete	Nov-10	
52	Thompson	00436-65	Performance was driven by trees non-preventable during minor storm and an unknown cause.			
			Repair damage during minor storm	Complete	Jul-10	
			Full Cycle Tree Clearing	To be completed 2011		
53	Lake Como	00788-65	Performance was driven by equipment failure and an unknown cause.			3Q 2009
			Repair equipment failure	Complete	Mar-10	4Q 2009
			2011 Circuit Inspection	To be completed 2011		1Q 2010 2Q 2010 3Q 2010 4Q 2010

<b>Penelec</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
54	Corry Central	00430-43	Performance was driven by line failure during minor storm.			
			Repair damage during minor storm	Complete	Jun-10	
			Full Cycle Tree Clearing	To be completed 2011		
55	Titusville West	00394-51	Performance was driven by lightning during minor storm, line failure and non-preventable trees.			
			Repair lightning damage during minor storm	Complete	May-10	
			Repair line failure	Complete	Sep-10	
56	Somerset	00016-12	Performance was driven by line failure, vehicle damage and equipment failure during minor storm.			
			Repaired line failure	Complete	Jul-10	
			Repaired damage due to car-pole accident	Complete	Jul-10	
57	Birmingham	00168-22	Performance was driven by non-preventable trees, car-pole accident and line failure.			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Add additional protection per circuit coordination	Complete	Aug-10	
			Repair damage from car-pole accident	Complete	Jul-10	
			Review circuit for additional fault indicators	Complete	Jul-10	
			2011 Circuit Inspection	To be completed 2011		
58	DuBois	00137-23	Performance was driven by trees non-preventable and lightning during minor storm, equipment failure and an unknown cause.			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Perform mainline Reliability Inspection	Complete	Dec-09	
			Reliability Coordinator to inspect circuit based on outage history	Complete	Feb-10	
			Repaired damage from minor storm	Complete	Nov-10	
			Full Cycle Tree Clearing	To be completed 2011		
59	Madera	00147-22	Performance was driven by non-preventable trees and lightning damage during minor storm.			
			Repair damage during minor storm	Complete	Apr-10	
			Repair lightning damage during minor storm	Complete	May-10	
			Full Cycle Tree Clearing	To be completed 2011		

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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	Allen	00503-4	Performance driven by trees as cause at 56% of minutes and lightning as cause at 38% of minutes. 74% of circuit minutes from lighting and trees in the 6/12/10, 6/24/10 & 9/22/10 storms.			
			Replaced 1 pole, 1 crossarm, and repaired one misc item identified during patrols	Complete	Apr-10	
			Perform accelerated circuit reliability assessment of three phase - No Priority 1 Findings	Complete	Apr-10	
			Perform accelerated circuit reliability assessment of mainline - No Priority 1 Findings	Complete	Apr-10	
			Perform accelerated circuit reliability assessment of three phase - No Priority 1 Findings	Complete	Jun-10	
			Perform accelerated circuit reliability assessment of mainline - No Priority 1 Findings	Complete	Jun-10	
			Replace recloser destroyed by lightning in June 12 storm	Complete	Jul-10	
			Forestry perform off cycle trim	Complete	Jul-10	
			Perform accelerated circuit reliability assessment of three phase - No Priority 1 Findings	Complete	Oct-10	
			Perform accelerated circuit reliability assessment of mainline - No Priority 1 Findings	Complete	Oct-10	
			Replaced 1 crossarm and 1 other item identified during patrols	Complete	Nov-10	
			Perform SAIFI analysis initiative study	To be completed 2011		
			Perform accelerated backbone assessment	To be completed 2011		
Forestry to perform on cycle comprehensive circuit Tree Trim in 2011	To be completed 2011					
2	Birdsboro	00757-1	Performance driven by trees non-preventable (75%), five large outages that occurred during a small storm June 24-25, 2010 and a car-pole accident.			
			Install Additional Tap Fuse	Complete	Dec-09	
			Perform accelerated backbone assessment	Complete	Mar-10	
			Perform accelerated three phase assessment	Complete	Mar-10	
			Comprehensive Tree Trimming	Complete	Jul-10	
			Upgrade T-12 Tie Recloser	Complete	Oct-10	
Perform accelerated backbone assessment	To be completed 2011					

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
3	Yorkana	00708-4	Performance driven by a wind storm which caused non-preventable tree outages (68% of minutes).			1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Crossarm and arrestor repairs	Complete	Jul-09	
			Installed additional fault indicators	Complete	Dec-09	
			Perform accelerated circuit three phase backbone assessment after wind storm	Complete	Feb-10	
			Perform accelerated assessment on the circuit backbone and three phase of the circuit after a major hail storm	Complete	May-10	
			Perform thermal scan of the circuit three phase backbone	Complete	Aug-10	
			Repair critical items identified from backbone assessment after wind storm	Complete	Dec-10	
			Replaced damaged recloser found during repair of hot spot identified from thermal scan	To be completed 2011		
			Perform accelerated backbone assessment	To be completed 2011		
Perform SAIFI analysis initiative study	To be completed 2011					
4	Shawnee	00822-3	Performance driven by line failure, equipment failure, and non-preventable trees. 50% of circuit minutes due to line failure during storm restoration on 11/18/10 while backfeeding other circuits			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Repair critical items identified from backbone assessment and circuit patrol	Complete	Sep-09	
			Perform accelerated backbone assessment	Complete	Jan-10	
			Perform accelerated three phase assessment	Complete	Jan-10	
			Install fault indicators	Complete	Apr-10	
			Perform accelerated single phase assessment	Complete	Jun-10	
			Perform accelerated backbone and three phase assessment	To be completed 2011		
Repair critical items identified from circuit patrol	To be completed 2011					
5	Allen	00502-4	Performance driven by tree as cause at 94% of circuit minutes, 63% of minutes from trees during the 9/22/10 storm.			
			Perform accelerated circuit reliability assessment of three phase	Complete	Oct-09	
			Perform accelerated circuit reliability assessment of mainline	Complete	Dec-09	
			Perform accelerated circuit reliability assessment of three phase	Complete	Apr-10	
			Perform accelerated circuit reliability assessment of mainline	Complete	Apr-10	
			Replaced 2 crossarms and 1 other item identified during Line patrol	Complete	May-10	
			Perform accelerated circuit reliability assessment of three phase - No Priority 1 Findings	Complete	Oct-10	
			Perform accelerated circuit reliability assessment of mainline - No Priority 1 Findings	Complete	Oct-10	
			Install fault indicators 4 locations	Complete	May-10	
			Perform accelerated backbone assessment	To be completed 2011		
Forestry to perform on cycle comprehensive circuit Tree Trim in 2011	To be completed 2011					

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
6	Myerstown	00750-2	Performance was primarily driven by tree caused outages to shared transmission and distribution poles (80%), other tree caused damage (10%) and unknown damage during thunderstorm (7%).			
			Three-phase assessment of circuit	Complete	Aug-10	
			Extend three-phase, balance load and add fusing to northern portion of circuit	To be completed 2011		
			Replace crossarm on three-phase backbone	To be completed 2011		
			Perform accelerated backbone assessment	To be completed 2011		
			Install Fault Indicators 15 locations	To be completed 2011		
			Repair ridge pin on three-phase backbone	To be completed 2011		
7	Newberry	00576-4	Performance was driven by non-preventable tree cause outages (80% of minutes).			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			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	
			Perform accelerated assessment on the circuit backbone and 3 phase of the circuit	Complete	Feb-10	
			Forestry to perform on cycle comprehensive circuit tree trimming	Complete	Mar-10	
			Perform accelerated assessment on the circuit backbone, three phases of the circuit and a portion of the single phase	Complete	Jun-10	
			Perform accelerated circuit single phase assessment	Complete	Jul-10	
			Perform accelerated assessment on the circuit backbone and three phase of the circuit after a wind storm	Complete	Oct-10	
			Install additional fault indicators on the circuit	Complete	Nov-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Install three radio controlled switches and recloser with fault indicators	To be completed 2011		
8	Dillsburg	00746-4	Performance driven by tree as cause at 94% of minutes. 58% of circuit minutes from trees during the 9/22/10 storm.			4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Perform accelerated circuit reliability assessment of mainline- No Priority 1 findings	Complete	Oct-09	
			findings	Complete	Dec-09	
			Replace 3 insulators and 1 misc item found during Line patrol	Complete	Jan-10	
			Perform accelerated circuit reliability assessment of three phase- No Priority 1 findings	Complete	Apr-10	
			Perform accelerated circuit reliability assessment of mainline- No Priority 1 findings	Complete	Apr-10	
			Forestry to perform on cycle comprehensive circuit Tree Trim in 2010	Complete	Dec-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Perform SAIFI analysis initiative study	To be completed 2011		

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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
9	Crossroads	00728-4	<b>Performance driven by non-preventable tree cause outages (80% of minutes).</b>			
			Perform accelerated backbone assessment	Complete	Oct-09	
			Perform accelerated assessment on the circuit backbone and three phase of the circuit after a wind storm	Complete	Oct-10	
			Repair critical items identified from backbone assessment	Complete	Oct-10	
			Forestry to perform assessment of three-phase cross-country R/W	Complete	Nov-10	
			Forestry to remove critical trees identified from cross-country assessment	Complete	Nov-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Forestry to perform on cycle comprehensive circuit tree trimming	To be completed 2011		
			Repair high priority items identified from circuit assessment	To be completed 2011		
Install additional fault indicators	To be completed 2011					
10	Windsor	00795-4	<b>Circuit performance was driven by storm events (97% of minutes). 41% of the storm minutes were caused by a broken pole outage.</b>			1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Perform Accelerated circuit three phase backbone assessment	Complete	Oct-09	
			Install additional fuses to protect the circuit backbone	Complete	Dec-09	
			Perform Accelerated circuit three phase backbone assessment after wind storm	Complete	Jul-10	
			Investigate additional fault indicators	Complete	Jul-10	
			Install additional fault indicators	Complete	Aug-10	
			Perform accelerated assessment on the circuit backbone and three phase of the circuit after a wind storm	Complete	Oct-10	
Perform accelerated backbone assessment	To be completed 2011					
11	Swatara Hill	00763-2	<b>Performance was primarily driven by a vehicle accident, tree problems along Ridge Road and an equipment failure.</b>			
			Accelerated circuit assessment 3 phase	Complete	Feb-10	
			Spot Trimming along Ridge Road	Complete	Dec-10	
			Replace recloser along Steinruck Road	Complete	Jan-11	
			Replace Underground Cable along Bassler Drive, Rhodes Drive, Chestnut Rd and Koch Ln	To be completed 2011		
			Correct 3 coordination issues	To be completed 2011		
			Perform accelerated backbone assessment	To be completed 2011		
			Install additional disconnect switches	To be completed 2011		
Install fault indicators 4 locations	To be completed 2011					

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
12	Barto	00705-1	Performance driven by trees non preventable (55%), primarily during two small storms and by a circuit breaker failure (25%).			1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Install mainline tap fuses	Complete	Jul-09	
			Perform accelerated backbone assessment	Complete	Mar-10	
			Perform accelerated three phase assessment	Complete	Mar-10	
			Perform fault current indicator installation engineering study	Complete	Mar-10	
			Install Fault Current Indicators at seven locations	Complete	May-10	
			Replace overloaded fuse with a single phase recloser, upgrade a fuse downstream of this location/ install fault indicators	To be completed 2011		
			Install Fault indicators on a heavily wooded section downstream of the new single phase recloser as three locations	To be completed 2011		
			Perform accelerated backbone assessment	To be completed 2011		
			Perform SAIFI analysis initiative study	To be completed 2011		
		Forestry to perform off cycle patrol and trim	To be completed 2011			
13	Birdsboro	00756-1	Performance driven by trees non-preventable (76%) three large outages occurred during a small storm June 24-25, 2010.			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Perform Fault Current Indicator Installation Engineering Study	Complete	Oct-09	
			Install Fault Current Indicators at six locations	Complete	Dec-09	
			Perform accelerated backbone assessment	Complete	Mar-10	
			Perform accelerated three phase assessment	Complete	Mar-10	
			Forestry to perform on cycle comprehensive circuit Tree Trimming	Complete	Jul-10	
			Upgrade T-12 Tie Recloser	Complete	Oct-10	
			Install Fault Indicators one additional mainline location	Complete	Nov-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Perform SAIFI analysis initiative study	To be completed 2011		
14	North Cornwall	00610-2	Performance was primarily driven by tree caused outages and pole failures.			
			Accelerated circuit assessment three phase	Complete	Jun-10	
			Install mainline three phase switch	Complete	Sep-10	
			Replace solids with fuses and move four spans upstream	Complete	Sep-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Replace arrestors two locations on three phase backbone	To be completed 2011		
			Forestry to perform off cycle patrol and trim	To be completed 2011		

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15	Tolna	00793-4	<b>Circuit performance was driven by non-preventable tree caused outages (43% of minutes).</b>			
			Perform accelerated backbone and three phase assessment after storm	Complete	Aug-09	
			Perform accelerated backbone and three phase assessment	Complete	Aug-10	
			Perform accelerated assessment on the circuit backbone and 3 phase of the circuit after a wind storm	Complete	Oct-10	
			Repair two condition items identified during Circuit assessment	To be completed 2011		
			Perform accelerated backbone assessment	To be completed 2011		
			Forestry to perform on cycle comprehensive circuit tree trimming	To be completed 2011		
			Install two reclosers to protect the circuit backbone.	To be completed 2011		
16	Fox Hill	00816-3	<b>Performance was driven by equipment failure and non-preventable trees.</b>			3Q 2009 4Q 2009 2Q 2010 3Q 2010 4Q 2010
			Study additional backbone protection	Complete	Aug-09	
			Perform accelerated backbone assessment	Complete	Mar-10	
			Perform accelerated three phase assessment	Complete	Mar-10	
			Perform accelerated single phase assessment	Complete	Sep-10	
			Study automation of sectionalizer on circuit	To be completed 2011		
			Perform accelerated backbone and three phase assessment	To be completed 2011		
Forestry to perform off cycle patrol and trim	To be completed 2011					
17	Shawnee	00860-3	<b>Performance driven by insulator equipment failure (fuses and CLF's) and non-preventable trees.</b>			1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Perform accelerated three phase assessment	Complete	Jan-10	
			Repair items identified from three phase assessment	Complete	Feb-10	
			Install radio control communication equipment on sectionalizer	Complete	Jul-10	
			Perform fuse and coordination study	Complete	Sep-10	
			Perform accelerated backbone and three phase assessment	To be completed 2011		
			Repair critical items identified from circuit patrol	To be completed 2011		

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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
18	Bath	00873-3	<b>Performance was driven by non-preventable trees, equipment failure and vehicle accidents.</b>			3Q 2009 4Q 2009 3Q 2010 4Q 2010
			Study downtown Bath sectionalization	Complete	Jul-09	
			Study Bath Substation automation	Complete	Jul-09	
			Perform accelerated three phase assessment	Complete	Jan-10	
			Forestry to perform on cycle comprehensive circuit tree trimming	Complete	Mar-10	
			Perform accelerated backbone assessment	Complete	Jul-10	
			Perform accelerated single phase assessment	Complete	Sep-10	
			Repair critical items identified from circuit patrol	Complete	Sep-10	
			Install additional backbone fusing and faulted circuit indicators	Complete	Dec-10	
			Perform SAIFI analysis initiative study	To be completed 2011		
			Perform accelerated backbone and three phase assessment	To be completed 2011		
Install remote control on Bath substation recloser	To be completed 2011					
19	Grantville	00721-2	<b>Performance was primarily driven by a pole failure, a cross arm failure and tree caused damage.</b>			
			Install new recloser and remove existing recloser	Complete	Aug-10	
			Accelerated circuit assessment three phase	Complete	Aug-10	
			Replace blown arrestor on three phase backbone	To be completed 2011		
			Replace failing crossarm on three phase backbone	To be completed 2011		
			Perform accelerated backbone assessment	To be completed 2011		
			Replace insulator on three phase backbone	To be completed 2011		
Replace insulator on three phase backbone	To be completed 2011					
20	No Bangor	00813-3	<b>Performance driven by non-preventable trees, equipment failure and vehicle accidents.</b>			
			Perform accelerated backbone assessment	Complete	Apr-10	
			Perform accelerated three phase assessment	Complete	Apr-10	
			Forestry to perform on cycle comprehensive circuit tree trimming	To be completed 2011		
			Perform accelerated backbone and three phase assessment	To be completed 2011		
Perform in depth inspection of backbone fuses	To be completed 2011					
21	No Bangor	00826-3	<b>Performance was driven by non-preventable trees and equipment failure.</b>			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Perform accelerated backbone assessment	Complete	Mar-10	
			Perform accelerated three phase assessment	Complete	Mar-10	
			Forestry to perform on cycle comprehensive circuit tree trimming	Complete	Jun-10	
			Perform in depth inspection of backbone fuses	To be completed 2011		
			Perform accelerated backbone and three phase assessment	To be completed 2011		

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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
22	Annville	00742-2	Performance was primarily driven by tree caused outages, car pole outages, wind damage, a step bank failure and conductor failure.			
			Accelerated circuit assessment three phase	Complete	May-10	
			Post storm assessment due to excessive damage	Complete	Jun-10	
			Install GOAB to sectionalize	Complete	Sep-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Install Fault Indicators on three phase six locations	To be completed 2011		
			Comprehensive tree trimming	To be completed 2011		
23	Campbelltown	00731-2	Performance was primarily driven by tree caused outages, wind damage, UG cable failures and lightning damage.			1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Forestry to perform mid-cycle assessment of three phase backbone	Complete	Dec-09	
			Replace UG cable along Gentry Drive	Complete	Jan-10	
			Accelerated circuit assessment three phase	Complete	May-10	
			Post storm assessment due to excessive damage	Complete	Jun-10	
			Forestry to perform mid-cycle assessment of remaining three phase	Complete	Sep-10	
			Install Fault Indicators on three phase in six locations	To be completed 2011		
			Perform accelerated backbone assessment	To be completed 2011		
			Perform SAIFI analysis initiative study	To be completed 2011		
			Trim locations identified in forestry review	To be completed 2011		
24	Shawnee	00895-3	Performance was driven by lightning, car pole accidents and non-preventable tree-related outages.			3Q 2009 4Q 2009 1Q 2010 4Q 2010
			Install radio control communication equipment on existing automation	Complete	Aug-09	
			Mainline back bone protection (lateral fusing)	Complete	Nov-09	
			Perform accelerated three phase and backbone assessment	Complete	Jan-10	
			Install Fault Indicators	Complete	Apr-10	
			Perform SAIFI analysis initiative study	To be completed 2011		
			Perform accelerated three phase and backbone assessment	To be completed 2011		

<b>Met-Ed</b>						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
25	Windsor	00797-4	Performance was driven by storm cause outages (70% of minutes).			
			Perform accelerated backbone assessment	Complete	Oct-09	
			Install additional fuses to protect the circuit main three phase	Complete	Dec-09	
			Perform accelerated assessment on the circuit backbone and 3 phase of the circuit	Complete	Feb-10	
			Repair critical items identified from backbone assessment	Complete	Feb-10	
			Perform accelerated backbone assessment	To be completed 2011		
26	Orrtanna	00764-4	Performance was driven by two August 2010 mainline vehicle pole contacts as cause of 64% of circuit minutes and a crimp failure on 12/12/10 at 18% of circuit minutes.			
			Replaced two poles, two crossarms, 15 insulators and three cutouts found during line patrol	Complete	Jan-10	
			Install animal guard three locations	Complete	Jun-10	
			Perform accelerated circuit reliability assessment of three phase	Complete	Sep-10	
			Perform accelerated circuit reliability assessment of mainline	Complete	Sep-10	
			Perform accelerated backbone assessment	To be completed 2011		
27	Yorkana	00715-4	Performance was driven by non-preventable tree cause outages (31% of minutes) and equipment problems (66% of minutes).			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Repair critical items identified from comprehensive circuit patrol	Complete	Sep-09	
			Install 5 additional sectionalizing switches	Complete	Nov-09	
			Perform accelerated assessment on the three phases of the circuit	Complete	Nov-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	
			Perform danger tree removal on the tree problem areas of the circuit	Complete	Dec-09	
			Installed additional Fault Indicators	Complete	Dec-09	
			Perform accelerated assessment on the circuit backbone including all three and single phases of the circuit after a major hail storm.	Complete	May-10	
			Perform accelerated circuit three phase backbone assessment and record the locations of all splices	Complete	Jul-10	
			Install three radio controlled switches with fault indicators	Complete	Aug-10	
			Perform thermal scan of all splices on the circuit three phase backbone	Complete	Aug-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Perform SAIFI analysis initiative study	To be completed 2011		
Forestry to perform off cycle patrol and trim	To be completed 2011					

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
28	N Hanover	00514-4	Performance driven by the June 4 windstorm as cause at 79% of circuit minutes, which felled 7 poles and 16% of circuit minutes from trees as cause during 7/19/10 storms.			
			Perform accelerated circuit reliability assessment of mainline - No Priority 1 Findings	Complete	Oct-09	
			Perform accelerated circuit reliability assessment of three phase - No Priority 1 Findings	Complete	Dec-09	
			Perform accelerated circuit reliability assessment of three phase - No Priority 1 Findings	Complete	Jul-10	
			Perform accelerated circuit reliability assessment of mainline - No Priority 1 Findings	Complete	Jul-10	
			Replace one chipped cutout found during Line patrol	Complete	Mar-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Forestry to perform off cycle patrol and hot spot trim	To be completed 2011		
			Forestry to perform on cycle comprehensive circuit Tree Trim in 2012	To be completed 2011		
29	Flying Hills	00777-1	Performance driven by trees non-preventable (93%) four large outages occurred during a small storm June 24-25, 2010.			
			Install additional tap fuses	Complete	Dec-09	
			Upgrade fuses to improve tie capability	Complete	Dec-09	
			Install additional mainline disconnects	Complete	Dec-09	
			Crossarm brace/ground/guy wire repairs	Complete	Dec-09	
			Perform accelerated backbone assessment	Complete	Apr-10	
			Perform accelerated three phase assessment	Complete	Apr-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Install Fault Indicators nine locations	To be completed 2011		
			Forestry to perform off cycle patrol and trim	To be completed 2011		
			Forestry to perform on cycle comprehensive circuit Tree Trim	To be completed 2012		
30	Birchwood	00624-3	Performance was driven by line failure and non-preventable trees. 57% of circuit minutes due to line failure during storm on 12/27/10 and cold load pickup during restoration.			
			Perform accelerated backbone assessment	To be completed 2011		
			Study phase balancing to relieve unbalance during cold load pickup	To be completed 2011		

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
31	Newberry	00586-4	Performance driven by a vehicle cause outage during a wind storm (72% of minutes).			1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Perform accelerated assessment on the circuit backbone	Complete	Oct-09	
			Perform accelerated assessment on the circuit backbone and three phase of the circuit	Complete	Feb-10	
			Perform accelerated assessment on the circuit backbone and three phase of the circuit.	Complete	Jun-10	
			Forestry to perform on cycle comprehensive circuit tree trimming	Complete	Jun-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Install fault indicators on the circuit three phase backbone.	To be completed 2011		
32	Pleasureville	00710-4	Performance driven by a wind storm which were non-preventable tree cause outages (97% of minutes).			1Q 2010 2Q 2010 3Q 2010 4Q 2010
			Perform accelerated assessment on the circuit backbone	Complete	Oct-09	
			Perform accelerated assessment on the three phases of the circuit	Complete	Dec-09	
			Perform accelerated assessment on the circuit backbone and three phases of the circuit	Complete	Jul-10	
			Forestry to perform on cycle comprehensive circuit Tree Trimming	Complete	Dec-10	
			Install fault indicators on the circuit three phase backbone.	Complete	Dec-10	
			Perform accelerated backbone assessment	To be completed 2011		
33	Straban	00676-4	Performance driven by trees in the 9/22/10 storm at 45% of circuit minutes and an animal contact in a three phase bank on 10/17/10 for 20% of circuit minutes.			
			Forestry to perform on cycle comprehensive circuit tree trim in 2009	Complete	Nov-09	
			Perform normal circuit reliability assessment of mainline	Complete	Jul-10	
			Perform normal circuit reliability assessment of three phase	Complete	Jul-10	
			Replaced one crossarm	Complete	Mar-10	
			Perform accelerated backbone assessment	To be completed 2011		
34	Hill	00737-4	Circuit performance was driven by misoperation of sectionalizer (69% of minutes).			
			Perform accelerated backbone assessment	Complete	Oct-09	
			Perform Accelerated backbone and three phase assessment	Complete	May-10	
			Install additional Fault indicators	To be completed 2011		
			Install sectionalizer	To be completed 2011		
			Install an additional recloser to protect the circuit 3 phase	To be completed 2011		
			Perform accelerated backbone assessment	To be completed 2011		
			Forestry to perform on cycle comprehensive circuit Tree Trimming	To be completed 2012		

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
35	Bernville	00786-1	and tree caused outages.			3Q 2009 4Q 2009 2Q 2010 4Q 2010
			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	Complete	Feb-10	
			Perform accelerated backbone assessment	Complete	Mar-10	
			Perform accelerated three phase assessment	Complete	Mar-10	
Perform accelerated backbone assessment	To be completed 2011					
36	Mountain	00740-4	Performance driven by a mainline capacitor failure during the 4/16/10 thunder & lightning storm at 48% of circuit minutes, 14% of circuit minutes due to trees during the same storm; and 13% of circuit minutes by multiple simultaneous vehicle contacts on 2/23/10.			
			Replace three poles, four crossarms, seven insulators, two lightning arresters, and four misc items found during line patrol	Complete	Oct-09	
			Perform accelerated circuit reliability assessment of three phase - No Priority 1 Findings	Complete	Mar-10	
			Perform accelerated circuit reliability assessment of mainline - No Priority 1 Findings	Complete	Mar-10	
			Replace two poles, one crossarm and two insulators found during line patrol	Complete	Jan-10	
			Forestry to perform on cycle comprehensive circuit Tree Trim in 2010	Complete	May-10	
			Replace one crossarm found during line patrol	Complete	Nov-10	
Perform accelerated backbone assessment	To be completed 2011					
37	Barto	00706-1	Performance driven by trees non-preventable and recloser outages caused by a capacitor bank problem and a pole fire.			3Q 2009 4Q 2009 1Q 2010 2Q 2010 4Q 2010
			Install mainline tap fuses	Complete	Jun-09	
			Crossarm, insulator and arrestor repairs	Complete	Feb-10	
			Perform accelerated backbone assessment	Complete	Mar-10	
			Perform accelerated three phase assessment	Complete	Mar-10	
			Perform Fault Current Indicator Installation Engineering Study	Complete	Mar-10	
			Install Fault Current Indicators at ten locations	Complete	May-10	
Perform accelerated backbone assessment	To be completed 2011					

Met-Ed						
Rank	Substation	Circuit	Remedial Action Planned or Taken	Status of Remedial Work	Date Remedial Work Completed	Appeared in 4 of 6 Quarters
	Bridgeton Hill	00117-3	Performance was driven by tree related outages and loss of supply from JCP&L.			3Q 2009
			Perform accelerated three phase and backbone assessment	Complete	Jul-09	4Q 2009
			Comprehensive Tree Trimming	Complete	Dec-09	1Q 2010
			Perform accelerated backbone assessment	To be completed 2011		2Q 2010
	19th and Cotton	00153-1	Performance driven by switch (cutout) equipment failure (89% of the minutes) and a animal caused substation outage.			4Q 2009 1Q 2010 2Q 2010 3Q 2010
			Perform accelerated three phase and backbone assessment	Complete	Dec-09	
			Replace Switch T1-156 w/ 600 A Disc.	Complete	Jan-10	
			Replace Switch T3-153 w/ 600 A Disc.	Complete	Jan-10	
			Replace Switch 15336 w/ 600 A Disc.	Complete	Jan-10	
			Replace Switch T1-153 w/ 600 A Disc.	Complete	Jan-10	
			Replace Switches 13629 & 13659 w/ 600 A Disc.	Complete	Jan-10	
			Installed Animal Guard on Substation Equipment	Complete	Jul-10	
			Install Fuse Bypass Switch	Complete	Nov-10	
			Perform accelerated backbone assessment	To be completed 2011		
	Install Mainline Fault Indicators four locations	To be completed 2011				
	North Lebanon	00712-2	Performance was primarily driven by tree caused outages, UG conductor failures and a recloser failure.			3Q 2009 4Q 2009 1Q 2010 2Q 2010 3Q 2010
			Install Animal Protection Mainline Recloser	Complete	Feb-09	
			Replace Lightning Arrestors	Complete	Jun-09	
			Install Additional Mainline Switch	Complete	Jul-09	
			Comprehensive Tree Trimming	Complete	Nov-09	
			Accelerated circuit assessment 3 phase	Complete	Apr-10	
			Reconfigure Circuit/Minimize Exposure	Complete	Apr-10	
			Install fuses 4 locations	Complete	Sep-10	
			Perform accelerated backbone assessment	To be completed 2011		
			Perform SAIFI analysis initiative study	To be completed 2011		
	Install additional mainline switch	To be completed 2011				

<b>Met-Ed</b>						
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	Shawnee	00837-3	<b>Performance was driven by tree contacts and equipment failure related outages.</b>			
			Forestry Patrol of Lockout Zone	Complete	Jul-09	3Q 2009
			Repair critical items identified from backbone assessment & circuit patrol	Complete	Apr-09	4Q 2009
			Install radio control communication equipment and automation	Complete	Dec-09	1Q 2010
			Perform accelerated three phase and backbone assessment	Complete	Jan-10	2Q 2010
			Perform accelerated three phase and backbone assessment	To be completed 2011		
	Walker	00865-3	<b>Performance driven by single storm and access/traffic issues.</b>			
			Review additional mainline tap fusing	Complete	Feb-09	3Q 2009
			Study circuit configuration	Complete	Aug-09	4Q 2009
			Study primary customer tap fusing	Complete	Aug-09	1Q 2010
			Perform accelerated three phase and backbone assessment	Complete	Jan-10	2Q 2010
			Perform accelerated three phase and backbone assessment	To be completed 2011		
	Annville	00743-2	<b>Performance was primarily driven by tree caused outages and cutout failures.</b>			
			Accelerated circuit assessment three phase	Complete	May-10	4Q 2009
			Post storm assessment due to excessive damage	Complete	Jun-10	1Q 2010
			Forestry patrol of backbone and all of three-phase along Lancaster Ave	Complete	Oct-10	2Q 2010
			Perform accelerated backbone assessment	To be completed 2011		3Q 2010
			Install additional disconnect switches	To be completed 2011		
			Comprehensive Tree Trimming	To be completed 2011		

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Joint 4<sup>th</sup> Quarter 2010 Reliability Report :  
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**CERTIFICATE OF SERVICE**

I hereby certify that I have this day served a true and correct copy of the foregoing document upon the individuals listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

Service by overnight United Parcel Service, as follows:

Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street, 2<sup>nd</sup> Floor  
Harrisburg, PA 17120

Service by overnight United Parcel Service and by electronic mail, as follows:

Irwin Popowsky, Esq.  
Tanya McCloskey, Esq.  
Office of Consumer Advocate  
5<sup>th</sup> Floor Forum Place  
555 Walnut Street  
Harrisburg, PA 17101  
[spopowsky@paoca.org](mailto:spopowsky@paoca.org)  
[tmccloskey@paoca.org](mailto:tmccloskey@paoca.org)

William R. Lloyd, Esq.  
Daniel Asmus, Esq.  
Office of Small Business Advocate  
300 North 2<sup>nd</sup> Street  
Harrisburg, PA 17101  
[willoyd@state.pa.us](mailto:willoyd@state.pa.us)  
[dasmus@state.pa.us](mailto:dasmus@state.pa.us)

Service by electronic mail, as follows:

Darren Gill  
Blaine Loper  
Bureau of Conservation, Economics & Energy  
Planning  
Pennsylvania Public Utility Commission  
[dgill@state.pa.us](mailto:dgill@state.pa.us)  
[bloper@state.pa.us](mailto:bloper@state.pa.us)

Dan Searfoorce  
Bureau of Fixed Utility Services  
Pennsylvania Public Utility Commission  
[dscarfoorc@state.pa.us](mailto:dscarfoorc@state.pa.us)

Dated: February 1, 2011

Original Signed:

A handwritten signature in black ink that reads "Lori B. Barman". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Lori B. Barman  
FirstEnergy Service Company  
76 S. Main Street  
Akron, OH 44308  
(330) 252-6380  
[lbarman@firstenergycorp.com](mailto:lbarman@firstenergycorp.com)

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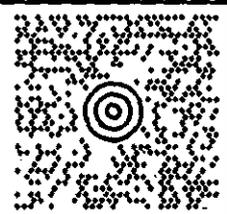
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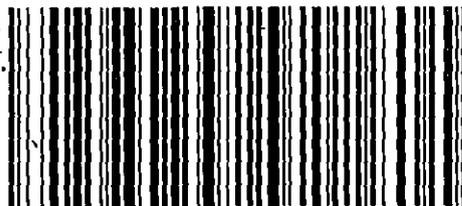
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