

Vernon J. Edwards
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July 29, 2010

#### VIA OVERNIGHT MAIL DELIVERY

Ms. Rosemary Chiavetta, Secretary Pennsylvania Public Utility Commission P.O. Box 3265 Harrisburg, Pennsylvania 17105-3265

### RECEIVED

JUL 29 2010

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

Re: Duquesne Light Company 2010 Second Quarter Reliability Report

#### Dear Secretary Chiavetta:

Enclosed for filing is the Second Quarter Reliability Report of Duquesne Light Company in accordance with the Commission's Order at L-00030161 entered March 20, 2006. Duquesne is submitting both a public version and a confidential version. The confidential version includes all of the information required by 52 Pa. Code §57.195, is marked "confidential and proprietary" and is enclosed in a sealed envelope.

Duquesne respectfully requests the "confidential and proprietary" version not be made available to the public.

If you have any questions regarding the information provided, please contact me.

Sincerely,

Vernon Edwards

Regulatory Compliance Supervisor

#### Enclosures

c: Mr. W. Williams - Bureau of CEEP

Mr. I. A. Popowsky - Office of Consumer Advocate

Mr. W. R. Lloyd, Jr. - Office of Small Business Advocate

Mr. D. Gill – Bureau of CEEP

Mr. B. J. Loper - Bureau of CEEP

#### DUQUESNE LIGHT COMPANY 2010 Second Quarter Reliability Report

RECEIVED

Filed July 30, 2010

JUL 29 2010

PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

#### 57.195 Reporting Requirements

(d)(2) The name, title, telephone number and e-mail address of the persons who have knowledge of the matters, and can respond to inquiries.

Pamela Niehaus - Manager, Engineering Services (412) 393-8446, pniehaus@duqlight.com

Gary Jack - Manager, Governmental Affairs (412) 393-1541, gjack@duqlight.com

(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.

#### Major Event April 16, 2010

On Friday, April 16, 2010, at approximately 1530 hours, severe thunderstorms with damaging lightning, high winds, and heavy rains moved through Duquesne Light's service area in Allegheny and Beaver counties.

At 1523 hours, the NWS issued severe thunderstorm warnings for both Allegheny and Beaver counties until 1630 hours. At 1553 hours, the Allegheny County Airport in West Mifflin reported a wind gust of 66 mph. The NWS indicated that the unseasonably warm weather contributed to the intensity of these storms. The high temperature on Friday was 80 degrees.

69,820 customers were affected throughout the course of this storm from a total of approximately 580,000 customers in our service territory. At the peak of this storm, 36,000 customers experienced service interruptions.

Restoration for the last customer affected by this storm was at 1630 hours on Monday, April 19, 2010.

(e)(2) Rolling 12-month reliability index values (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the electric distribution company'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 BENCHMARKS AND STANDARDS**

**Duquesne Light Company** 

#### System Performance Measures with Major Events Excluded

Entire System									
	SAIDI	SAIFI	CAIDI	MAIFI					
Benchmark	126	1.17	108	*					
12 Month Standard	182	1.40	130	*					
2010 2Q (Rolling 12 mo)	95	1.13	84	*					

<sup>\*</sup> Sufficient information to calculate MAIFI is unavailable.

#### Formulas used in calculating the indices

SAIFI = (Total KVA interrupted) - (KVA impact of major events)

System Connected KVA

SAIDI = (Total KVA-minutes interrupted) - (KVA-minute impact of major events)

System Connected KVA

CAIDI = SAIDI/SAIFI

#### Data used in calculating the indices

Total KVA Interrupted for the Period

(Excluding 2/5/10 & 4/16/10 Major Events): 7,975,230 KVA

Total KVA-Minutes Interrupted:

(Excluding 2/5/10 & 4/16/10 Major Events): 671,878,616 KVA-Minutes

System Connected Load as of 2/5/10: 7,050,027 KVA

February 5, 2010 Major Event: 1,562,210 KVA (22% of System Load)

1,193,717,350 KVA-Minutes

System Connected Load as of 4/16/10: 7,050,027 KVA

April 16, 2010 Major Event: 837,830 KVA (12% of System Load)

291,711,930 KVA-Minutes

(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 electric distribution company defines its worst performing circuits shall be included.

Circuits are evaluated based on a rolling twelve-month count of lockouts of protective devices (circuit breakers, sectionalizers and line reclosers). Circuits that experience four or more lockouts for a device in each quarterly rolling twelve-month period are identified and reported. Customer surveys show a significant drop in satisfaction when customers experience four or more interruptions in a year, and that threshold was therefore used as a basis for this evaluation method.

The list is ranked first by the date of the most recent outage, with a secondary sort based on number of lockouts. This places a higher priority on circuits experiencing problems in the most recent quarter. Circuits that have not seen recent outages fall to a lower priority, but remain on the list for monitoring.

Circuits that appear on the list for more than a year will be targeted for remediation based on a review of outage records for root cause identification, field evaluations, and engineering analysis. Project scopes developed as a result of this analysis will be incorporated into the company's Work Plan for engineering, design and construction.

This circuit analysis method provides timely review by in-house staff. It provides a true representation of the dynamic nature of Duquesne's distribution system. The threshold of four lockouts may produce a result greater or less than 5% of the total circuits in the system. Reports will be issued on all circuits that violate the four-lockout threshold, even if the total is greater than 5% of the number of circuits on the system.

See Attachment A for table of circuit reliability values and Service Centers associated with each circuit.

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

Second Quarter Rolling 12 Months

Rank	Circuit	Name	Service Center	Remedial Actions Planned or Taken
1	23716	Pine Creek	Edison	Majority of outages are as a result of falling trees during storm conditions. Vehicle accident also an issue on this circuit during this time frame. No action needed at this time, but will continue to monitor
2	23700	North	Edison	Outages due to falling trees and overloads. VM to review circuit for tree issues and Engineering to review loads to correct fuse and transformer issues.
3	23935	Eastwood	Penn Hills	Engineering to Infrared circuit to locate poor performing equipment by the end of the 3rd Quarter.
4	23921	Logans Ferry	Penn Hills	Infrared study done in 2009 due to outages. Repairs based on infrared report completed in March 2010. During the June 2 storm, other outages occurred and new action will be taken along with continuing to monitor the circuit.
5	23950	Wilkinsburg	Penn Hills	Engineering to infrared circuit to locate poor performing equipment by the end of the 3rd Quarter.
6	23870	Mt. Nebo	Raccoon	Outages due to falling trees. VM reviewed circuit in the field during the 2 <sup>nd</sup> Quarter 2010 and will be developing a mitigation plan for this circuit during the 3 <sup>rd</sup> Quarter.
7	23610	Findlay	Raccoon	Outages due to trees and equipment failures. Infrared circuit completed July 1, 2010 with repairs to be completed by end of 3rd Quarter to improve equipment failures. Westbury URD being rebuilt this year as well.
8	23635	Ambridge	Raccoon	This circuit is scheduled to be relieved of load when the Edgeworth Project is completed, which will improve the reliability of this circuit.

For reference, the following chart shows the 1<sup>st</sup> Quarter 2010 rolling 12-month worst circuits and action forecasted for remediation with updates.

First Quarter Rolling 12 Months

Rank	Circuit	Name	Service Center	Remedial Actions Planned or Taken
1	23870	Mt. Nebo	Raccoon	Outages due to falling trees. VM to review circuit in the field and determine if any specific action is required. Expected completion will be end of 2 <sup>nd</sup> Quarter 2010 for review of tree issues.
2	23961	Carson	Preble	Three out of four Lightning Arrestor failures appear to be related - Lightning Arrestor failed causing damage to surrounding primary bushings and LA on nearby transformers. Last outage was due to overloaded transformer, which was remedied by installing an additional transformer to relieve overloaded transformer. <a href="Update:">Update:</a> No new action is needed at this time based on no new outages that meet our criteria.
3	4067	Schentey	Penn Hills	All outages in 2009 related to storm of June 18 – 20, 2009. Last outage in September caused by a motor vehicle accident. <b>Update:</b> No new action is needed at this time based on no new outages that meet our criteria.
4	23734	Universal	Penn Hills	Three equipment failures, Primary Insulator, Transformer Bushing and Cable. One outage due to Trees. Will perform infrared testing 2 <sup>nd</sup> Quarter of 2010 with repairs in 3 <sup>rd</sup> Quarter in this area to reduce equipment failures. <b>Update:</b> Infrared report completed May 20, 2010 with repairs to be completed by end of 3 <sup>rd</sup> Quarter. No new outages that meet our criteria.
5	4253	Grant	Preble	All outages in June 2009 related to storm. No further follow-up necessary.

(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.

July 1, 2009 through June 30, 2010 - Two PUC Major Event Exclusions

				-	167.4.4	
CAUSE	NO. OF OUTAGES	OUTAGE PERCENTAGE	KVA TOTAL	KVA PERCENTAGE	KVA- MINUTE TOTAL	KVA-MINUTE PERCENTAGE
Storms	442	16%	1,046,400	13%	170,578,972	25%
Trees (Contact)	84	3%	96,329	1%	16,323,773	2%
Trees (Falling)	557	20%	1,747,789	22%	156,695,160	23%
Equipment Failures	875	31%	2,882,838	36%	223,519,485	33%
Overloads	169	6%	316,163	4%	13,520,007	2%
Vehicles	156	6%	398,564	5%	34,237,919	5%
Other	505	18%	1,487,147	19%	57,003,300	10%
TOTALS	2,788	100%	7,975,230	100%	671,878,616	100%

### (e)(6) Quarterly and year-to-date information on progress toward meeting transmission and distribution inspection and maintenance goals/ objectives.

Program Project	Unit of Measurement	Target for 2010 2Q	Actual for 2010 2Q	Percent Complete	Targets for Year 2010	YTD Actuals Year 2010	Percen Complete
Communications Goals							
Telecom Battery Maintenance	Batteries	23	23	100%	92	46	50%
Overhead Distribution Goals				}			
Sectionalizer/Recloser Control	Control Units	42	42	100%	82	117	143%
Sectionalizer Upper Switch	Switches	. 0	. 0	N/A	. 0	0	N//
Overhead Transmission Goals							
Tower Helicopter Inspections	Number of Towers	500	537	107%	500	537	1079
Tower Ground Detail Inspections	Number of Towers	125	151	121%	300	151	50%
Substations Goals							
Breaker Maintenance	Breakers	231	93	40%	756	218	29%
Transformer Maintenance	Transformers	55	19	35%	65	20	319
Station Battery Maintenance	Batteries	261	261	100%	1,044	526	509
Station Relay Maintenance	Relays	520	312	60%	1,910	1,021	539
Underground Distribution Goals							
Manhole Inspections	Manholes	188	157	84%	750	302	40%
Network Vault Inspections	Network Units	138	202	146%	550	322	59%
Network Protector Inspections	Protectors	75	165	220%	300	330	110%
Underground Transmission Goals							
Pressurization and Cathodic							
Protection Plant Inspection	Work Packages	13	10	77%	52	20	38%
Vegetation Management Goals	_						
Overhead Line Clearance	Circuit Overhead Miles	393	433	110%	1,410	757	54%
	Total Units	2,564	2,405	94%	7,811	4,367	56%

## (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.

Operating and Maintenance	2010	2 <sup>nd</sup> Qtr.	2 <sup>nd</sup> Qtr.	YTD	YTD
	Budget	Actual	Budget	Actual	Budget
Total	\$189,663,301	41,279,124	45,639,381	\$84,747,936	\$91,495,217

## (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.

Capital	2010 Budget	2 <sup>nd</sup> Qtr. Actual	2 <sup>nd</sup> Qtr. Budget	YTD Actual	YTD Budget
Total	\$274,763,201	\$58,065,168	\$66,301,170	110,056,163	\$136,273,661

The 2010 Capital Budget has been updated since filing the 1<sup>st</sup> Quarter Reliability Report. The 2<sup>nd</sup> quarter variance in Duquesne's Capital Budget is due mostly to project timing issues, which includes project delays related to obtaining transmission line approvals and delays in major project material deliveries.

The Duquesne Light Company's Transmission and Distribution Operating and Maintenance (e)(7) and Transmission and Distribution Capital (e)(8) Budgets and Expenditures consist of the following work elements:

- Restoration of Service costs includes expenses to restore service to customers during storm-related events, and restoration from outages caused by system and component equipment failures.
- Customer Commitment costs includes expenses to satisfy residential, commercial, industrial and governmental initiated work requests.
- System Maintenance costs include expenses for programmed preventive and corrective maintenance work.
- System Improvement costs include expenses incurred to provide load relief in growth areas identified through system assessment, as well as continued targeted replacement of systems and components based on maintenance findings and trended useful life.
- Utility costs required to enhance and maintain systems and processes necessary in support of the utility operations including metering systems, technology development to satisfy hardware and system application needs, transmission and distribution planning, all revenue cycle processes and all Operations support and Administrative and General expenses.

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

onic Technician 7	Telecom
Electronic Tech 11	
Splicer/Trouble 7	
Test Table Tech 0	
Total 25	
Equipment Tech 23	Substation
& Control Tech 27	
Equipment Tech 9	
Total 59	
Apprentice T&D 2	Underground
Driver Helper 0	
UG Inspector 5	
rney UG Splicer 15	
Sr. UG Splicer 5	
Tester/Installer 11	
UG Mechanic 9	
etwork Operator 9	
Total 56	
Apprentice T&D 42	Overhead
Rigger Specialist 4	
oment Attendant 1	
Material Handler 6	
Field Inspector 4	
rney Lineworker 100	
neworker Helper 0	
er Crew Leader 2	_
ce Crew Leader 4	
chanic 2 Rigger 1	
d Group Leader 4	
Sr. Lineworker 58	
Total 226	<del></del>
Total 6	eet Light Changers
i Otai U	
Total 2	Mobile Worker

### (e)(9) (Continued)

Engineering	Drafter	3
	General Clerk - Grad	10
	General Technician	0
	GIS Technician B	5
	Head File Record Clerk	1
	Survey Instrument	3
	Right of Way Agent A	3
<b>,</b>	Sr. Technician	4
	T&D Mobile Worker	4
	Technician A	1
	Technician B	11
	Technician C	1
	Test Technician, Mobile	4
	Total	50
Service Center Technician	Sr. Technician	6
	Technician	8
	Total	14
Traveling Operator/Troubleshooter	Senior Operator	29
	Traveling Operator	9
	Traveling Operator 1/C	0'
	Troubleshooter	16
<u> </u>	Total	54
Load Dispatcher	Total	12
Meter Technician	Meter Technician	17
	Sr. Meter Technician	18
	Total	35
Meter Reader	Total	14
Customer Service Representatives	Autodialing Operator	9
_	Customer Service Rep	93
	Word Processing Clerk	2
	Sr. Customer Service	3
	Telephone Switchboard	0
	Total	107
Admin/Supervisory/Mgmt	Total	365
	TOTAL	1,025
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(e)(11) Monthly call-out acceptance rate for transmission and distribution maintenance workers presented in terms of both the percentage of accepted call-outs 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 – 2<sup>nd</sup> Quarter 2010

Month	Accepts	Refusals	Total	Percentage
April	353	469	822	43%
May	303	580	883	34%
June	324	475	799	40%

Amount of Time it Takes to Obtain the Necessary Personnel - 2<sup>nd</sup> Quarter 2010

Month	Total Callout Events	Necessary Personnel Accepting	l	ige Minutes alling Event	Average Minutes to Obtain Necessary Personnel		
April	85	353	36.4	3,094/85	8.8	3,094/353	
May	95	303	23.4	2,219/95	7.3	2,219/303	
June	91	324	20.9	1,903/91	5.9	1,903/324	
2 <sup>nd</sup> Quarter 2010	271	980	26.6	7,216/271	7.4	7,216/980	
YTD	450	1,491	23.2	10,458	7.0	10,458/1,491	

The numerator in the above equations equals the total number of minutes all of the callouts took during the given month/quarter/year. The denominator in the above equations equals the total number of callout events or the total number of workers accepting during the given month/quarter/year.

As an example, during the month of April, on average, it took Duquesne Light, 8.8 minutes, per worker, to obtain 353 accepts during the 85 callouts. It took Duquesne Light, on average, 36.4 total minutes to obtain the necessary personnel for each of its 85 callouts.

#### ATTACHMENT A

(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.

Circuit	Name	Service Center	Device	Lockouts	Connected KVA	Last Outage	Total KVA- Minutes	Total KVA Interrupted	SAIDI	SAIFI	CAIDI
23716	Pine Creek	Edison	Breaker	4	26,970	6/23/10	9,778,307	118,304	363	4.39	83
23700	North	Edison	Sectionalizer	4	17,835	6/9/10	6,701,928	113,947	376	6.39	59
23935	Eastwood	Penn Hills	Breaker	4	21,437	6/9/10	29,442,515	99,027	1373	4.62	297
23921	Logans Ferry	Penn Hills	Sectionalizer	5	27,157	6/6/10	10,230,594	149,766	377	5.51	68
23950	Wilkinsburg	Penn Hills	Sectionalizer	6	16,022	6/5/10	14,604,876	96,747	912	6.04	151
23870	Mt. Nebo	Raccoon	Recloser	5	26,795	6/2/10	46,692,120	76,664	1743	2.86	609
23610	Findlay	Raccoon	Sectionalizer	4	25,975	5/28/10	23,804,033	116,692	916	4.49	204
23635	Ambridge	Raccoon	Breaker	5	38,490	5/18/10	77,271,246	252,498	2008	6.56	306

SHIP TO: MS. ROSEMARY CHIAVETTA 717-772-7777 PENNSYLVANIA PUBLIC UTILITY COMMISS 400 NORTH STREET COMMONWEALTH KEYSTONE BUILDING HARRISBURG PA 17120-0200





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