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April 29, 2010

**VIA OVERNIGHT MAIL DELIVERY**

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

**RECEIVED**

APR 29 2010

PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

**Re: Duquesne Light Company – 2009 Annual Reliability Report**

L-00030161

Dear Secretary Chiavetta:

Enclosed for filing please find an original and six (6) copies of Duquesne Light Company's Annual Reliability Report for the calendar year 2009, as required by 52 Pa. Code §57.195.

If you have any questions regarding the information provided, please contact me at (412) 393-3662.

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  
2009 ANNUAL RELIABILITY REPORT

RECEIVED

APR 29 2010

Filed April 30, 2010

PA PUBLIC UTILITY COMMISSION  
SECRETARY'S BUREAU

**57.195 Reporting Requirements**

- (a)(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

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

Duquesne Light Company's service territory covers approximately 800 square miles, with a well-developed distribution system throughout. Electric service reliability is fairly consistent across the service territory. The combination of an effective outage restoration process and significant distribution automation allows the Company to quickly restore power to large numbers of customers in outage situations.

There were three storms in our service territory throughout 2009, all of which were PUC Reportable, including one Major Event Excludable storm occurring on February 11, 2009. This excludable storm affected approximately 13% of Duquesne's customers.

Achieving outstanding performance in system reliability continues to be one of Duquesne's long-term objectives. The Engineering and Planning Group performs ongoing analysis of reliability indices, root cause analysis of outages, and tracking and monitoring of other performance measures. This is the long-term process to optimize reliability and to identify improvement opportunities. This includes making recommendations for capital projects such as circuit rehabilitation, new substations and distribution circuits.

An Emergent Work Process is used to identify problems, set priorities, and resolve issues as quickly as possible. Each day, field personnel perform field inspections and any abnormalities are logged into a database. This database is reviewed every two weeks by the Emergent Work Team and any high priority problems are identified and a course of action is determined. In addition, any device that has operated three or more times in the previous six months is identified. Analysis at the device level is used to identify small areas where customers have experienced multiple outages. System level and even circuit level indices may mask these isolated problems. This is the short-term process for real-time analysis and reliability improvement.

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

Scheduled preventative and predictive maintenance activities continue to reduce the potential for future service interruptions. Corrective maintenance is prioritized with the objective to reduce and eliminate any backlog in the most cost-efficient manner.

Several capital budget projects target distribution reliability improvements, including pole replacement, substation rehabilitation, circuit load relief and voltage improvement, URD rehabilitation, circuit rearrangement and installation of additional automated remotely controlled pole top devices.

Specific programs, procedures and ongoing maintenance activities that support Duquesne's commitment to excellent service reliability include:

- An Infrared and Ultrasound Inspection Program that systemically identifies circuit and substation problems for remedial action in advance of failure.
- A comprehensive Vegetation Management Program, which is designed to provide long-term line clearance, deters future growth and achieves optimum cycle for trimming. All of the Company's circuits are included in a multi-year Vegetation Management maintenance program. The impact on SAIDI and SAIFI due to tree-related outages continues to trend positively.
- An ongoing long-term Sectionalizer Maintenance and Replacement Program serves to refurbish and maintain reliable operation of all automatic and remote controllable switches on Duquesne's automated distribution system, and to replace those that are no longer operating efficiently.
- A comprehensive Substation Rehabilitation Program targets improvements in delivery system substation facilities including replacement of deteriorated and obsolete transformers, breakers, switches, relays, regulators and other equipment.
- Lateral fusing on 23KV distribution circuits is an ongoing initiative. Installing fuses on single phase and three phase overhead taps reduces the number of customers affected by an outage and improves reliability.
- New distribution substations are being installed between existing major substations to take advantage of transmission reliability, decrease distribution circuit exposure and improve reliability to end users.
- Line maintenance work of various types is regularly performed in order to maintain distribution plant. This work includes replacement of cross arms, arrestors, insulators, and other equipment on the overhead system as well as inspections and remedial work on the underground system.
- Storm Preparedness Training is conducted each year and Storm Review Meetings are held following major events. These meetings focus on the successes and failures of the most recent emergency service restoration effort. Service restoration process improvements are made as needed to improve response time and effectiveness during the next restoration effort.

**(b)(2) A description of each major event that occurred during the year being reported on, including the time and duration of the event, the number of customers affected, the cause of the event and any modified procedures adopted in order to avoid or minimize the impact of similar events in the future.**

On Wednesday, February 11, 2009, at approximately 1943 hours, strong storms, with sustained winds of 30 to 40 mph and winds gusting to 60 mph, caused power outages in our service area, initially in eastern Allegheny County. The Allegheny County Airport in West Mifflin recorded a wind gust of 92 mph. These high winds continued throughout Wednesday evening and shortly after midnight they intensified, affecting the rest of our service areas in Allegheny and Beaver Counties.

The National Weather Service in Pittsburgh issued a high wind warning which was in effect from 1700 hours on Wednesday, February 11, 2009 through 1900 hours on Thursday, February 12, 2009. A severe thunderstorm warning had also been issued until 2030 hours on Wednesday.

75,310 customers were affected throughout the course of this wind storm from a total of 580,000 customers in our service territory. At the peak of this storm, 44,000 customers experienced service interruptions.

Restoration for the last customer affected by this storm was at 0030 hours on Sunday, February 15, 2009.

**(b)(3) A table showing the actual values of each of the reliability indices (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the electric distribution company's service territory for each of the preceding 3 calendar years. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained customer minutes interruptions, the number of customers affected, and the minutes of interruption. If MAIFI values are provided, the number of customer momentary interruptions shall also be reported.**

**RELIABILITY BENCHMARKS AND STANDARDS  
Duquesne Light Company  
System Performance Measures with Major Events Excluded\*\***

	SAIDI	SAIFI	CAIDI	MAIFI
2007	84	0.79	107	*
2008	97	0.99	98	*
2009	82	0.97	85	*
3 Year Average	88	0.92	97	*
Benchmark	126	1.17	108	NA

\* Sufficient information to calculate MAIFI is unavailable.

### Formulas Used in Calculating the Indices

$$\text{SAIFI} = \frac{(\text{Total KVA interrupted}) - (\text{KVA impact of major events})}{\text{System Connected KVA}}$$

$$\text{SAIDI} = \frac{(\text{Total KVA-minutes interrupted}) - (\text{KVA-minute impact of major events})}{\text{System Connected KVA}}$$

$$\text{CAIDI} = \text{SAIDI/SAIFI}$$

#### 2009

Total KVA Interrupted for the Period (excluding 2/11/09 Major Event previously reported)	6,828,430 KVA
Total KVA-Minutes Interrupted (excluding 2/11/09 Major Event previously reported)	578,862,007 KVA-Minutes
System Connected Load as of 12/31/09:	7,043,377 KVA
February 11, 2009 Major Event:	903,714 KVA (13% of System Load) 291,170,402 KVA-Minutes

#### 2008

Total KVA Interrupted for the Period (excluding 9/14/08 Major Event previously reported)	6,989,723 KVA
Total KVA-Minutes Interrupted (excluding 9/14/08 Major Event previously reported)	685,207,937 KVA-Minutes
System Connected Load as of 12/31/08:	7,040,058 KVA
September 14, 2008 Major Event:	2,008,290 KVA (29% of System Load) 1,539,055,609 KVA-Minutes

#### 2007

Total KVA Interrupted for the Period: (excluding 8/9/07 Major Event previously reported)	5,555,121 KVA
Total KVA-Minutes Interrupted: (excluding 8/9/07 Major Event previously reported)	594,147,851 KVA-Minutes
System Connected Load as of 12/31/07:	7,040,058 KVA
August 9, 2007 Major Event:	1,260,752 KVA (18% of System Load) 719,087,392 KVA-Minutes

- (b)(4) **A breakdown and analysis of outage causes during the year being reported on, including the number and percentage of service outages 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.**

**January 1, 2009 through December 31, 2009 – One PUC Major Event Exclusion**

CAUSE	NO. OF OUTAGES	OUTAGE PERCENTAGE	KVA TOTAL	KVA PERCENTAGE	KVA-MINUTE TOTAL	KVA-MINUTE PERCENTAGE
Storms	349	15%	966,439	14%	160,506,695	28%
Trees (Contact)	97	4%	45,467	1%	3,755,454	1%
Trees (Falling)	379	16%	1,307,493	19%	102,928,422	18%
Equipment Failures	780	33%	2,457,846	36%	202,953,120	35%
Overloads	160	7%	220,886	3%	20,281,348	3%
Vehicles	165	7%	555,815	8%	46,307,186	8%
Other	443	18%	1,274,484	19%	42,129,782	7%
<b>TOTALS</b>	<b>2,373</b>	<b>100%</b>	<b>6,828,430</b>	<b>100%</b>	<b>578,862,007</b>	<b>100%</b>

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

Duquesne did not have any circuits on the 5% worst performing list for a year or more.

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

Program – Project	Unit of Measurement	Target for 2009	Actual 2009	Percent Complete
<b>Communication Goals</b>				
Telecom Battery Maintenance	Batteries	112	168	150%
Microwave Radio Maintenance	Radio Units	0	0	N/A
<b>Overhead Distribution Goals</b>				
Sectionalizer/Recloser Control	Control Units	120	141	118%
Sectionalizer Upper Switch	Switches	205	207	101%
<b>Overhead Transmission Goals</b>				
Tower Helicopter Inspections	Number of Towers	500	545	109%
Tower Ground Detail Inspections	Number of Towers	300	355	118%
<b>Substations Goals</b>				
Breaker Maintenance	Breakers	670	696	104%
Transformer Maintenance	Transformers	65	68	105%
Station Battery Maintenance	Batteries	1,072	1,083	101%
Station Relay Maintenance	Relays	1,910	2,352	123%
<b>Underground Distribution Goals</b>				
Manhole Inspections	Manholes	750	759	101%
Network Vault Inspections	Network Units	550	557	101%
Network Protector Inspections	Protectors	300	447	149%
<b>Underground Transmission Goals</b>				
Pressurization and Cathodic Protection Plant Inspection	Work Packages	52	52	100%
<b>Vegetation Management Goals</b>				
Overhead Line Clearance	Circuit Overhead Miles	1,410	1,422	101%

**Variances to 2009 PUC Maintenance Program**

**Telecom Battery Maintenance:** The Telecom Battery Maintenance results rose above goal due to deployment of a special test set that provides better information about cell deterioration rate, condition and performance. This resulted in retesting as Engineering provided field training on the use of this new tool.

**Microwave Radio Maintenance:** Duquesne Light eliminated our Microwave Radio System in 2008, therefore no maintenance was required. This category will be eliminated in our 2010 maintenance plan.

**Sectionalizer/Recloser Control:** Duquesne Light inspects these control units every two years. However, any Sectionalizer or Recloser Upper Switch that fails during the year goes through a complete inspection and maintenance or replacement process, which includes inspection of the control units, thereby raising the number of total control units inspected that were not planned.

**Tower Ground Detail Inspections:** Duquesne Light inspected more Transmission Towers for Ground Detail based on the efficiency of completing an entire Right-of-Way area thereby raising our number of completing ground inspections.

**Substation Relay Maintenance:** Crews tested additional relays during the commissioning of new circuits.

**Network Protector Inspections:** Duquesne Light performs additional maintenance of network protectors based upon condition through the use of modern remote supervisory systems.

(b)(7) **A comparison of budgeted versus actual transmission and distribution operation and maintenance expenses for the year being reported on. Explanations of any variances shall be included.**

Program	2009 Budget	YTD Actual	YTD Budget
<b>OPERATIONS AND BUSINESS SUPPORT</b>			
Operations	\$29,596,536	\$26,843,436	\$29,596,536
Business Support	\$49,975,216	\$35,406,819	\$49,975,216
<b>Program Totals</b>	<b>\$79,751,752</b>	<b>\$62,250,255</b>	<b>\$79,751,752</b>

The 2009 O&M variances were a result of budget and actual accounting recording differences. The majority of the variances represents expenses originally budgeted as Transmission or Distribution expenses but the actual expenses recorded were as General or Administrative expenses which are not contained in this report.

(b)(8) A comparison of budgeted versus actual transmission and distribution capital expenditures for the year being reported on. Explanations of any variances shall be included.

Program	2009 Budget	YTD Actual	YTD Budget
<b>OPERATIONS AND BUSINESS SUPPORT</b>			
Operations	\$138,875,077	\$153,518,245	\$138,875,077
Business Support	\$48,258,119	\$48,853,177	\$48,258,119
Program Totals	\$187,133,196	\$202,371,422	\$187,133,196

(b)(9) Quantified transmission and distribution inspection and maintenance goals/objectives for the current calendar year detailed by system area (i.e., transmission, substation, and distribution).

### 2010 Transmission and Distribution Goals and Objectives

Program – Project	Unit of Measurement	Target for Year 2010
<b>Communication Goals</b>		
Telecom Battery Maintenance	Batteries	92
<b>Overhead Distribution Goals</b>		
Sectionalizer/Recloser Control	Control Units	82
Sectionalizer Upper Switch	Switches	0
<b>Overhead Transmission Goals</b>		
Tower Helicopter Inspections	Number of Towers	500
Tower Ground Detail Inspections	Number of Towers	300
<b>Substations Goals</b>		
Breaker Maintenance	Breakers	756
Transformer Maintenance	Transformers	65
Station Battery Maintenance	Batteries	1,044
Station Relay Maintenance	Relays	1,910
<b>Underground Distribution Goals</b>		
Manhole Inspections	Manholes	750
Network Vault Inspections	Network Units	550
Network Protector Inspections	Protectors	300
<b>Underground Transmission Goals</b>		
Pressurization and Cathodic Protection Plant Inspection	Work Packages	52
<b>Vegetation Management Goals</b>		
Overhead Line Clearance	Circuit Overhead Miles	1,410



**(b)(10) Budgeted transmission and distribution operation and maintenance expenses for the current year in total and detailed by FERC account.**

<b>Operating and Maintenance</b>	<b>2010 Budget</b>
<b>Total</b>	<b>\$189,663,301</b>

**(b)(11) Budgeted transmission and distribution capital expenditures for the current year in total and detailed by FERC account.**

<b>Capital</b>	<b>2010 Budget</b>
<b>Total</b>	<b>\$268,829,097</b>

The Duquesne Light Company 2010 Transmission and Distribution Operating and Maintenance (b)(10) and Transmission and Distribution Capital (b)(11) 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.

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

**Changes for 2010 Maintenance Program**

**Telecom Battery Maintenance:** The retirement of our microwave system eliminates the need for a separate communication battery, thereby reducing the number of communication batteries being tested.

**Microwave Radio Maintenance:** Duquesne Light eliminated our Microwave Radio System in 2008, therefore no maintenance was required. This category has been eliminated in our 2010 maintenance plan.

**Sectionalizer/Recloser Control:** Duquesne Light decreased the number of Sectionalizer/Recloser Control units for inspection in 2010 due to a program in 2010 to replace approximately 500 of our older GWC and GW Sectionalizers and Reclosers with a new unit called the IntelliRupter that includes the communication and control box all in one unit.

**Breaker Maintenance:** Breaker inspection and testing is often performed before actual due date to make better use of resources and/or coincide with planned circuit outages, construction and corrective maintenance activities. Inspections are initiated based upon time, operations, oil test results and/or condition assessment. As such, the schedule does not remain linear from year-to-year.

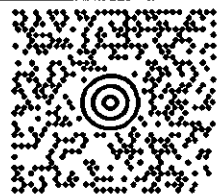
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2 LBS PAK

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**SHIP TO:**

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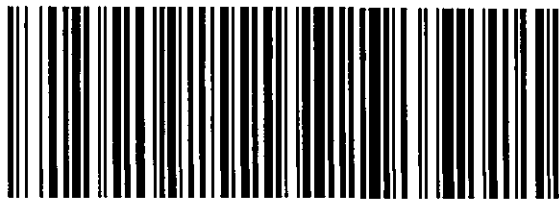
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