



Pike County Light & Power Co.

Pike County Light & Power Co.
4 Irving Place
New York NY 10003-0987
www.oru.com

John L. Carley
Assistant General Counsel
(212) 460-2097
FAX: (212) 677-5850
Email: carleyj@coned.com

April 30, 2015

REGULAR MAIL

Honorable Rosemary Chiavetta
Secretary
Commonwealth of Pennsylvania
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17105-3265

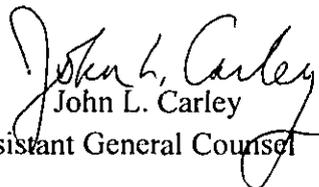
Re: Electric Service Reliability Regulations
Docket No. L-00030161

Dear Secretary Chiavetta:

In accordance with the Electric Service Reliability Regulations adopted by the Pennsylvania Public Utility Commission, in its Order dated May 20, 20004 in the above-referenced docket, Pike County Light & Power Company hereby files its Service Reliability Report for 2014 System Performance.

Any questions regarding this report should be directed to Mr. Brian Nugent, Section Manager, Performance & Operations Engineering.

Sincerely,


John L. Carley
Assistant General Counsel

Attachment (1)
c: Office of Consumer Advocate
Office of Small Business Advocate
Pennsylvania AFL-CIO

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Orange & Rockland

**Pike County Light & Power Company
Annual Electric Reliability Report**

2014 System Performance

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April 2015

INTRODUCTION

Pursuant to the requirements of 52 Pa. Code § 57.195, Pike County Light & Power Company ("Pike", "PCL&P" or the "Company") submits this Annual Reliability Report ("Report") to the Pennsylvania Public Utility Commission ("PAPUC") for its 2014 system performance. Pike is an electric distribution company ("EDC") which has approximately 4,500 electric distribution customers, thereby making it a "smaller EDC" for purposes of 52 Pa. Code § 57.195 (c). The Company is a utility subsidiary of Orange and Rockland Utilities, Inc. ("Orange and Rockland"). The Company, together with Orange and Rockland and Rockland Electric Company (i.e., Orange and Rockland's New Jersey utility subsidiary), comprise the Orange and Rockland System.

A. § 57.195. (b)(1)

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

Overall Current Assessment

The "Western Division" of the Orange and Rockland System includes the Company's service territory, as well as portions of Orange County and Sullivan County in New York State, and portions of Sussex County in New Jersey. Pike County is the south-westernmost portion of the Western Division. Pike's service territory in Pennsylvania is primarily fed from two 34.5 kV feeders that originate from New York Substations, i.e., Line 5-10 from the Cuddebackville Substation, and Line 7 from the Port Jervis Substation. The eastern portion of the Pike service territory is fed by two 13.2 kV feeders from the Matamoras Substation that has ties to distribution circuitry from Orange and Rockland's Port Jervis Substation, in New York, as well. The Matamoras Substation is fed from both Line 5-10 and Line 7, which back each other up through an automatic transfer scheme at the substation. The western portion of the Pike service territory is a radial feed from Line 7.

In an effort to enhance the reliability of its electric distribution system, PCL&P developed and submitted to the PAPUC a Reliability Action Plan ("RAP") on October 3, 2014. As discussed below, the Company was able to successfully execute the RAP in 2014.

The Company has expanded upon existing and proven technology by installing additional distribution automation equipment for enhanced fault isolation. It also incorporated new technologies, in particular, smart fault indicators ("SFI"). These devices allow for automatic and remote notification of any power disturbances in coverage zones, such as transient and permanent faults. SFIs significantly reduce outage response time by directly identifying faulted zones, thereby directly reducing circuit patrol times and customer outage durations. Through diligent monitoring and tracking, the Company identified and made repairs to defective equipment. The Company also arranged two Line 7 outages to implement major repairs requiring de-energized facilities. The collective effort of both planned outages resulted in the completion of 19 separate jobs. The Company conducted extensive planning and community communications as part of each outage. These communications included: radio, print, social networking and calls to large customers.

The Company has modified its operational procedures so as to decrease response time to outages. PCL&P also has expanded its customer outreach efforts. Company executives met with local residents, community leaders and business owners to review system performance and outline short-term corrective action initiatives and potential long-term system improvement plans.

Although PCL&P is confident that all of its actions and changes will have a positive impact on SAIFI, CAIDI and SAIDI, it is extremely difficult and subjective to quantify the exact improvements offered by the RAP initiatives that the Company implemented. One example would be the benefits derived from the installation of smart fault indicators in reducing outage durations, and thus CAIDI and SAIDI. For instance, field engineers are now aware of certain outages before customers have the opportunity to call Customer Service, which could save minutes for an outage and the Company can deploy resources more quickly. In addition, the Company will now be able to better identify the trouble location, which could save substantially more time, as less patrol time will be necessary to find the problem and start repairing the damage. Projecting how much time savings this ultimately results in, and the resultant improvement to CAIDI and SAIDI, would be speculative and inexact. The same arguments can be made in projecting and speculating attendant SAIFI improvements.

The PAPUC's service reliability standards for Pike, last revised on August 17, 2006, are as follows:

- 12-Month System Average Interruption Frequency Index ("SAIFI", or "Frequency") of 0.82 interruptions per customer served;
- 12-month Customer Average Interruption Duration Index ("CAIDI" or "Restoration") of 235 minutes of interruption per customer interrupted;
- 12-month System Average Interruption Duration Index ("SAIDI" or "Duration") of 195 minutes per customer served.

In 2014, the Pike service territory experienced a Frequency of 2.12 interruptions per customer served, a Restoration of 106 minutes, and Duration of 225 customer-minutes of interruption. SAIFI was 159% above the standard, CAIDI was 129 minutes (55%) below the standard, and SAIDI was 30 minutes (15%) above the standard. These results are detailed on Page 10 of this Report, along with the most recent three-year history for these indices.

The three-year reliability standards for Pike are as follows:

- Three-year annualized SAIFI of 0.67 interruptions per customer served;
- Three-year annualized CAIDI of 192 minutes of interruption per customer interrupted;
and
- Three-year annualized SAIDI of 129 minutes per customer served.

For the three-year period ended December 2014, Pike experienced an annualized Frequency of 1.30 interruptions per customer served, a Restoration of 149 minutes, and Duration of 194 customer minutes of interruption.

There were five major events that affected Pike's service territory during 2014 that were accepted by the PAPUC for exclusion from the statistics. These major events affected 16,123 customers for a total of 87,709 customer-hours (5,262,530 customer minutes) of interruption and are detailed starting on Page 8 of this Report.

The table on Page 9 summarizes, by cause, Pike customer interruptions experienced in 2014, with pre-arranged outages and major events removed. The leading cause of outages is tree contact, with 27 interruptions affecting 1,335 customers for a total of 221,033 customer-minutes. The *service reliability program targeted to manage these outages is the three-year, cycle-based tree clearance program*. The most recent cycle was completed in 2012, and is scheduled next for completion in 2015. In addition, a Circuit Ownership Program was in effect in 2014, whereby circuits are patrolled by 'circuit owners' who identify and address circuit issues that will help to improve performance. This effort, along with the other service reliability programs that the Company implements, as are discussed later in this Report, are designed to target circuit equipment and conditions that will result in performance improvements.

The distribution inspection and maintenance goals/objectives and capital expenses, are listed starting on Page 13 of this Report. Pike has no transmission lines.

B. 57.195. (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 to avoid or minimize the impact of similar events in the future.

Major Events

Date	Cause	Time	Duration (minutes)	Customers Affected	Cust. Min of Interruption
7/2/2014	Lightning Storm	3:08 PM	684	2,526	538,061
7/6/2014	Tree Contact	3:24 PM	157	2,522	375,933
8/21/2014	Lightning Storm	6:56 PM	1,447	4,297	3,117,857
9/11/2014	Motor Vehicle	7:01 AM	475	2,281	218,416
11/26/2014	Snow Storm	1:07 PM	3,322	4,497	1,012,263
TOTAL				16,123	5,262,530

a. July 2, 2014

This event was due to a lightning storm with winds gusting up to 28 mph, that entered PCL&P's service territory causing outages on circuits L7-6-34, 104-1-13 and 104-3-13. The storm lasted approximately two and a half hours and interrupted 2,526 customers.

b. July 6, 2014

This event occurred on a clear day with winds gusting to speeds of 21 mph. A white pine branch from outside of the clearance zone was blown onto the tap wire and, sensing bushing of a metering device, this caused a fault that locked out circuit L7.

c. August 21, 2014

At approximately 7:00 p.m. a severe thunder storm (similar to a microburst) produced heavy rain, lightning and dangerous straight line winds in PCL&P's service territory causing multiple cases of trouble. The storm also produced hail and localized flooding throughout the service area. Several trees were broken at the ground level and uprooted; a significant number of limbs were also broken from tree tops during the weather event, heavily impacting the electrical overhead system. The aftermath of the storm produced lingering fog well into the early hours of August 22nd making it difficult to visually patrol the electrical system. The damage impacted all of the major PA distribution circuits namely, L7-6-34, 5-10-34, 104-1-13, and 104-3-13 causing 4,927 customer interruptions (95% of customer base).

d. September 11, 2014

A motor vehicle veered off the road and struck a guy wire anchor. The guy wire was connected to a 13.2 kV distribution pole which in turn was connected via spanning guy to a 34.5 kV mainline junction pole across the street. Also connected to the 34.5 kV junction pole was a primary span and dead-end pole with a three phase transformer bank feeding two customers. All three of these poles were damaged in the accident. The accident knocked two phases of 13.2 kV primary conductor off of multiple poles. It also knocked one phase of the 34.5 kV primary wire off of its insulator on the junction pole, causing a fault that resulted in a recloser opening and locking out. 2,281 customers lost electrical service 218,416 customer minutes.

e. November 26, 2014

On November 26, 2014, at approximately 9:00 a.m. a winter storm starting as rain and turning to heavy wet snow entered the Company's service territory. The snow continued until approximately 1:00 p.m. on November 27, Thanksgiving Day. Wind speeds gusted up to 11 miles per hour during the day. The heavy snow caused trees and tree limbs to break and sag bringing down primary and secondary wire. One outage was caused by a plow truck running into and damaging a utility pole with cutouts. There were 4,497 customers affected by this storm and 1,012,263 customer minutes of interruption.

C. 57.195. (b)(3)

A table showing the actual values of each of the reliability indices (SAIFI, CAIDI, SAIDI, and if available, MAIFI) for the EDC's service territory for each of the preceding 3 calendar years. The report shall include the data used in calculating the indices, namely the average number of customers served, the number of sustained interruptions, and 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.

Year	SAIFI	CAIDI	SAIDI	Average No. of Customers Served	No. of Interruptions	Customers Affected	Customer Minutes of Interruption
2011	0.73	297	216	4,491	71	3,268	969,660
2012	0.57	184	104	4,493	55	2,542	468,931
2013	1.21	209	253	4,495	54	5,449	1,137,057
2014	2.12	106	225	4,506	62	9,542	1,008,212

MAIFI data is not presently available.

D. § 57.195. (b)(4)

A breakdown and analysis of outage causes during the year being reported on, including the number and percentage of service outages, the number of customers interrupted, and customer interruption minutes categorized by outage cause such as equipment failure, animal contact, tree related, and so forth. Proposed solutions to identify service problems shall be reported.

Causes of Interruption				
Cause Description	No. of Inter.	% of Inter.	Customers Affected	Customer Minutes
Tree	27	43.50%	1,335	221,033
Equipment Failure	20	32.30%	2,957	206,258
No Cause Found/Other	7	11.30%	767	87,446
Animal	3	4.80%	28	3,578
Lightning	3	4.80%	33	6,109
Overload	1	1.60%	4,421	483,565
Work Error	1	1.60%	1	223
Non-Comp Acc	0	0.00%	0	0
Cust Problem	0	0.00%	0	0
Total	62		9,542	1,008,212

As noted in the above table, the primary cause of interruptions in 2014 was 'tree contacts'. The 2012 Pike distribution vegetation management program included the approximately 57 miles of the L7 and Substation 104 overhead primary system, which is the total of the Pike service territory. The 2015 Distribution L7 Vegetation Maintenance in Pike commenced in March 2015 and is planned to be completed by the end of May 2015. This area is scheduled to undergo the established quarterly worst performing segment-based tree clearance program. During 2014, Pike assisted municipalities in the removal of approximately 30 hazard trees. Tree issues are also reported and addressed during the Circuit Ownership circuit patrols.

E. §57.195(b)(5)

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

Pursuant to Pike's exemption as set forth in §57.195(c), and as discussed above, Pike is not required to address this subsection.

F. § 57.195. (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.

**T/D Inspection/Maintenance
Goals/Objectives**

Goals/Objectives vs. Results

For distribution goals and objectives, the Company focused on completing all scheduled preventive maintenance on its distribution facilities. As set forth below, Pike met these goals. Pike has no transmission facilities.

- Distribution Vegetation Management
 - o While no vegetation management activity was scheduled for 2014, the Company responded to several requests from customers and municipalities for tree trimming and hazard tree removal.
- Pole Inspection Program
 - o Distribution poles are inspected on a twelve year cycle. PCL&P planned to inspect 350 of its approximately 4,200 poles in 2014. Pike performed 450 pole inspections in 2014.
- Distribution Overhead Line Inspections
 - o The 2014 program included infrared inspection of all three-phase circuitry, which Pike completed as planned.
- Power Quality
 - o The 2014 maintenance program required inspection of eleven capacitors and five regulators, which Pike completed as planned.
- Recloser Program
 - o The 2014 maintenance program required visual inspection of all reclosers annually, and a functional test every three years. Pike installed a fourth recloser in October 2014. A functional test is performed during the commissioning of new reclosers. Four visual inspections and one functional test were completed in 2014.
- Substation Maintenance and Inspection Program
 - o The 2014 program required completion of all inspection and maintenance requirements as listed in Appendix I for the Matamoras Substation, which Pike completed as planned.

- Transformer Inspection Program
 - o PCL&P is required to inspect all of its padmount on a five-year cycle. Pike inspected all of its 268 pad-mounted distribution transformers in 2013. This completes the pad-mounted transformer inspection portion of the PA I&M Plan until 2018.
 - o PCL&P is required to inspect all of its overhead distribution transformers on a two-year cycle as part of the overhead distribution line inspection program. All overhead distribution transformers were inspected in 2014. The next inspection cycle is scheduled to start and be completed in 2016.

G. § 57.195. (b)(7)

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

T/D Operation and Maintenance

2014 O&M Expenditures	2014 Budget (\$,000)	2014 Actual (\$,000)
5600 OPERATION SUPERVISION AND ENGINEERING	14.7	25.2
5630 OVERHEAD LINE EXPENSES	5.7	44.5
5670 RENTS	0.0	0.3
5700 MAINTENANCE OF STATION EQUIPMENT TRANSMISSION	3.3	0.0
5710 MAINTENANCE OF OVERHEAD LINES TRANSMISSION	8.8	0.2
5800 OPERATION SUPERVISION AND ENGINEERING	106.5	138.6
5810 LOAD DISPATCHING	0	0.0
5820 STATION EXPENSES	49.3	7.6
5830 OVERHEAD LINE EXPENSES	27.7	103.7
5840 UNDERGROUND LINE EXPENSES	32.2	10.8
5860 METER EXPENSES	33.9	42.5
5870 CUSTOMER INSTALLATIONS EXPENSES	0.0	0.4
5880 MISCELLANEOUS DISTRIBUTION EXPENSES	201.3	254.6
5890 RENTS	0.7	0.1
5920 MAINTENANCE OF STATION EQUIPMENT DISTRIBUTION	12.8	3.2
5930 MAINTENANCE OF OVERHEAD LINES DISTRIBUTION	156.5	652.5
5940 MAINTENANCE OF UNDERGROUND LINES DISTRIBUTION	51.8	47.3
5960 MAINTENANCE OF STREET LIGHTING AND SIGNAL SYSTEMS	18.9	15.5
5980 MAINTENANCE OF MISCELLANEOUS DISTRIBUTION PLANT	0	0.0
Total Distribution	724.1	1,347.0

The 2014 Actual Operation and Maintenance Expenses exceeded the budgeted amounts by 186%.

- In 2014, Pike was involved in two significant planned/scheduled outages to complete work associated with both capital and O&M. These outages were scheduled to safely make a series of critical maintenance and electric service reliability improvements.
- Electric Operations: The annual tree trimming cycle was expedited from the third quarter to the first and second quarters due to performance and commitments made to local municipalities

H. § 57.195. (b)(8)

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

T/D Capital Expenditures

Account#	Capital Project	2014 Budget(\$,000)	2014 Budget(\$,000)
330	2014 Circuit Reliability Blanket (PARC)	11.2	36.9
330	2014 Pole Inspection Bracket (PARC)	40.4	- 0
330	Line 7 Recloser	- 0	79.1
330	US 209-Cummins Hill Rd to Ryan	- 0	273.5
330	PA STORM STARTED 11 26 2014	-0	34.8
330	2014 Electric Distribution / Transformer Blankets - PA	264.6	464.2
330	Electric Meter Purchases - PA	29.7	17.9
330	Electric Meter 1st Install Bkt - PA	40.9	17.3
330	Westfall Enhancements	160.8	109.0
330	Bldg. Improvement Blaket - PA	- 0	25.0
Total Capital		547.6	1057.7

- The 2014 overall Capital Expenditures were over by 52% vs. budgeted. The over run was the result of Electric Distribution Blankets work and Transformer purchases. The US 209 Cummins Hill Rd to Ryan project was budgeted for 2013, but the spending overflowed into 2014. Line 7 Recloser and Bldg Improvements work was unbudgeted. In 2014, Pike County L&P was involved in two significant planned/scheduled outages to complete work associated with both capital and O&M. These outages were scheduled to safely make a series of critical maintenance and electric service reliability improvements.

Blankets are open at the beginning of each year for unexpected small dollar projects that come up during the year. We have a small Pennsylvania Blanket that is opened each year for these types of jobs. In 2014, we did use the blanket and it was closed.

§ 57.195. (b)(9)

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

T/D

Inspection and Maintenance

Goals/Objectives

Quantified

Inspection and maintenance programs, designed with the intention of improving frequency of interruption and minimizing the resultant increases in restoration (as frequency is improved), have been in effect in Pike's service territory for over ten years. In addition, the "Biennial Inspection, Maintenance, Repair and Replacement Plan" became effective on January 1, 2012. This plan along with the associated programs are focused on field facilities and customer satisfaction, and are effective in minimizing the probability of an interruption while limiting the number of customers affected per interruption. The major programs are:

- **Distribution Vegetation Management**
Spot trimming and hazard tree removal are performed as conditions are identified. The next trim cycle is schedule for 2015.
- **Pole Inspections Planned**
350 Poles are scheduled to be inspected in 2015.
- **Power Quality**
The 2015 maintenance program will require inspection of eleven capacitors and five regulators.
- **Recloser Program**
The 2015 maintenance program will require inspection of four reclosers.
- **Substation Maintenance and Inspection Program**
The 2015 maintenance program will require the completion of all monthly and annual inspection and maintenance requirements, as listed in Appendix I for the Matamoras Substation.
- **Distribution Overhead Line Inspections**
All five circuits for Pike were scheduled for inspection in 2014 and 2015. They were completed in 2014. The next inspection cycle is due in 2016.

- Distribution Transformer Inspections

In 2014 all overhead transformers were inspected. Next inspection of overhead transformers are scheduled to be completed in 2016. The overhead line inspection program and pad mount transformers will be inspected at least once every five years.

§ 57.195. (b)(10)

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

T/D Operation and Maintenance

O&M	Capital Project	2015 Budget(\$,000)
5600	OPERATION SUPERVISION AND ENGINEERING	16.0
5630	OVERHEAD LINE EXPENSES	6.5
5700	MAINTENANCE OF STATION EQUIPMENT TRANSMISSION	8.7
5710	MAINTENANCE OF OVERHEAD LINES TRANSMISSION	8.6
5800	OPERATION SUPERVISION AND ENGINEERING	124.1
5820	STATION EXPENSES	48.7
5830	OVERHEAD LINE EXPENSES	27.4
5840	UNDERGROUND LINE EXPENSES	9.0
5860	METER EXPENSES	38.2
5880	MISCELLANEOUS DISTRIBUTION EXPENSES	168.2
5890	RENTS	0.7
5920	MAINTENANCE OF STATION EQUIPMENT DISTRIBUTION	22.4
5930	MAINTENANCE OF OVERHEAD LINES DISTRIBUTION	749.8
5940	MAINTENANCE OF UNDERGROUND LINES DISTRIBUTION	44.8
5960	MAINTENANCE OF STREET LIGHTING AND SIGNAL SYSTEMS	21.0
Total Distribution		\$ 1,294.10

§ 57.195. (b)(11)

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

T/D Capital Expenditures

Account#	Capital Project	2015 Budget(\$,000)
330	Electric Meter Purchases - PA	32.0
330	Electric Meter 1st Install Bkt-PA	55.7
330	Pole Inspection Blanket(PARC)	156.7
330	Old Milford Road - Double Circuit Part 2	517.0
330	Electric Dist Blanket and Transformers	312.4
Total Capital		\$ 1,073.80

§ 57.195. (b)(12)

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

T/D

Inspection and Maintenance

Programs

Significant Changes

Inspection & Maintenance Changes

There were no significant changes to Pike's Inspection and Maintenance programs in 2014. Inspection programs in 2015 will be performed in accordance with the Company's "Biennial Inspection, Maintenance, Repair and Replacement Plan" filed with the PAPUC.

Appendix I Substation Maintenance and Inspection Program

Item Description:

Examine individual utility substation maintenance programs to validate proper maintenance procedures and verify that maintenance is being performed. Review recent operating data to verify that no adverse trends exist.

Company Program:

The following describes the different class inspections and maintenance programs performed by the Substation Operations Department, and their associated time cycles. Intervals vary depending on equipment type, style and maintenance history.

CLASS #1 INSPECTION - Monthly

- Visual inspection of transformers and oil breakers for oil leaks, oil levels, nitrogen pressure, connections, condition of bushings and Oil Circuit Breaker ("OCB") operating mechanism.
- Visual inspection of battery banks, chargers, control board indicating lights, control house lights, yard lights.
- Visual inspection of minor equipment including Potential Transformers ("PTs"), Current Transformers ("CTs"), Capacitive Coupled Potential Devices ("CCPDs"), disconnect switches and bus connections.
- *Visual inspection of all structures, fences and yard surfaces.*
- Counter readings taken of OCBs, Gas Circuit Breakers ("GCBs"), reclosers and tap changers.

STATION BATTERY TESTS - Annually

Measure specific gravity and cell voltage. Test with Battery Impedance Testing Equipment.
Clean batteries.

FANS, PUMPS, HEATERS AND COMPRESSORS - Annually

Check for proper operation prior to winter for heaters and compressors and prior to summer for fans and pumps.

TRANSFORMER GAS-IN-OIL ANALYSIS - Annually

DOBLE POWER FACTOR TEST - Every Three - Ten Years

Use Doble instrument to measure the integrity of the insulating medium of certain device.

OCB TIMING - Every Three - Ten Years

Check the time it takes for each operation of certain breakers.

**RELAY MAINTENANCE - Every Four Years, Electromechanical;
Six Years Microprocessor Based, With Self-Check.**

Clean, test and calibrate as required all relays involved in protective relay schemes.
After testing and calibrating, perform a trip test to verify proper operation.

CLASS #3 INSPECTION - Every Three – Ten Years

The Class #3 inspection on transformers is to include, but is not limited to the following items:

1. Test oil;
2. TTR - Test, meggar test;
3. Inspect all connectors, bushings;
4. Inspect for leaks (oil - nitrogen);
5. Check CT connections, alarm systems on banks; and
6. Doble Power Factor Test.

Transformers With Load Tap Changers:

1. Test Oil in LTC cabinet; and
2. Test LTC control for proper operation.

The Class #3 inspection on OCBs is to include, but is not limited to the following items:

1. Test Oil;
2. DLRO (Ductor Test) before and after;
3. Inspect and clean control cabinet;
4. Inspect and clean Pneumatic-Hydraulic or spring charged operating system; and
5. Operational Test.

The Class #3 inspection on reclosers is to include, but is not limited to the following items:

1. Test Oil ;
2. DLRO (Ductor Test) before and after; and

3. Control cabinet clean, checkout and operational test.

Reclosers With Vacuum Bottles

1. Hi-Pot test.

The Class #3 inspection on ACB's is to include, but is not limited to the following items:

1. DLRO (Ductor Test) before and after;
2. Inspect all contacts (action to be taken, if needed);
3. Inspect and test all Micro and Aux. contacts (close and trip circuit); and
4. Operational Testing

CLASS #4 INSPECTION - Various intervals (four - twelve years or as necessitated by Class #3 Inspection results) dependent on equipment type, style and maintenance history.

The Class #4 inspection consists of a thorough inspection and testing of the apparatus listed below.

The Class #4 also includes all inspections included in a Class #3.

Transformers With Load Tap Changer

1. Drain oil from LTC cabinet, inspect all contacts;
2. Inspect and tighten all connections;
3. Clean complete LTC cabinet;
4. Filter or replace oil; and
5. Test LTC control for proper operation.

The Class #4 inspection on OCB's is to include, but is not limited to the following items:

1. DLRO (Ductor test) before and after;
2. Drop tanks - inspect and tighten all connections. Clean all parts and tanks;
3. Test and filter or replace oil;
4. Inspect and clean control cabinet;
5. Inspect and clean Pneumatic-Hydraulic or spring charged operating systems; and
6. Operational Test.

The Class #4 inspection on reclosers is to include, but is not limited to the following items:

1. Drop tank (filter or replace oil);
2. Inspect all contacts - repair or replace (depending on the condition);

3. Check and tighten all connections;
4. Control cabinet, clean and checkout;
5. DLRO (Ductor Test) before and after; and
6. Operational Test.

Recloser With Vacuum Bottles

1. Hi-Pot test.

The Class #4 inspection on ACB's is to include, but is not limited to the following items:

1. DLRO (Ductor Test) before and after;
2. Inspect all contacts - clean and put protective grease coating on;
3. Inspect and clean all ARC chutes;
4. Inspect and test all Micro and Aux. contacts (close and trip circuit);
5. Check and tighten all connections; and
6. Operational Test.

References:

All inspection and maintenance records are retained as a hard copy for one year at Orange and Rockland's main Operating Division headquarters. These records are also retained electronically on a work management system. Repeated callouts and equipment failures that show an abnormal trend are flagged by the work management system.

The Doble power factor testing, transformer gas in oil analysis, and infrared inspection records are stored electronically on the Substation Information System ("SIS"). OCB timing maintenance records are presently kept on a separate electronic storage system that is provided with the test equipment.



Law Dept. Rm 1815S

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, NY 10003



U.S. POSTAGE >> PITNEY BOWES



ZIP 10003 \$ 005.75⁰
02 1W
0001399466 MAY 01 2015

Hon. Rosemary Chiavetta
Secretary
Commonwealth of Pennsylvania
Pennsylvania Public Utility Commission
400 North Street
Harrisburg, PA 17105-3265