

#### An Exelon Company

# **2012 Summer Reliability** Meeting

#### **Pennsylvania Public Utility Commission**

# June 7, 2012



### **Summer Readiness**

- ✓ Capacity Additions
  - Major projects and local distribution level projects
- Preventative Maintenance Activities
  - Transmission and Distribution Level completions
- Employee Preparations
  - Training and summer equipment preparations
- ✓ Event Preparedness
  - Lessons learned incorporated into summer prep drills this spring
- ✓ Transmission Preparedness



**Capacity Projects** 

- ✓ <u>Clay Substation:</u>
  - Add a second 90MVA 230-34 kV Transformer and associated Circuit Breakers, Replace the existing electromechanical protection equipment, with new modern digital equipment.
  - Project Costs = \$12.1 Million
  - Provides additional operational and maintenance flexibility.
  - Improves reliability by eliminating the analog relay protection schemes.
  - The Project was placed into service as scheduled on May 30, 2012.
- ✓ <u>Clay Transmission:</u>
  - Route a new 230kV transmission line along 7 miles of existing right of way into Clay Substation and replace the existing single circuit towers with dual circuit monopole structures.
  - Project Costs = \$26.0 Million
  - Improves system reliability and flexibility to address distribution contingencies for Clay and the combination of Clay and Jennersville Substations.
  - The new poles are in place and the second transmission line is scheduled to be in service by June 1, 2013.
- ✓ Center Point 500kV Substation
  - Construct a new 500kV to 230kV substation in Worchester Township, PA in the PECO ROW at the intersection of the 220-79 and 5029 lines.
  - Project Costs = \$50 Million
  - Alleviates the recognized overloads, while further diversifying the geographic locations of the region's 500kV-230kV transformer capacity.
  - Substation was energized and put into service May 2011.
- Chichester Substation 9B Transformer and Reactor Addition Project
  - Supports the retirement of the Eddystone Unit 2 coal fired generating station as of May 2012.
  - Addition of a new 336MVA transformer in parallel with the existing 9 Transformer with series reactors installed on the combined 132kV secondary of both transformers.
  - Project Costs = \$6.9 Million
  - The Project was placed into service as scheduled on April 30, 2012.



# **PECO Keys to Success**

### ✓ Reliability Enhancement Programs

- Top Priority Circuit Program (TPC)
  - 5% circuits are reviewed every year.
- Distribution Sectionalizing Program
- Center City Upgrades

### ✓ Preventative Maintenance Programs

- Vegetation Management Program
- Circuit Patrols and Thermography
- Center City Network Inspections
- Recloser Inspections
- Manhole Inspections
- ✓ Capacity Planning
  - Summer Readiness
  - Analyze all circuits and previous summer performance
  - Issue designs for projected overloads





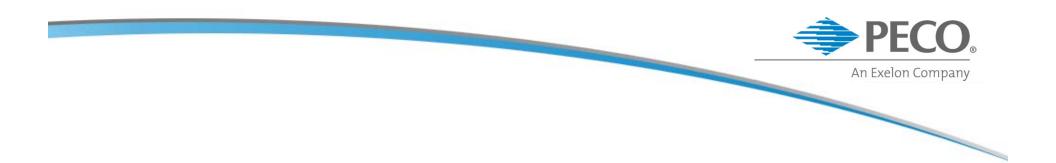
## **Storm Preparations**

- ✓ Initiate pre-event planning and preparations
- Secure additional personnel for assistance with restoration and tree trimming
- Conduct interviews and briefings with media to discuss storm preparations, planning and customer outage expectations
- Conduct outreach with elected officials and local governments
  - State Regulatory and Elected Officials
  - County 911 Centers Outreach and Staffing
  - Municipal and County Governments



# Event Preparedness: Hurricane Irene Lessons Learned

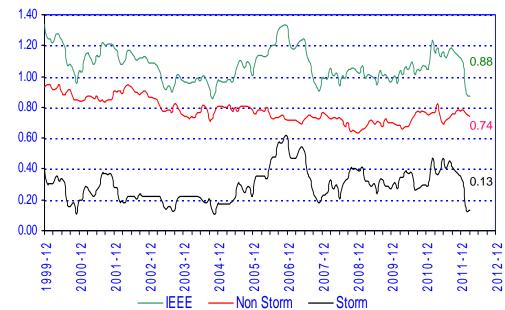
- ✓ Successes
  - Utilization of Established Hurricane Plan
  - Advanced Planning
  - Staging of Crews
  - Communications to Employees
- ✓ Opportunities for Improvement
  - Road Closures
  - Customer Communications Regarding Restorations
  - Truck Permitting for Foreign Crews



# **APPENDIX**

# **Reliability Overview**

- Continued strategic investment in infrastructure capital budget of over \$2.3 billion for the period of 2011-2015.
- Reliability programs are the keys to success
  - Recloser Performance
  - Vegetation Management
  - Top Priority Circuit (TPC)
- ✓ Despite intense weather in 2011, reliability is very good.
- ✓ As the February 2nd 2011 ice storm which affected 9.7% of PECO customers has rolled off the 12 month rolling indices, SAIFI, CAIDI and SAIDI are below their respective benchmarks and standards established on May 7, 2004.





## 2011 Review



#### 2011 Storms

- PECO had 9 storms in 2011 including Hurricane Irene on August 27 and a snow storm on October 29.
- 367,000 storm customer interruptions in the 1<sup>st</sup> quarter of 2011 was the highest 1<sup>st</sup> quarter value in PECO history.
- February 2011 was the worst February on record for storms.
- The February 2<sup>nd</sup> ice storm affected 9.7% of PECO's customers with snow depth averaging 6", and icing 1/10 to ½" across the PECO territory.

#### 2011 Summer Heat and Rain

- Hot Summer with 6 heat waves 32 days of 90+ degree heat from May 31 through August 31
- 2001-2010 Average (June 1 through August 31) is 24.1 days of 90+ degrees heat
- July was hottest month in Philadelphia history. 21 days of 90° or more in July, 2011 vs. 19 in July, 2010
- The National Weather Service announced that 2011 was the wettest year in Philadelphia weather history.

# **Reliability Performance**



#### Rolling 12-month reliability index values through March 2012

	SAIFI	CAIDI	SAIDI
2012 Q1	0.89	111	99
Benchmark	1.23	112	138
Rolling 12 month Standard	1.48	134	198
3-Year Average (2009 – 2011)	1.07	122	131
Benchmark	1.23	112	138
3-Year Average Standard	1.35	123	167

Performance through March 2012: SAIFI, CAIDI and SAIDI are all below the PUC Benchmark and Standard