

Energy Association of Pennsylvania

# Summer Reliability Assessment Report

*Electric Distribution Companies' Perspective*

to the  
**Pennsylvania Public Utility Commission**  
**June 9, 2011**  
Harrisburg, PA

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# Introduction

The **Energy Association of Pennsylvania** represents the interests of its

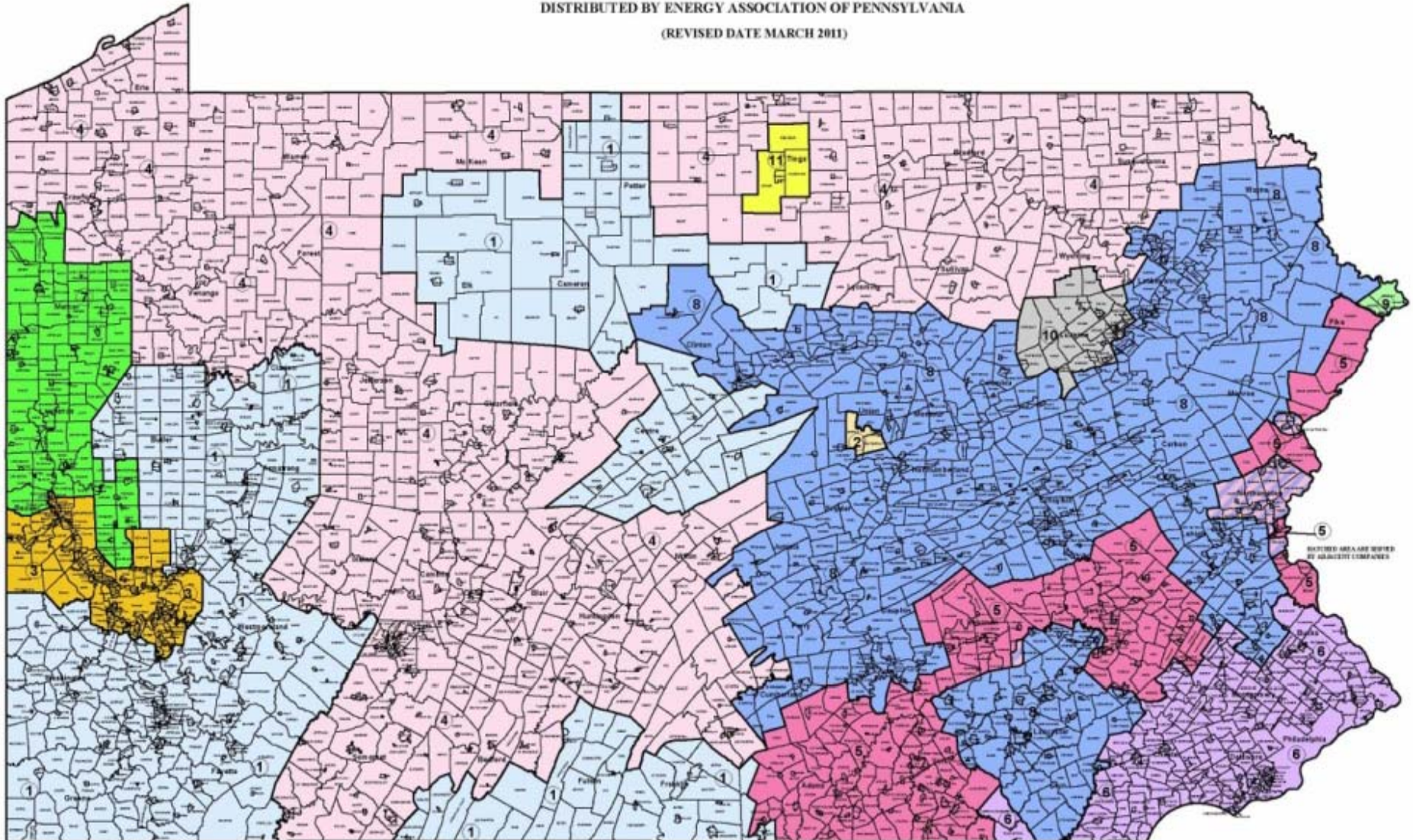
## Member EDCs:

Citizens' Electric Company  
Duquesne Light Company  
Metropolitan Edison Company (FE)  
PECO Energy Company  
Pennsylvania Electric Company (FE)  
Pennsylvania Power Company (FE)  
Pike County Light & Power Co.  
PPL Electric Utilities  
UGI Utilities, Inc. (Electric Division)  
Wellsboro Electric Company  
West Penn Power Company (FE)

Collectively, these eleven distribution companies serve over 5.6 million retail customers in Pennsylvania.



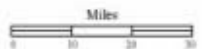
**MAP OF PENNSYLVANIA SHOWING APPROXIMATE OPERATING TERRITORIES OF INVESTOR OWNED ELECTRIC DISTRIBUTION COMPANIES**  
 (WITHOUT REFERENCE TO CHARTER OR FRANCHISE AREAS)  
 (R.E.A. TERRITORIES NOT INDICATED)  
 DISTRIBUTED BY ENERGY ASSOCIATION OF PENNSYLVANIA  
 (REVISED DATE MARCH 2011)



State Map by Statistics 01/10/2010 11:14 AM EDT

- Counties by State**
- Adams
  - Allegheny
  - Armstrong
  - Beaver
  - Bedford
  - Berks
  - Blair
  - Butte
  - Cameron
  - Carbon
  - Cashtown
  - Clearfield
  - Columbia
  - Crawford
  - Cumberland
  - Dauphin
  - Delaware
  - Elk
  - Franklin
  - Fulton
  - Gardner
  - Greene
  - Harrisburg
  - Haverhill
  - Huntingdon
  - Indiana
  - Juniata
  - Lancaster
  - Lebanon
  - Lehigh
  - Lehigh Valley
  - Luzerne
  - Maryland
  - McKean
  - Merger
  - Monroe
  - Montgomery
  - Morris
  - Mt. Vernon
  - Nantuxet
  - Norfolk
  - Northampton
  - Northumberland
  - Ohio
  - Orleans
  - Perry
  - Pike
  - Potomac
  - Richmond
  - Schenck
  - Snyder
  - Southampton
  - St. Lawrence
  - Union
  - Washington
  - Wayne
  - Westmoreland
  - York

- |                                        |                                             |                                            |
|----------------------------------------|---------------------------------------------|--------------------------------------------|
| <b>1</b> West Penn Power               | <b>5</b> Metropolitan Edison Company        | <b>9</b> Pike County Light & Power Company |
| <b>2</b> Citizens' Electric Company    | <b>6</b> PECO Energy Company                | <b>10</b> UGI Utilities, Inc.              |
| <b>3</b> Duquesne Light Company        | <b>7</b> Pennsylvania Power Company         | <b>11</b> Wellsboro Electric Company       |
| <b>4</b> Pennsylvania Electric Company | <b>8</b> PPL Electric Utilities Corporation |                                            |



# EAP Electric Utility Members

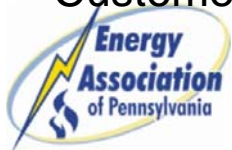
- Deliver energy to just under six million residential, commercial and industrial customers in Pennsylvania.
- Employ approximately 10,000 in their Pennsylvania operations.
- Own and operate roughly 15,000 miles of transmission lines and over 132,000 miles of distribution lines, in addition to poles, substations, transformers, conductors, circuits, etc.



# EDC Commitment to Reliability

**EAP members are committed to providing safe, reliable and cost-effective service and consider the ongoing reliability of their delivery systems to be a top priority.**

- Capital investment in technology, infrastructure improvements and equipment replacement – **all require rate recovery**;
- Inspection and preventative maintenance of distribution lines and other equipment;
- Vegetation Management;
- Outage coordination, mutual assistance efforts, and innovative interactive customer communications;
- Ongoing employee training;
- Participation in emergency response drills;
- Testing and updating of operations and support systems;
- Customer notifications to encourage greater conservation during peak usage days.



# Investments in Utility Infrastructure

- Much of PA's electric utility infrastructure is aging and ready for strengthening, upgrading or replacement.
- The quality of utility services provided to customers depends on the quality of the infrastructure over which the services are provided.
- Each electric utility faces different circumstances based on its history and the characteristics of its service territory.
- Establishing an environment that enables investment to maintain and modernize this massive electric distribution infrastructure is a major policy issue.
- The demands on EDCs' infrastructure continue to increase.



# Demand for Electricity in PA

**Electricity demand\* in Pennsylvania has grown at an average annual rate of 1% over the past 15 years.**

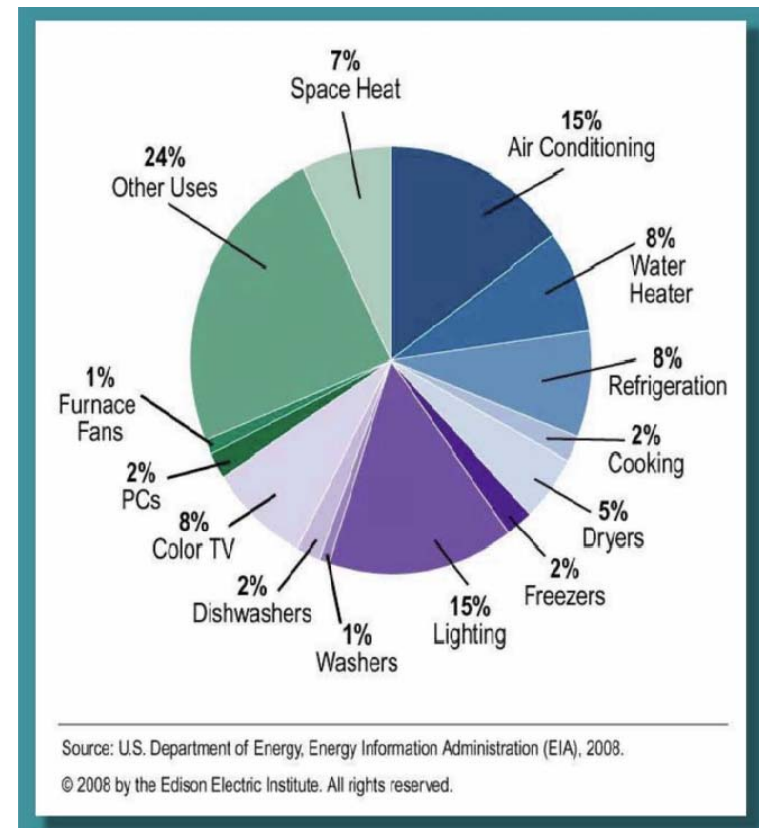
Aggregate figure for industrial, commercial and residential sectors.

Source: 2010 PA PUC-issued report entitled "Electric Power Outlook for Pennsylvania 2009-2014"

**The average U.S. home today is nearly 50% larger than average home in 1975.**

**The average U.S. household owns 23 consumer electronic products.**

Source: Edison Electric Institute, "Electricity 101" (2010)



# Alternative Ratemaking Mechanisms (ARM) Needed in PA

- Current practice of recovering infrastructure costs through a base rate case causes “regulatory lag” which may harm a utility’s financial condition and increase its cost to borrow money.
- ARM provides for more timely recovery of costs to replace utility infrastructure through tools such as an automatic adjustment clause and a fully future test year.
- Twenty states have adopted alternative ratemaking for electric utilities and nineteen states now provide special rate mechanisms for recovery of costs of replacing natural gas distribution mains.
- Modernizing infrastructure also creates high-quality jobs for PA’s citizens and helps maintain reliability of utility services.
- House Bill 1294 would authorize alternative ratemaking mechanisms for fixed utilities.





# Electricity Competition Act of 1996

## Ensures Reliability

*Mandates the PUC to maintain the levels of distribution service reliability that existed at the time of passage of the Act. [66 Pa. C.S. §§2802 \(3\)](#)*

### **Annual and Quarterly Distribution Reliability Reports** (52 Pa. Code § 57.195)

- Establish reliability benchmarks and standards to measure the performance of each electric distribution company;
- Compare and analyze average number of interruptions per customer; average amount of time, in minutes, that a utility took to restore power to a customer affected by an interruption; and the average outage time, in minutes, per customer;
- Non-compliance enforcement actions can be taken against EDCs that fail to meet the Commission's reliability performance standards.



# Distribution Reliability Reports Performance Measures

- **CAIDI** (*Customer Average Interruption Duration Index*)  
Average time required to restore service to the average customer per sustained interruption.
- **SAIFI** (*System Average Interruption Frequency Index*)  
Average frequency of sustained interruptions per customer occurring during the analysis period.
- **SAIDI** (*System Average Interruption Duration Index*)  
Average duration of sustained customer interruptions per customer occurring during the analysis period.
- **MAIFI** (*Momentary Average Interruption Frequency Index*)  
Average frequency of momentary interruptions per customer occurring during the analysis period.



# Distribution Reliability Reports

## EAP EDC Members' Performance - 2010

The Commission's annual report on PA EDCs' 2010 performance will be issued later this month.

Preliminary 2010 results:

- **Ten of 11 EDCs** achieved compliance with their 12-month CAIDI performance standard. Six of the EDCs performed better than their 12-month CAIDI performance benchmark.
- **Ten of 11 EDCs** achieved compliance with their 12-month SAIFI performance standard. Eight EDCs performed better than their 12-month SAIFI performance benchmark.



# Preventative: Inspection & Maintenance

## Biennial Inspection & Maintenance Reporting

- In addition to monitoring EDC reliability performance, the PUC adopted regulations **establishing standards for inspection and maintenance of distribution facilities** (*pursuant to the Electricity Competition Act (66 Pa. C.S. §§2802 (20))*).
- Became effective in September 2008.
- Regulations require EDCs to file a plan every two years “for the **periodic inspection, maintenance, repair and replacement** of its facilities that is designed to meet its performance benchmarks and standards under this subchapter.” *52 Pa. Code §57.198(a)*.

	1 <sup>st</sup> Biennial Report		2 <sup>nd</sup> Biennial Report	
	Date Due to PUC	Date of Implementation	Date Due to PUC	Date of Implementation
Group 1 EDCs	Oct. 1, 2009	Jan. 1, 2011	Oct. 1, 2011	Jan 1, 2012
Group 2 EDCs	Oct. 1, 2010	Jan. 1, 2012	Oct.1, 2012	Jan 1, 2013



# Act 129

## Reduce Consumption / Promote Reliability

### EDC Programs to Comply with Act 129 Enhance Safety & Reliability

**Act 129 of 2008** (*effective Nov. 14, 2008*)

- Reduce energy consumption 1% by May 2011; and, 3% by May 2013.
- Reduce peak demand (*top 100 hours of highest demand*) by 4.5% by May 2013.
- EDCs' means of achieving Act 129 requirements:
  - ✓ Energy Efficiency and Conservation (EE&C) Programs;
  - ✓ Conservation Service Providers;
  - ✓ Curtailment Service Providers;
  - ✓ Smart Meter Technology



# Act 129 - Energy Savings & Conservation Reduce Consumption / Promote Reliability

## EDCs' Conservation and Energy Efficiency Programs Provide Program Measures for All Customer Sectors

- Residential, Low-Income Residential, Commercial, Industrial, Schools and Government;
- Energy assessments & audits (*to identify highest priority weatherization and energy efficiency needs*);
- Incentives and rebates (*to promote purchase and installation of high-efficiency equipment & appliances*);
- Appliance tune-up and recycling programs;
- Compact fluorescent light bulbs (CFLs) and lighting retrofit programs;
- ENERGY STAR® new homes programs;

- Renewable energy programs (*solar, wind*);
- Energy efficiency education (*individual & community*);
- Load curtailment & control programs (*financial incentives during peak periods*);
- Aggregator contracts;
- Whole-building assessments/ rebates and loans;
- Industrial motors and variable speed drives;
- Conservation voltage reduction
- Distributed energy



# Ensuring Reliability of Generation and Transmission

- It is vital that all parts of the grid generate reliably and in a coordinated manner to protect the reliability of electric service to customers.
- Independent System Operators (such as PJM), the North American Electric Reliability Corporation, and the Federal Energy Regulatory Commission all play important roles in ensuring reliable generation and transmission service.



# Summary

- EAP member EDCs take a broad array of actions to ensure **safe and reliable electric service** including encouraging customers to conserve electricity on peak usage days during the summer.
- Under the Electricity Competition Act and associated regulations the **Commission ensures** that distribution system reliability is maintained.
- Pennsylvania's EDC Act 129 plans which serve to **conserve energy and reduce peak demand** also enhance reliability.
- **Timely rate recovery is critical** to encourage EDC capital investments in new technology and infrastructure to maintain and enhance distribution system reliability.





**Thank you.**

