

Statement of Robert T. Whalen, President  
Utility Workers Union of America  
System Local 102  
House Majority Policy Committee Hearing  
Latrobe, PA  
September 6, 2012

Good morning, Chairman Reed and distinguished members and guests. I am Robert Whalen and here on behalf of the 1100 members of System Local 102 that produce and distribute electricity in the states of Pennsylvania, Maryland, West Virginia and Virginia. I am also a member of the Utility Workers Union of America National Executive Board. I have worked in the electrical utility business for 35 years in various jobs.

System Local 102 has just experienced the untimely closure and scrapping of the Armstrong Power Station near Kittanning, Pennsylvania on September 1, 2012. In its previous state, Armstrong could have continued to produce electricity at a cost effective rate and enhanced service reliability to the residents and businesses of Pennsylvania until 2015 without any upgrades. Armstrong Power Station had many of its critical components rebuilt or replaced in the late nineties and early two thousands, restoring it to like new condition. With the addition of air cleaning equipment or other technology, Armstrong would have produced electricity for many years into the future.

Now that Armstrong is closed, there must be additional equipment added to the regulated (wires) side of the business in an attempt to ensure service reliability for customers. The cost of installing a new transformer, new high voltage transmission line, and relocating the relay room will be passed on to every customer and business of the regulated side of the electrical utility business. If the company would have invested that same amount of money in technology to clean the emissions from Armstrong, the electrical grid would be more reliable and consumers in Pennsylvania would experience lower electric rates.

### **Allegheny Energy First Energy Merger**

During the recent merger of Allegheny Energy and First Energy, First Energy provided the following information related to generation and transmission:

1. More than 21,000 MW of competitive generation capacity.

2. Favorable environmental profile with a diverse mix of fully scrubbed baseload fossil, non-emitting nuclear and renewable generation, including large-scale storage.
3. Combined Fleet (generation) is well positioned for changing environmental regulation.
4. Based on capacity:
  - a. 68 percent of coal-based fleet is supercritical generation (vs. national :28 percent)
  - b. 32 percent of coal-based fleet is subcritical generation (vs. national 72 percent)
5. Provider of more than 2,200 MW of renewable resources: hydroelectric, contracted wind and pump-storage capacity.

Based on the above Company-provided information during the merger approval process, it appears the Company is suggesting that it will be able to provide low cost, safe, reliable electricity to the customers in its service area. The information also suggests that the combined Company would have a favorable environmental profile.

### **Transmission Line System**

With First Energy's acquisition of Allegheny Energy's Transmission Line System, it provided First Energy with a profitable way to transmit its Ohio based generation to the east coast.

### **PJM**

The following information is from the PJM website:

PJM Interconnection is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia.

- Acting as a neutral, independent party, PJM operates a competitive wholesale electricity market and manages the high-voltage electricity grid to ensure reliability for more than 60 million people.
- PJM's long-term regional planning process provides a broad, interstate perspective that identifies the most effective and cost-efficient

improvements to the grid to ensure reliability and economic benefits on a system wide basis.

- An independent Board oversees PJM's activities. Effective governance and a collaborative stakeholder process help PJM achieve its vision: "To be the electric industry leader – today and tomorrow – in reliable operations, efficient wholesale markets, and infrastructure development."

## **PJM Report and requirements to deactivate First Energy Power Station Units**

### **First Energy Generator Deactivation Request - January 2012**

### **Deactivation Study Results and Required Upgrades – April 25, 2012**

#### **General**

PJM received a notice on January 26, 2012 from FirstEnergy of its intent to deactivate through retirement the following generating units by not later than September 1, 2012:

Armstrong 1 172 MW

Armstrong 2 171 MW

Ashtabula 5 244 MW

Bay Shore 2 138 MW

Bay Shore 3 172 MW

Bay Shore 4 215 MW

Eastlake 1 132 MW

Eastlake 2 132 MW

Eastlake 3 132 MW

Eastlake 4 240 MW

Eastlake 5 597 MW

Lake Shore 18 245 MW

R. Paul Smith 3 28 MW

R. Paul Smith 4 87 MW

#### **Reliability Analysis:**

PJM Interconnection Analysis (and affected Transmission Owners) performed a study of the Transmission System and found significant reliability concerns resulting from the deactivation of these generating units. In all, more than 190 reliability violations were identified in this deactivation analysis. A summary of the reliability impacts resulting from the proposed Deactivations include:

##### **1. N-1 Common Mode Voltage Violations:**

- Ten low voltage violations on the 138 kV system

##### **2. N-1-1 Thermal Violations:**

- Six 138 kV thermal violations in the Allegheny Power zone

- Thirty 138 kV and 345kV thermal violations in the ATSI zone
- Two 230 / 115 kV thermal violations (transformers) in the PenElec zone
- Ten 138 kV thermal violations in the AEP zone

### **3. N-1-1 Voltage Violations:**

- Ninety-two low voltage violations in the ATSI zone

### **4. Generator Deliverability Violations:**

- Twenty-six 138 kV and 345 kV overloaded facilities in the ATZI zone.
- One 138 kV overload facility in the Allegheny Power zone.
- Seven 115 kV and 345 kV overloaded facilities in the PenElec zone.
- Eight 345 kV and 138 kV overloads in the AEP zone.

### **5. Load Deliverability Violations:**

- One voltage collapse violation observed in the ATSI zone
- One 345 kV overload on an AEP / ATSI facility

### **Study Results and Required Upgrades:**

The following generating units will be deactivated on September 1, 2012:

Armstrong 1

Armstrong 2

Bay Shore 2

Bay Shore 3

Bay Shore 4

Eastlake 4 Note: will be converted to synchronous condenser (expected completion Dec. 1, 2013)

Eastlake 5 Note: will be converted to synchronous condenser (expected completion June 1, 2013)

R. Paul Smith 3

R. Paul Smith 4

The following generating units will continue to operate as upgrades to the transmission system are constructed:

Ashtabula 5

Eastlake 1

Eastlake 2

Eastlake 3

Lake Shore 18

Required transmission upgrades and expected completion date:

ATSI zone:

- Install a 50 MVAR capacitor bank at the Maclean 138 kV station 6/1/2013
- Install a 345/138 kV transformer at the Inland Q-11 station 6/1/2013
- Install a 138 kV circuit breaker at the Inland Q-11 station 6/1/2013
- Upgrade terminal equipment on the Avon – Crestwood 138 kV line 6/1/2013
- Eastlake unit 5 to be converted to synchronous condenser 6/1/2013
- Eastlake unit 4 to be converted to synchronous condenser 12/1/2013
- Eastlake units 1, 2 and 3 to be converted to synchronous condensers 6/1/2015
- Lakeshore unit 18 to be converted to synchronous condenser 6/1/2015
- Loop the Chamberlin - Mansfield 345 kV line into the Hanna 345 kV substation (existing baseline upgrade b1283) 6/1/2014 (advanced from 6/2015)
- Build new Hayes 345/138 kV substation with new 138 kV lines to: Greenfield #1, Greenfield #2, and Avery (existing baseline upgrade b1281) 6/1/2014 (advanced from 6/2015)
- Build Beaver - Hayes - Davis Besse #2 345 kV line (existing base line upgrade b1282) 6/1/2014 (advanced from 6/2015)
- Re-conductor the Galion – Leaside 138 kV line 6/1/2014
- Re-conductor the Galion – GM Mansfield – Ontario - Cairns 138 kV line 6/1/2014
- Install a 2nd 345/138 kV transformer at the Allen Junction station 6/1/2014
- Install a 2nd 345/138 kV transformer at the Bay Shore station 6/1/2014
- Create a new Northfield Area 345 kV switching station by looping in the Eastlake – Juniper 345 kV line and the Perry - Inland 345 kV line 6/1/2015
- Build a new Mansfield - Northfield Area 345 kV line 6/1/2015
- Create a new Harmon 345/138/69 kV substation by looping in the Star – South Canton 345 kV line 6/1/2015
- Build a new Harmon – Brookside + Harmon - Longview 138 kV line 6/1/2015
- Create a new Five Points Area 345/138 kV substation by looping in the Lemoyne – Midway 345 kV line 6/1/2015
- Install a 50 MVAR capacitor at Hayes 138 kV 6/1/2015
- Install a 138/69 kV transformer at the Avery station 6/1/2015
- Increase design temperature limitation on the Avery – Hayes 138 kV line by raising the existing structures 6/1/2015
- Reconductor Cloverdale - Harmon #2 and #3 138kV lines and Terminal upgrades 6/1/2015
- Change the transformer tap settings on the Maclean 138/69 kV transformers 6/1/2015
- Upgrade the Richland – Naomi 138 kV line 6/1/2015
- ATSI-AEP 138kV Substation on / near territory border and 138kV from new substation to Longview 6/1/2016, working on potential operating procedure to mitigate impacts until this upgrade complete

- Build new Allen Jct - Midway - Lemonye 345kV line 6/1/2016, but operating procedure in place to mitigate impacts until this upgrade complete
- Build a new Leroy Center 345/138 kV substation by looping in the Perry – Harding 345 kV line 6/1/2016, but operating procedure in place to mitigate impacts until this upgrade complete
- Place a portion of the 138 kV Leroy Center 345/138 kV project into service by summer 2015 6/1/2015
- Reconductor the Barberton – West Akron 138 kV line 6/1/2016, but operating procedure in place to mitigate impacts until this upgrade complete

#### AP zone:

- Replace breaker risers at Marlowe 138 kV and wave traps at Marlowe 138 kV and Bedington 138 kV 6/1/2013
- Replace line trap at Stonewall on the Stephenson 138 kV line terminal (existing base line upgrade b1902) 6/1/2013
- Loop the Homer City-Handsome Lake 345 kV line into the Armstrong substation and install a 345/138 kV transformer at Armstrong 6/1/2014
- Change the CT ratio at Millville 6/1/2015
- Install a new Buckhannon – Weston 138 kV line 6/1/2016, but operating procedure in place to mitigate impacts until this upgrade complete

#### PenElec zone:

- Construct Four Mile Junction 230/115 kV substation (existing baseline upgrade b1609) 6/1/2014
- Construct a 115 kV ring bus at Claysburg Substation 6/1/2015
- Reconductor Eclipse substation 115 kV bus 6/1/2013
- Install second 230/115 kV autotransformer at Johnstown 6/1/2015

#### AEP zone:

- Reconductor AEP portion of South Canton – Star 345 kV line and upgrade terminal equipment at South Canton (existing base line upgrade b1812) 12/31/2013
- Advance baseline upgrade b1901 (Rebuild the Ohio Central – West Trinway (4.84 miles) section of the Academia – Ohio Central 138 kV circuit. Upgrade the Ohio Central riser, Ohio Central switch and the West Trinway riser) 6/1/2015
- Advance baseline upgrade b1868 (Perform a sag study on the 05E LIMA – New Liberty 138 kV line) 6/1/2015
- Advance the rebuild portion of the baseline upgrade b1819 (Rebuild the Robinson Park - Sorenson 138 kV line corridor as a 345 kV double circuit line with one side operated at 345 kV and one side at 138 kV) 6/1/2015

- Advance 2016 baseline project b1733 (Perform a sag study of the Bluff Point - Jay 138 kV line.) Upgrade breaker, wavetrap, and risers at the terminal ends). 12/1/2014
- Perform a sag study on the Brues – West Bellaire 138 kV line 12/1/2014
- Advance Baseline project b1865 (Perform a Sag study on the Kanawha – Carbondale 138 KV line) 12/1/2014
- Sag study of the Dequine - Meadowlake 345 kV line #1 12/1/2013
- Sag study of the Dequine - Meadowlake 345 kV line #2 12/1/2013
- Advance baseline project b1868 (Perform sag study of the East Lima – New Liberty 138kV line) 12/1/2014
- Establish a new 765/345 interconnection at Sporn. Install a 765/345 kV transformer at Mountaineer and build ¾ mile of 345 kV to Sporn. 6/1/2015
- Perform a sag study on the Grant Tap – Deer Creek 138 kV line and replace bus and risers at Deer Creek station 12/1/2014
- Advance baseline project b1436 (Perform a sag study on the Sorenson - Illinois Road 138kV line). Replace bus and risers at Illinois Road. 12/1/2014
- Perform a sag study on the Kammer – Ormet 138 kV line 12/1/2012
- Perform a sag study of the Maddox- Convoy 345 kV line 12/1/2013
- Perform a sag study of the Maddox – T130 345 kV line 12/1/2013
- Perform a sag study of the Meadowlake - Olive 345 kV 12/1/2013
- Perform a sag study on the Milan - Harper 138 kV line and replace bus and switches at Milan Switch station 12/1/2014
- Advance baseline project b1871 (Perform a sag study on the Ohio Central – West Coshocton 138KV line). 12/1/2014
- Perform a sag study of the R-049 - Tillma 138 kV line 12/1/2013
- Advance 2016 Baseline project B1734 (Perform a sag study of Randolph - Hodgins 138 kV line. Upgrade terminal equipment). 12/1/2014
- South Canton – Harmon 345 kV line - advance baseline project b1812 (rebuild AEP portion of line). Also upgrades risers, wavetrap and bus work at South Canton station. 6/1/2015
- Perform a sag study of the Tillma - Dawkins 138 kV line 12/1/2013
- Advance baseline project b1738 (Perform a sag study of the Wolf Creek - Layman 138 kV line. Upgrade terminal equipment including a 138 kV breaker and wavetrap). 12/1/2014
- Advance baseline project b1883 (Switch the breaker position of transformer #1 and SW Lima at East Lima 345 kV bus). 12/1/2014
- Terminate Transformer #2 at SW Lima in a bay position 12/1/2014
- Perform a sag study on the Brookside - Howard 138 kV line and replace bus and risers at AEP Howard station 12/1/2014

The above reports clearly show that most of the upgrades required by PJM as a result of generation deactivation will be passed on to the regulated side of the electrical utility business while reducing market competition and service reliability due to less generation.

In the PJM market, various electric generating companies have requested the deactivation of approximately one hundred units of generation totaling approximately 14,180 MW. First Energy alone has requested the deactivation of approximately 37 units and the removal of approximately 5,685 MW of generation. The loss of this generation will certainly have an adverse effect on the price of electricity and service reliability during very cold and hot weather conditions. As the economy continues to improve and the demand for electricity increases by Pennsylvania businesses, there will be less generation available at cost effective prices, which may result in corporations locating or relocating in states that regulate the price of electricity. We must have affordable power to keep Pennsylvania businesses viable and competitive so they can maintain stable employment for their workers.

If generating companies are allowed to shut down units at their discretion and manipulate the market like Enron did in California, Pennsylvania will most likely experience rolling black outs and sharp price spikes due to the unavailability of power. An important note to consider is a power station cannot be built in a short period of time.

### **Security**

I ask you to consider a state without electricity. There are no portable generators or batteries that can replace electricity in Pennsylvania homes or businesses for any sustainable amount of time. Electricity is a matter of National security and its generating facilities/infrastructure should be maintained and regulated the same as any military defense system. From an economic standpoint, there is no business that can survive without it. When the lights go off, it costs Pennsylvania businesses revenue.

### **Summary**

The only way to ensure that Pennsylvania citizens and businesses will have clean, safe, reliable, and cost effective electricity is to return the generation of electricity to a regulated entity under the control of the Public Utility Commission. Prior to

deregulation in 1998, electric utility generating companies were required to maintain their facilities to provide reliable power and have a reserve of power available for any type of weather/loading conditions. If the companies were still regulated, it is reasonable to believe that they would have been required to invest in pollution control equipment while making a reasonable profit.

I would also like to thank Representative Reese and Representative Pyle for helping to make today's meeting possible.

Respectfully submitted by Robert T. Whalen