

# **ANNUAL REPORT TO THE GOVERNOR AND GENERAL ASSEMBLY – ENERGY CONSERVATION EFFORTS OF VIRGINIA’S INVESTOR-OWNED PUBLIC UTILITIES IN 2010**

**Submitted by the Department of Mines, Minerals and Energy  
November 24, 2010**

## **Introduction**

As outlined in § 67-202.1 of the Code of Virginia, each investor-owned public utility (IOU) that provides electric service in the Commonwealth is required to prepare an annual report delineating its efforts to conserve energy, including but not limited to its implementation of customer demand-side management (DSM) programs and efforts by the utility to improve energy efficiency and conservation within its internal operations, pursuant to § 56-235.1 of the Code. The annual reports are to be submitted by November 1 of each year to the Division of Energy of the Department of Mines, Minerals and Energy (DMME). The Division is charged with compiling the utilities’ reports and submitting the compilation to the Governor and the General Assembly.

For the year 2010, reports were received from Dominion Virginia Power, Appalachian Power Company (APCo), and Kentucky Utilities Company d/b/a Old Dominion Power Company. The following is a summary of their energy conservation efforts during the past year. A copy of each utility’s full report is available from the Virginia Department of Mines, Minerals and Energy.

### **Dominion Virginia Power**

Dominion Virginia Power has invested significant resources in conservation and efficiency programs that provide customers the information and supporting technology needed to manage and reduce energy consumption. On March, 24, 2010, the Virginia SCC issued an order approving demand-side management programs, which included approval for five of the company’s programs: (1) Air Conditioner Cycling; (2) Commercial Heating, Ventilating, and Air Conditioning (HVAC) Upgrade; (3) Commercial Lighting; (4) Low Income; and, (5) Residential Lighting. Additionally, in 2009, the company began an Advanced Metering Infrastructure (AMI) demonstration in a number of locations in the Dominion Virginia Power service territory in order to fully understand the impacts of AMI and plans to submit an application for approval in 2011.

Dominion also offers several DSM tariffs; Standby Generation (SG) and Curtailable Service (CS). The SG service tariff provides a direct means of implementing load reduction during peak periods by transferring load normally served by the company to a participant’s standby generator. The CS tariff requires participants to reduce their electric demand, when requested by the company, in return for a rate reduction credit. Participants commit to curtailment upon a 30-minute notice in order to receive the rate credit and are required to reduce load to a firm service level.

Dominion filed an application with the SCC on September 30, 2010 to offer three experimental dynamic pricing tariffs and related technology, customer interface and data collection as part of a structured comprehensive pilot program to a limited number of residential and commercial customers who volunteer to enroll. Eligible customers must have either an AMI meter or an interval data recorder (IDR). As part of the pilot, the company proposed to offer a robust educational program for participants to ensure that they understand how the dynamic rates work and the potential for energy savings.

As part of its integrated resource planning process, the company evaluated additional future DSM programs for which the company has not yet sought regulatory approval.

The company has numerous consumer education initiatives that include providing demand and energy usage information, opportunities to meet with Dominion representatives, and online customer support options to assist customers in managing their energy consumption. The Company's website has a section dedicated to energy conservation. This section contains helpful information for both residential and non-residential customers. Through consumer education, the company is working to encourage the adoption of energy-efficient technologies in residences and businesses.

Dominion also has numerous external conservation initiatives that include the installation of solar panels as part of the company's "SmartGrid Charlottesville" initiative, a home energy makeover contest for "SmartGrid Charlottesville", encouraging the use of LED lights for decorations, partnering with EarthCraft, and reaching out to low-income customers

Dominion's efficiency and conservation commitment is multi-faceted. The company does not view environmental responsibility as only controlling emissions but also conserving resources, such as energy and water. Some examples of these projects and other environmentally-focused projects are maintaining and improving the energy efficiency of Dominion's facilities, retrofitting new lighting to replace old florescent fixtures with electromagnetic ballasts, a new web-based, open protocol system called Tridium that allows personnel to remotely operate lighting and HVAC systems, green information technology incorporating ENERGY STAR compliant or certified components in the IT department, the NighWatchman program that shuts down inactive desktops at night, and an investment recovery program that disposes of surplus assets in a way that both maximizes return on investment and minimizes the environmental impact.

Dominion's report provides a snapshot of the current plans and programs available to the company's internal and external stakeholders. The company supports the commonwealth's goals regarding energy conservation and renewables and will continuously evaluate energy savings and environmental programs for itself and its customers in support of the overall goals in the Virginia Energy Plan.

## **Appalachian Power Company**

American Electric Power (AEP) and Appalachian Power Company (APCo) are committed to energy efficiency, both within our own internal operations, and externally by helping our customers use electricity in a wise and efficient manner.

AEP has established a self-imposed goal of reducing its demand by 1,000 MW and reducing energy consumption by 2,250 GWh annually by the end of 2012. APCo intends to be an active participant in meeting this goal and its level of participation will depend upon the outcome of various policy matters which are currently before the SCC.

Recognizing the prospects of higher avoided costs, AEP has begun several initiatives to improve grid efficiency and install advanced metering. Examples are: “passive” demand reductions via customer-focused energy efficiency, unique utility infrastructure efficiency initiatives such as Integrated Voltage/VAR Control, as well as “active” demand response (“peak shaving”-type) program opportunities. Additionally, there are mandated levels of AEP-East Operating Company energy efficiency and demand response in Ohio, Indiana and Michigan.

APCo offers various time-of-day tariff options which are geared toward allowing customers to shift usage to lower cost periods. Based on a change of lifestyle or, in the case of a non-residential customer, a change or shift in mode of operation, these tariff schedules provide the customer with an opportunity to shift or reduce peak demand on the Company’s system, save money and encourage additional efficiencies. The tariff options for residential customers include load management water heating and time-of-day. Tariff options for commercial and industrial include: Small General Service load management water heating, Medium General Service and Large General Service Off-peak excess demand provisions, General Service and Large General Service time-of-day and Advanced time-of-day.

In 2008, APCo implemented a consumer education program on energy conservation entitled “Watt Why & How” which has continued through 2010, and will be ongoing in the future. The program is geared toward educating community leaders and citizens on what APCo is doing to meet the growing demand for electricity, changes in electric rates, and how people can save money on their electric bills. [www.WattWhyandHow.com](http://www.WattWhyandHow.com)

The company filed its Narrative Summary of Events Impacting the 2009 IRP on September 1, 2010 with the SCC. That IRP Summary identifies the latest analysis for both the AEP system and APCo for meeting our customers’ needs in an efficient manner at reasonable costs.

In accordance with the Commission’s order dated July 30, 2010, APCo developed pilot programs that offer dynamic pricing on an hourly and monthly basis to non-residential rate customers that have properly certificated renewable generation facilities. The company filed its pilot program on September 28, 2010 which offers both buy/sell tariffs on a real-time basis for renewable generators.

In March of 2010, APCo re-emphasized a program that offers residential energy audits to customers in Virginia, in order to assist them with conserving energy. In addition, the company identified specific high end energy users in the Lynchburg, Fieldale and Galax areas and sent out letters to these users offering the residential energy audit service. To date, APCo has conducted 141 residential energy audits.

APCo is currently working with local government energy managers to develop an energy efficiency program pursuant to the terms of the electric service contract with local governments effective July 1, 2009. The current proposal is to implement a high efficiency lighting program which will provide the most savings for those customers.

In October 2010, APCo received approval of a grant through the AEP Foundation to provide low income weatherization services in its service territory. The grant will be used for weatherization, electric furnace/central air replacement with heat pumps, replacement of standard electric water heaters with high efficiency water heaters and training for weatherization technicians.

During 2009 and 2010, the company continued to look for opportunities to improve internal efficiencies. The company has tested newly emerging cost effective LED lighting technologies both inside and outside of our facilities. The company has also completed lighting retrofit projects, the installation of energy star rated white roofs and the replacement of various HVAC equipment.

APCo received approval from the SCC for its Renewable Portfolio Standard in August 2008. APCo proposes meeting Virginia's renewable energy portfolio goals with a combination of run-off-river hydroelectric energy from existing facilities, new purchases of wind energy, and any carry forward credits APCo obtains for exceeding target threshold amounts. The AEP System-East Zone is already receiving energy from Camp Grove and Fowler Ridge wind projects with a total nameplate rating of 275 MW, of which APCo's share is 175 MW. APCo anticipates meeting the interim goals established in the Virginia Renewable Standard Program.

Finally, APCo is offering Virginia retail customers the opportunity to support the renewable generation of energy by voluntarily participating with a new green pricing option. The renewable power rider allows customers to support the value of Renewable Energy Certificates (RECs) which will be acquired from hydro-generated sources.

### **Old Dominion Power Company (ODP)**

Old Dominion Power Company (Kentucky Utilities) continues to encourage customers to conserve energy by providing energy efficiency tips in the Power Source newsletters that are included in the monthly bills. During 2010, each issue contained practical and proactive ways in which customers can implement energy and conservation measures. Energy efficiency/smart saver tips are made available to customers at various public gatherings and community festivals as well as the company's website. The Home Energy

Calculator is a tool also available to customers on the website; designed to help a customer determine where potential energy savings exist.

Although ODP does not currently deploy demand-side management portfolios, Kentucky Utilities Company (KU) and Louisville Gas and Electric Company (LG&E) have had significant demand-side management and energy efficiency programs in place in Kentucky for a number of years in which ODP customers have benefited from indirectly through avoided cost capacity savings. However, the Company is committed to environmental stewardship and continues to search for cost-effective programs to implement in the ODP service territory.

Since the last submission of this report, the Company has taken additional steps to improve energy efficiency in the Norton, VA office and storeroom, namely by upgrading to a more efficient heating, ventilation, and air conditioning (HVAC) system. Also the Company continues to reap benefits from the conservation efforts implemented internally in 2009 through the elimination of single pane windows and inefficient lighting, carpet upgrades, and utilization of hybrid vehicles in the fleet.

Billing options such as paperless billing and auto pay enable customers to view and pay bills on-line instead of receiving a paper copy through regular mail. Lastly, ODP, KU, and LG&E have initiated the “Environmental Champions Program” which encourages employees to conserve energy and recycle waste at work.