

ANNUAL REPORT TO THE GOVERNOR AND GENERAL ASSEMBLY



ENERGY CONSERVATION EFFORTS OF VIRGINIA'S INVESTOR-OWNED PUBLIC UTILITIES IN 2011



Submitted by the Department of Mines, Minerals and
Energy

November 29, 2011

Introduction

§ 67-202.1 of the Code of Virginia requires each investor-owned public utility (IOU) that provides electricity service in the Commonwealth to prepare an annual report to the Department of Mines, Minerals and Energy (DMME) delineating its efforts to conserve energy. In the report, each IOU is required to disclose its implementation of customer demand-side management (DSM) programs and its efforts to improve energy efficiency and conservation within its internal operations. The annual reports are to be submitted by November 1 of each year to the Division of Energy of DMME. The Division is charged with compiling the utilities' reports and submitting the compilation to the Governor and the General Assembly.

For the year 2011, reports were received from Dominion Virginia Power (Dominion), Appalachian Power Company (APCo), and Kentucky Utilities Company d/b/a Old Dominion Power Company (ODP). 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 DMME.

Dominion Virginia Power (Dominion)

Dominion reports it has invested significant resources in conservation and efficiency programs that provide customers the information and supporting technology needed to manage and reduce energy consumption. Dominion also offers two 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 upon request by Dominion 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 reports it is also administering several ongoing DSM pilot programs. These include distributed generation/load curtailment for large non-residential customers, dynamic pricing tariffs, an electric vehicle pilot, and an advanced metering infrastructure demonstration.

On September 1, 2011, Dominion filed for SCC approval for six new DSM programs. These programs include a commercial energy audit program, a commercial duct testing and sealing program, a commercial refrigeration program, commercial distributed generation, residential lighting program and residential bundle program. A decision on these programs is expected by May 1, 2012. Dominion believes the proposed programs provide a diversified mix of services that are cost-effective and in the public interest.

In order to quantify the level of energy and demand savings, Dominion has implemented evaluation, measurement and verification plans. The most recent report was filed with the SCC on October 3, 2011. Dominion indicates all programs are on track to meet or exceed energy and demand savings goals established through 2011.

Dominion 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. Through consumer education, the company is working to encourage the adoption of energy-efficient technologies in residences and businesses. Dominion's education programs include a customer connection newsletter, online energy calculators, community outreach events, and utilization of social media.

Dominion reports it has also taken steps to conserve energy in its internal operations. Some examples are maintaining and improving the energy efficiency of Dominion's facilities, retrofitting new lighting to replace old florescent fixtures with electromagnetic ballasts, irrigation enhancement at its Tredegar campus in Richmond, green information technology incorporating ENERGY STAR compliant or certified components in the IT department, the NightWatchman 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. Dominion states it 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 (APCo)

APCo's parent company, American Electric Power (AEP), has established a self-imposed goal of reducing its demand by 1,000 megawatts (MW) and reducing energy consumption by 2,250 gigawatt hours (GWh) annually by the end of 2012. To date, AEP reports total reductions of 493 MW and 1,343 GWh have been achieved. APCo intends to be an active participant in meeting this goal; however it reports that its level of participation has been reduced due to increased costs paid by customers from required environmental investments.

Recognizing the prospects of higher costs, APCo reports 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. In addition to these and the activities listed below, APCo reports it is currently meeting with stakeholders to finalize a portfolio of energy efficiency and demand response programs to be filed with the SCC for approval. If approved, APCo believes these new programs will provide opportunities for residential, commercial and industrial customers.

APCo reports it 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 tariffs.

As part of its effort to manage its peak load, its overall load shape and its generation resource costs, APCo petitioned the SCC to approve two DR riders for its non-residential retail customers. The SCC approved these riders on September 12, 2011. APCo advises it is in the process of training its personnel on the program and will soon post educational material for its customers on its website. APCo states it plans to actively market these riders to its customers in the coming months.

In 2008, APCo implemented a consumer education program on energy conservation entitled “Watt Why & How” which has continued through 2011, 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.

The company filed its Integrated Resource Plan (IRP) on September 1, 2011 with the SCC. The IRP identifies the latest analysis for both the AEP system and APCo for meeting their customers’ needs in an efficient manner at reasonable costs. The full IRP is available from the SCC’s website.

In accordance with an order from the SCC, 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. The SCC approved the pilot program on May 18, 2011 and APCo advises it is in the process of developing and implementing the provisions set forth in the approval order.

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 155 residential energy audits.

APCo reports it has developed an energy efficiency program for its public authority customers. The program, which was mutually agreed upon, is a prescriptive high efficiency lighting incentive program. The program was launched on January 15, 2011. APCo states it has received 28 applications to date for lighting upgrade incentives totaling \$103,000. APCo advises the program will continue with a final application period that will launch December 15, 2011 and will remain open to new applications through February 15, 2012.

In October 2010, APCo received approval of a grant through the AEP Foundation to provide low income weatherization services in its service territory. The total grant was \$1.1 million, with \$500,000 to be used in Virginia. 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. In Virginia, the monies are being administered through Community Housing Partners to provide services to low income customers in the APCo Virginia territory. APCo reports work started in 2011 and to date more than 100 homes have received services. APCo anticipates that the grant will improve efficiency of 180 homes in Virginia before funds are depleted.

During 2011, APCo advised it 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 their facilities. The company has also completed lighting retrofit projects, the installation of energy star rated white roofs and has replaced various HVAC equipment. APCo reports that since the baseline year of 2007, energy use in its Virginia facilities has decreased approximately 26%.

Old Dominion Power Company (ODP)

ODP advises it continues to encourage customers to conserve energy by providing energy efficiency and conservation tips in the Power Source newsletters that are included in the monthly bills. During 2011, 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.

ODP reports its website also contains tools which allow its customers to identify potential areas for energy savings. ODP offers Smart Saver ideas which offer low cost and no cost ways to save on lighting, heating and cooling, appliances and electronics, insulation and water usage. Additionally, a Watt Finder Guide is available which educates customers on how appliance choices and usage impacts energy consumption.

In 2011, ODP proposed to implement four demand-side management and energy efficiency programs. However, the SCC did not approve the applications so the programs will not go forward at this time. ODP reports the SCC decision does not preclude the company from requesting approval for similar programs in the future.

Although ODP does not currently deploy demand-side management portfolios, it reports 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, ODP advises it is committed to environmental stewardship and continues to search for cost-effective programs to implement in the ODP service territory.

ODP advises its 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.