

ANNUAL REPORT TO THE GOVERNOR AND GENERAL ASSEMBLY



ENERGY CONSERVATION EFFORTS OF VIRGINIA'S INVESTOR-OWNED PUBLIC UTILITIES IN 2015



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Energy

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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 2015, 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 continues to report that 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 one DSM tariff, the Standby Generation (SG) rate schedule. 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 Curtailable Service tariff, which requires participants to reduce their electric demand upon request by Dominion in return for a rate reduction credit, was closed to new participants effective January 25, 2014.

Dominion continues to offer a number of programs to residential customers, including a residential appliance recycling program, the residential heat pump upgrade program, the residential air conditioner cycling program, and the residential income and age qualifying home improvement program. The residential air conditioning cycling program, recently extended through April 2016, involves the installation of cycling switches on residential air conditioning units that allows the units to be remotely cycled off for brief intervals during periods of peak load demand.

Additional programs available to non-residential customers include the distributed generation program and the duct testing and sealing program. The distributed generation program allows participating customers to receive reduced-cost backup generation service in exchange for reducing electrical load on Dominion's system. The duct testing and sealing program provides cash incentives for qualifying customers to have ducts tested and sealed according to program-approved methods in order to increase efficiency.

Dominion reports it is also administering several ongoing DSM pilot programs. These include dynamic pricing tariffs, an electric vehicle pilot, and an advanced metering infrastructure

demonstration. Approved by the SCC on August 26, 2013, a dynamic pricing schedule allows Dominion to charge different prices as the costs of electricity production change in response to demand. This means that electricity usage during periods of higher usage will be charged more per kWh than usage during periods of lower electricity usage. Currently, the pilot is limited to 3,000 voluntary participants, 2,000 of whom are residential customers and 1,000 of whom are commercial/general customers. The electric vehicle pilot offers customers two alternatives to electricity pricing with the intent to encourage customers to charge their electric vehicles during times of low usage. Both of these pilots are scheduled to end in 2016. Dominion is filing with the SCC a petition to extend enrollment in this pilot through September 1, 2016 and implementation through November 30, 2018 within the existing cost cap set by the SCC in its initial approval order. As of September 2015, 466 were enrolled in the pilot across both options. Dominion is also continuing to upgrade individual customer meters to smart meters. As of September 2015, Dominion reports having installed over 340,000 smart meters throughout the state.

On August 29, 2014, Dominion requested approval from the SCC for three additional DSM programs for residential and non-residential customers. They were the income and age qualifying home improvement program, the residential appliance recycling program and the qualifying small business improvement program. The first two programs were to provide eligible customers with support and incentives to purchase appliances to reduce demand. The qualifying small business improvement program was designed to provide low-cost energy assessments and other incentives for small businesses meeting certain size- and need-based requirements. The company sought to implement these programs for a period of five years. On April 24, 2015, the SCC reduced the duration and modifying the terms of the qualifying home improvement and residential appliance recycling programs, and did not approve the qualifying small business improvement program citing a lack of specific eligibility criteria.

In a recent SCC filing on August 28, 2015, Dominion filed for approval of two new DSM programs: the residential thermostat program and the small business improvement program. The residential programmable thermostat program would provide an incentive to eligible customers who purchase specific types of program-approved thermostats at retail or on-line retailers. The small business improvement program would provide small businesses an energy use assessment and tune-up or re-commissioning of electric heating and cooling systems along with financial incentives for the installation of specific energy efficiency measures. A decision on both of these programs is expected by May 1, 2016.

In order to continue to quantify the level of energy and demand savings, Dominion has implemented evaluation, measurement and verification (EM&V) plans to quantify the level of savings for the approved DSM programs. These plans are developed, executed and reported by a third party vendor, DNV GL. The most recent report was filed with the SCC on April 1, 2015.

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 continue to include a customer

connection newsletter, an energy conservation blog, 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, enhancing the irrigation system at its Richmond office to save water, green information technology incorporating ENERGY STAR compliant or certified components in the IT department, the Night Watchman 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 reports receiving recognition for being among the top 100 green utilities based on carbon emissions and renewable energy capacity. It also reports receiving recognition from the U.S. Environmental Protection Agency as a leader in offering voluntary renewable energy options to its electric utility customers.

Dominion's report provides a snapshot of the current plans and programs available to the company's internal and external stakeholders. Dominion reports that in March 2012, the Company and eight other utilities joined the Green Button Initiative to provide households access to data related to their energy use. They also will continue to evaluate the results of a recent market potential study to determine other potential DSM programs for customers. 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) continues to express a commitment to energy efficiency and demand side management measures. APCo also reports that beginning in January 2014, the AEP Interconnection Agreement ceased to exist, and as a result, APCo is now solely responsible for supplying electricity to its customers within the PJM RTO.

Last year, APCo reported that it had recently filed with the SCC a request during its Biennial filing for two residential programs to reduce demand and energy usage. These programs included a residential low income program and residential direct load control program. The SCC approved the programs in November 2014. The residential low income program uses weatherization agencies in its service territory to implement cost-effective energy saving measures in residential households with low incomes. Residential customers participating in APCo's direct load control program will be offered a monetary incentive to allow APCo to control the central air conditioning unit of the home.

On October 24, 2014 APCo filed with the SCC a petition for approval of a portfolio of six energy efficiency programs as well as a rate adjustment clause to recover costs. The portfolio included four residential programs and two commercial and industrial programs. These programs were designed to improve energy consumption in residential structures by offering online and in-person energy checkups, removing and recycling used appliances, recruiting manufacturers to design and build Energy Star qualified homes, and offer instant rebates for energy efficient

appliances and lighting equipment. For commercial and industrial customers, APCo proposed programs that offer financial incentives for various energy saving projects. In early 2015, the Commission approved five of the six programs, keeping all four residential programs and approving only one of the commercial and industrial customer programs. These programs will be available for customers in early 2016.

APCo continues to offer various time-of-day tariff options that allow 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 a load management water heating provision and time-of-day rate schedules. 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. A voluntary wind service tariff and an economic development rider are also offered. APCo's 2014 Biennial filing contained a request to modify its tariffs and schedules to improve the price signals sent to various customers.

Due to the termination of AEP's Interconnection Agreement, APCo closed the voluntary demand response rider programs to new customers effective April 1, 2014. APCo reports that customers already enrolled in the program will be allowed to continue to participate until June 1, 2017. Eligible retail customers can still enroll in PJM's emergency demand response program through a curtailment service provider. APCo plans to file for two new riders for demand response in late 2015 with the SCC that will be consistent with PJM's new capacity performance requirements.

APCo participates in the voluntary renewable portfolio standard program and it has met the goals in each of the last four years. The company also offers a net metering tariff for qualifying customers. APCo advises an increasing number of customers are interested in this program and 531 have signed up to date. APCo also offers a green pricing option through a renewable power rider to its residential, commercial and industrial customers. This option allows customers to support the value of renewable energy certificates which are acquired from hydroelectric sources. Customers can purchase an amount up to the total amount of electricity used monthly. In April 2015, APCo filed with the SCC for approval of another rider, Experimental Rider RGP (Renewable Generation Purchase) where to allow certain non-residential customers to purchase non-dispatchable renewable energy generated by a facility owned and operated by a third party and located on or adjacent to its property.

In 2008, APCo implemented a consumer education program on energy conservation entitled "Watt Why & How" which has continued through 2015, 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. In addition, APCo mails a monthly e-newsletter containing energy saving tips to more than 280,000 customers in Virginia.

During 2014, APCo advised it continued to look for opportunities to improve internal efficiencies. The company is continuing to explore 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 41%.

Old Dominion Power Company (ODP)

ODP does not report any major changes to its energy conservation efforts. ODP 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 2014, 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.

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. KU/LG&E estimates these programs along with additional programs, pending approval of KU and LG&E's proposed 2015-2018 DSM/EE plan, are expected to achieve 500 megawatts of demand reduction and a cumulative energy savings of 1.6 million MWh by 2018.

ODP reports that on February 3, 2015, KU and LG&E hired a consultant, The Cadmus Group, to perform an industrial-demand-side-management-and-energy-efficiency-potential-study ("Industrial Study"). The study is in accordance with a Kentucky Public Service Commission final order that required KU and LG&E to "commission a study that examines the potential benefits of industrial DMS/EE [demand-side management and energy efficiency] programs."

ODP advises its billing options such as paperless billing and auto pay continue to 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.