



IMPACT Paradigm Associates

12604 Hay Meadow Pl, Herndon, VA 20171

www.ipa-llc.org

June 29, 2023

To: Division of Legislative Automated Services (DLAS)

Email: reportdocs@dlas.virginia.gov

Enclosed please find a copy of *The 2023 Report of the Independent Monitor on the Status of the Virginia Energy Efficiency Stakeholder Process*, as directed by Chapter 397 of the 2019 Virginia Acts of the Assembly, as required by § 56-585.1 of the Code of Virginia for publication on the General Assembly Web Portal.

Title of the Report: The 2023 Report of the Independent Monitor on the Status of the Virginia Energy Efficiency Stakeholder Process

Mandate: Chapter 397 of the 2019 Virginia Acts of the Assembly, as required by § 56-585.1 of the Code of Virginia

Contact Name: Ted Kniker

Contact Telephone: 703-401-7515

Contact Email Address: ted.kniker@ipa-llc.org

Respectfully submitted,

Ted Kniker

Ted Kniker

Independent Monitor

Executive Vice President

IMPACT Paradigm Associates, LLC

THE REPORT OF THE INDEPENDENT MONITOR ON THE STATUS OF THE ENERGY EFFICIENCY STAKEHOLDER PROCESS

AS DIRECTED BY CHAPTER 397 OF THE 2019 VIRGINIA ACTS OF THE ASSEMBLY, AS REQUIRED BY § 56-585.1 OF THE CODE OF VIRGINIA



JUNE 30, 2023

TO:

The Honorable Glenn Youngkin
Governor, Commonwealth of Virginia

The Honorable Richard L. Saslaw
Chair, Senate Commerce and Labor Committee

The Honorable Kathy J. Byron
Chair, House Commerce and Energy Committee

The Honorable Jehmal T. Hudson
Chair, State Corporation Commission

**THE REPORT OF THE INDEPENDENT MONITOR
ON THE STATUS OF THE ENERGY EFFICIENCY
STAKEHOLDER PROCESS**

as directed by Chapter 397 of the 2019 Virginia
Acts of the Assembly, as required by
§ 56-585.1 of the Code of Virginia.

Respectfully Prepared and Submitted by:



Ted Kniker, Independent Monitor
Executive Vice President
IMPACT Paradigm Associates, LLC





CONTENTS

Glossary of Terms.....	iv
Executive Summary	v
Introduction	1
Legislative Requirements.....	1
2023 Legislative Update	1
Report on the Status of the Energy Efficiency Stakeholder Process	1
2023 Stakeholder Process	2
Stakeholder Representation	2
Meeting Schedule and Participation.....	3
DEV Stakeholder Subgroups.....	4
Additional Stakeholder Collaboration Options	4
Stakeholder Objectives	5
2023 Program Recommendations.....	5
Stakeholder Recommendations for Phase I Utility - Appalachian Power	5
Stakeholder Recommendations for Phase II Utility – Dominion Energy Virginia.....	6
Status of Recommendations and Petitions.....	8
Appalachian Power.....	8
2019 APCo Programs	8
2020 APCo Programs	9
2021 APCo Programs	10
2022 APCo Programs	11
Dominion Energy Virginia	11
2019 DEV Programs	11
2020 DEV Programs	13
2021 DEV Programs	17
2022 DEV Programs	18
Stakeholder Feedback About the Process.....	21
Next Steps	24
Appendix I: Previous Year Legislative Changes.....	25
2020 Legislative Update	25
2021 Legislative Update.....	25
2022 Legislative Update.....	25



GLOSSARY OF TERMS

AC	Alternating current
APCo	Appalachian Power Company
BE	Beneficial Electrification
BEM	Building Energy Management
C&I	Commercial and Industrial
Chapter 296	Chapter 296 of the 2018 Virginia Acts of Assembly
Chapter 397	Chapter 397 of the 2019 Virginia Acts of Assembly
Code	Code of Virginia
Commission	Virginia State Corporation Commission
CSP	Competitive Service Provider
DC	Direct Current
DER	Distributed Energy Resources
DEV	Dominion Energy Virginia
DHCD	Department of Housing and Community Development
DI	Digital Input
DMME	Department of Mines, Minerals and Energy
DOE	Virginia Department of Energy
DR	Demand Response
DSM	Demand Side Management
EE	Energy Efficiency
EE-RAC	Energy Efficiency Rate Adjustment Clause
EM&V	Evaluation, Measurement and Verification
General Assembly	Virginia General Assembly
GTSA	Grid Transformation and Security Act, Chapter 296 of the 2018 Acts of Assembly
HSE	Health, Safety, and Environment
IPA	IMPACT Paradigm Associates, LLC
IRP	Integrated Resource Plan
kV	Kilovolt
kW	Kilowatt
kWh	Kilowatt-hour
LED	Light Emitting Diode
LGS	Large General Service
LI	Low-income
LMI	Low-Moderate Income
LMP	Locational Marginal Prices
MF	Multi-family
MW	Megawatt
RFP	Request for Proposals
ROE	Return on Equity
ROI	Return on Investment
RPM	Reliability Pricing Model
RPS	Renewable Energy Portfolio Standard
SCC	State Corporation Commission
SF	Single Family
SIR	Savings to Investment Ratio
SMB	Small to Medium Business
TOU	Time of Use
TRM	Technical Reference Manual
TRM	Transmission Reliability Margin
VA	Virginia
VCEA	Virginia Clean Economy Act, Chapter 1193 of the 2020 Acts of the Assembly
WAP	Weatherization Assistance Program
VES	Virginia Energy Sense, a State Corporation Commission consumer education program



EXECUTIVE SUMMARY

During the 2018 General Assembly session, legislation was approved related to electric utility regulation, grid modernization, and energy efficiency requiring Appalachian Power (APCo) and Dominion Energy Virginia (DEV) to utilize a stakeholder process to gather and receive input and feedback for the development of proposed energy efficiency programs. The intended result of the process is to have petitions that are filed with the State Corporation Commission (SCC) for its review and approval, that have included input of knowledge and expertise of energy efficiency stakeholders as well as their feedback so that implementation will contribute to the desired energy conservation goals of the state.

Chapter 397 of the 2019 Virginia Acts of the Assembly, as directed by § 56-585.1 of the Code of Virginia, mandates that the process must be facilitated by an independent monitor, to ensure representation of stakeholders, progress toward obtaining input and feedback, and to report on the stakeholder process objectives, stakeholder recommendations, the status of the recommendations, and status of petition filings. This report, describing the fourth year of the stakeholder process, by the independent monitor is submitted in accordance with Chapter 397.

Stakeholder Process

Between July 1, 2022, the submission date of the last annual report, and June 30, 2023, the stakeholder groups for Appalachian Power (Phase I Utility) have met twice and Dominion Energy Virginia (Phase II Utility) have met three times. Meetings were used to inform stakeholders of the status of program recommendations from previous years, develop program recommendations for the utilities' next filing, and to discuss topics of interest raised by the stakeholders, including discussions of recommended program performance through EM&V reports. For the Phase I Utility, a subgroup was convened to discuss the possibility of adding solar projects to its portfolio. For the Phase II Utility subgroup meetings of the Non-Residential Programs and Innovation subgroups were held during the report period to discuss related topics and ideas. The Innovation subgroup met twice to review pilot program ideas submitted by process stakeholders. In addition, a Customer Awareness and Outreach subgroup was established and will hold its first meeting in July 2023.

The Appalachian Power stakeholder group has 165 current members, and the Dominion Energy Virginia stakeholder group has 324 current members, which represents an increase of 1.9 percent and a 5.2 percent respectively for each group, compared to the previous year. Each utility's stakeholder group represents over 20 different types of organizations, including the utilities, SCC, Virginia Department of Energy, local governments, energy conservation organizations, energy efficiency organizations, program implementers, and low-income advocacy and assistance organizations.

Stakeholder Objectives

For the 2023 filing year, the independent monitor did not facilitate the development of specific programmatic or process objectives by the stakeholders as part of the stakeholder meetings. Stakeholders, including each respective utility, had a unique set of circumstances they wanted to address in the filing year. For APCo, the petition filing cadence had been set at every two years and no programs had been proposed in 2022. For 2023, APCo worked with stakeholders to identify programs to enhance current and expiring offerings. APCo also explored the possibility of designing a solar pilot program. For DEV, there was discussion related to a new contract for customer awareness and outreach and the establishment of a customer awareness and outreach subgroup. Additionally, stakeholder efforts were focused on generating ideas for pilot projects that could be included in DEV's 2023 filing.



EXECUTIVE SUMMARY

2023 Program Recommendations

In preparation for the 2023 filings, the stakeholders provided input and feedback on program design ideas for the utilities' consideration. The input and feedback were developed during stakeholder meetings, and stakeholders could submit program proposals using program design templates that could be submitted to the independent monitor and utilities after the meetings. The following table summarizes the recommendations from the stakeholder process.

Program Focus Area	APCo Stakeholder Recommendations	DEV Stakeholder Recommendations
Residential Customer Programs	<ul style="list-style-type: none"> • Moderate Income Program • In Unit Multi Family Program • Schools EE Kit Program • EV Demand Response – Pilot • Water Heater Demand Response – Pilot • Smart Homes Kits - Pilot 	<p>43 pilot program ideas submitted by stakeholders being reviewed and categorized as:</p> <ul style="list-style-type: none"> • Proposals that may be best suited if treated as enhancements to current programs, rather than unique pilot proposals. • Proposals that may require additional discussion/ research prior to moving forward. • Proposals that are beyond the scope of what can be accomplished in the regulated DSM setting. <p>An RFP is currently open at the time of writing, soliciting other potential program ideas.</p>
Non-Residential/C&I Programs	<ul style="list-style-type: none"> • No new 2023 Stakeholder program idea/ concept recommendation 	

For the anticipated 2023 petition filing:

- Subject to further review and analysis, APCo intends to file for additional programs and pilots, the extension of existing low-income programs, and potential enhancements to existing programs.
- DEV will be reviewing, and cost-testing winning submissions to an RFP (still open at the time of this report) and will convene at least one more meeting of the stakeholder group to provide updates on the proposed set of programs. Based upon stakeholder review, DEV may also be submitting pilot program ideas in its filing.

Status of Previous Year Petition Filings

For the first four years of the stakeholder process, the program recommendations proposed and/or approved by the Commission, as of the writing of this report, represent:

- Phase I Utility (APCo): \$142.90 million, or approximately 102 percent of the legislative goal. Of the \$142.90 million proposed, \$6.81 million for one pilot program (3-year cost cap), was approved by the Commission in July 2022 and was launched in January 2023.
- Phase II Utility (DEV): \$712.9 million, or approximately 82 percent of the legislative goal. Of the \$712.9 million proposed, with \$107.8 million in Phase XI filing (5-year cost cap), is pending approval.



EXECUTIVE SUMMARY

2019 Petition Filings

Appalachian Power

The three (3) programs approved in the 2019 filing were successfully launched in early 2021 with two remaining currently active in APCo's Virginia service territory. The approved programs include:

Program	Description	Status
Residential Low-Income Single-Family Program	This program replaced APCo's existing Low Income Weatherization Program, which was in place since 2015 and expired at the end of 2020. The new program is better funded and therefore will generate savings for residential low-income customers through, among other things, the evaluation of energy improvement opportunities and the installation of weatherization upgrades, and other energy savings for dwellings.	The program is actively enrolling and serving customers throughout the territory. The 2022 verified savings were 1,213,006 kWh.
Residential Low-Income Multifamily Program	This new program provides and installs energy efficiency measures in income-qualified multifamily properties. The program also educates and motivates owners to participate in additional programs offered by APCo in Virginia and will include an education component to help participating customers to effectively manage their energy usage.	A strong interest in the program has led to successful upgrades at numerous properties. APCo expects this success to continue through the life of the program. The 2022 verified savings were 564,165 kWh.
ENERGYSTAR® Manufactured Housing Program	This program provides an incentive to the homeowner to offset a portion of the difference in price between a standard manufactured home and an ENERGY STAR® manufactured home.	A total of 295 rebates have been paid to date. The program ended in December 2022. It was determined that the manufactured homes market has now transformed to mainly ENERGY STAR or ENERGY STAR equivalent homes in Virginia.

Dominion Energy Virginia

The 13 programs approved in the 2019 DSM annual rider proceeding by the Commission were successfully launched in early 2021 and are all currently active in DEV's Virginia service territory. The programs and status are:

Program	Description	Status
Residential Electric Vehicle (EE and DR)	This program encourages efficient charging of electric vehicles and shifting of electric vehicle charging load to off-peak periods.	Enrolled 299 customers through 2022; Program is still available to customers.
Residential Electric Vehicle (Peak Shaving)	This Program would provide customers who already have a qualifying electric vehicle charger with an annual incentive in exchange for allowing the Company to reduce the operating cycle of their charger by remote control during periods of high demand.	Enrolled 686 customers through 2022. Program is still available to customers.



Program	Description	Status
Residential Energy Efficiency Kits (EE)	This program provides energy efficiency kits to customers as a welcome gift or in response to requests under specific conditions.	Enrolled 54,903 customers through 2022. Program is still available to customers.
Residential Home Retrofit (EE)	This program incentivizes retrofit of participating customer homes using measures that may extend beyond what would be considered a typical measure in a home energy assessment program.	Enrolled 149 customers through 2022. Program is still available to customers.
Residential Manufactured Housing (EE)	This program offers incentives for the installation of energy efficiency measures designed specifically for manufactured and modular housing.	Enrolled 6 customers through 2022. Program is still available to customers.
Residential New Construction (EE)	This program encourages the use of energy efficient materials and practices in new home construction through a combination of incentives and education.	Enrolled 3,578 customers through 2022. Program is still available to customers.
Residential/Non-residential Multifamily (EE)	This program identifies and targets multi-family residences with incentives and measures specifically designed to take advantage of energy-saving opportunities in this type of residence. For the purpose of this program, the assumption is that a multi-family residence is defined as a residence with a shared envelope, wall, or floor/ceiling, with no specific limitation on the number of residences within a given structure.	Enrolled 1,643 customers through 2022. Program is still available to customers.
Non-residential Midstream Energy Efficiency Products (EE)	A companion program to the residential efficient products program that takes advantage of additional savings opportunities that can be realized through upstream and midstream incentives applied to energy efficient products but targeted at non-residential customers. The non-residential program includes incentives for purchasing high efficiency commercial kitchen appliances, freezers and refrigerators, and HVAC systems.	Enrolled 120 customers through 2022. Program is still available to customers.
Non-residential New Construction (EE)	This program encourages the use of energy efficient materials and practices in new construction through a combination of incentives and education.	Program currently available to customers. The nature of non-residential new construction projects can cause long lag between construction design and rebate approval.



Program	Description	Status
Small Business Improvement Enhanced (EE)	This program provides small businesses with 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. This program is an enhancement to the existing DSM V Small Business Improvement Program.	Enrolled 898 customers through 2022. Program is still available to customers.
HB 2789 (Heating and Cooling/ Health and Safety) (EE)	This program provides incentives to low-income, elderly, and disabled individuals for the installation of measures that reduce heating and cooling costs and enhance health and safety of residents.	Enrolled 7,021 customers through 2022. Program is still available to customers.
Residential Thermostat (EE) and (DR) Programs	The EE program offers rebates to customers who either purchase a qualifying smart thermostat and/or enroll in an energy efficiency program. The DR program manages heat pumps and air-conditioning units using smart thermostats to reduce peak demand.	Enrolled 14,196 customers in the EE component through 2022, and 13,084 in the DR component. Program is still available to customers.
Residential Customer Engagement Program (EE)	This program provides staffing and subject matter experts to interact with customers directly by phone, e-mail, and/or social media to provide energy efficiency advice on request. The program also includes staffing to provide experts at public events and meetings of local organizations.	265,150 reports will be sent in 2022. Program is still active.

Status of 2020 Petition Filings

Appalachian Power

On November 20, 2020, APCo filed for approval to continue a rate adjustment clause, the EE-RAC, and for approval of new energy efficiency programs. Eight programs were approved by the SCC in July 2021, which are:

Program	Description	Status
Residential Home Energy Report Program	This program will help customers reduce energy needs by encouraging them to alter their electricity usage habits by providing positive reinforcement. The reports will compare the participant's energy usage with similar homes, which will, ideally, motivate the customer to take action to save energy and maintain those savings.	The program is actively engaging with customers throughout the service territory. The 2022 verified savings were 26,612,523 kWh.
Residential Efficient Products Program	This new program will generate energy savings for consumers through the promotion of high efficiency lighting and appliances. This program was previously included in Appalachian's EE portfolio and ended in December 2018. Based on discussions and recommendations in the stakeholder process, the Company seeks approval to re-launch the program	The program is currently providing instant discounts and rebates to customers throughout the service territory. The 2022 verified savings were 8,326,219 kWh.



Program	Description	Status
Residential Energy Efficiency Kit Program	This program will generate energy savings for customers by providing energy efficiency kits to residential customers. The kits will provide cost-effective energy saving measures for customers while promoting other programs in the Company's EE portfolio. The kits will include products with verified electric energy savings that customers can self-install.	Customers are actively requesting kits as well as purchasing energy efficient products from the marketplace. The 2022 verified savings were 2,733,029 kWh.
Residential Home Performance Program	This program will generate savings for the Company's residential customers through the promotion of energy efficient homes. The primary objective for the program is to produce long-term electric energy reduction in the residential sector. The program will provide customers with a comprehensive in-home energy audit to identify immediate and larger-scale measures that the customer can implement to reduce energy usage.	The program is actively providing home assessments to customers throughout the service territory. The 2022 verified savings were 1,230,687 kWh.
Business Energy Solutions ("BES") Program	The new BES program replaces the C&I Lighting and non-lighting programs and is designed to generate energy savings for C&I customers through the promotion of high efficiency lighting and non-lighting upgrades. The BES Program will accelerate energy efficiency by incorporating both lighting and non-lighting measures under one program.	The program is actively enrolling customers in the program throughout the service territory. The 2023 verified savings were 8,802,494 kWh.
Residential Bring Your Own SMART Thermostat ("BYOT") Program	The Commission initially approved for a three-year period ending December 31, 2021. The program was approved for an additional 5 years in Case No. PUR-2020-00251 beginning in the calendar year 2022. The BYOT Program allows residential customers to enroll in a qualifying Wi-Fi-enabled smart thermostat in a demand response program. During a load management event, the Company will either cycle the customer's HVAC equipment or raise the set point of the thermostat.	The program is actively enrolling customers throughout the service territory. The 2022 verified savings were 189,881.
Small Business Direct Install ("SBDI") Program	This program offers on-site energy assessments at small businesses, direct install of certain energy efficiency measures, and financial incentives for other cost-effective measures to capture deeper energy savings.	The program is actively enrolling customers throughout the service territory. The 2022 verified savings were 1,297,479 kWh.
Volt Var Optimization ("VVO") Pilot Program	The VVO Pilot Program will reduce energy and demand usage without any interaction by the customer. The VVO Pilot Program will more closely control the voltage that is delivered to the meter and, subsequently, to the customer's end-use electrical devices. VVO technology allows customer devices to operate more closely to the design voltage, which can provide an annual reduction of two to four percent in energy use. All residential, commercial, and industrial customers of Appalachian Power Company, who are served from circuits equipped with VVO, would benefit from the technology.	The first phase of the project is complete. The first 2 of 6 circuits planned under the pilot were placed in service in Dec 2022. The second phase of the project is currently under construction. The next 2 circuits planned under the pilot will be placed in service in late 2023.



Dominion Energy Virginia

On December 2, 2020, DEV filed for approval of 11 DSM programs, which were approved by the SCC in September 2021. The proposed programs are:

Program	Description	Status
Virtual Audit	would offer customers a self-directed home energy assessment using audit software, completed entirely by the customer, with no trade ally entering the home. Customers would be directed to a website or toll-free number where they would answer a set of questions with answers specific to the conditions and systems in their home with aids to help them answer accurately. From this information, the software would generate a report of recommended measures and actions the customer could take to improve the efficiency of their home. The report would also identify the Company's other active energy efficiency programs that fit each customer's needs.	Currently open to customers. There were 2,149 participants in 2022.
Smart Home	would provide the Company's residential customers a suite of smart home products that provide seamless integration in the home. The program will deliver the energy efficient measures bundled in two versions of a Smart Home Kit, so that customers can benefit from a fully integrated set of compatible smart products. The Smart Home Kit will include general instructions for installing the specific energy efficient measure within their home.	Currently open to customers. There were 15 participants in 2022.
Residential Water Savings (EE)	designed to give the Company's residential customers control over their water-related energy use. The proposed Program leverages the installation of smart communication water heating and pool pump technologies to facilitate more efficient operation while reducing overall electricity usage and peak demand response. Customers have the option to purchase a qualified program product online, in-store, equipment distributor, or through qualified local trade allies.	Currently open to customers. There were 62 participants in 2022.
Residential Water Savings (DR)	all customers who purchase and install a qualified product (EE component) will be offered the opportunity to enroll in the peak demand reduction (DR) component of the DR Program. Additionally, Customers who have previously purchased a qualifying product and who have the eligible products installed, will be offered the opportunity to enroll in the DR component of the Program. Customers will be offered an annual incentive (above the product purchase incentive amount) to participate in the peak reduction component year-round and an additional reduced incentive for each subsequent year they continue to participate. Customers would be allowed to opt-out of a certain number of events.	Currently open to customers.
Income and Age Qualifying Program (EE)	would provide in-home energy assessments and installation of select energy-saving products at no cost to eligible participants. As with the Company's other low-income programs, the Company will partner with Weatherization Service Providers (WSPs) to perform community outreach and install program measures to eligible customers. Moreover, the proposed Program would allow for providers to charge up to 10 percent of their yearly allocation for administrative costs on single family jobs. In addition, the proposed program design has a 15% health & safety cap to bring additional benefits to customers in the form of wider opportunities for bill savings.	Currently open to customers. There were 4,782 participants in 2022.
Income & Age Qualifying Solar (HB 2789 program)	would provide a mechanism for customers who meet certain income, age, disability, and previous program participation requirements regarding weatherization to receive, at no cost to the customer, photovoltaic solar panels installed at their residence.	Currently open to customers. There were 7 participants in 2022.



Program	Description	Status
Agricultural Program (EE)	would provide qualifying non-residential customers with incentives to implement specific energy efficiency measures to help agribusinesses replace aging, inefficient equipment, and systems with new, energy-efficient technologies. The Program is designed to help agricultural customers make their operations more energy-efficient by providing incentives for efficient agricultural equipment and lighting specifically used in agricultural applications.	Currently open to customers. There were 3 participants in 2022.
Building Automation Program (EE)	would provide qualifying non-residential customers with incentives to install new building automation systems in facilities that do not have centralized controls or have an antiquated system that requires full replacement. The Program would be marketed and promoted to controls contractors who design, install, and maintain fully functional building automation systems. Product lines would include brands like Carrier, Schneider Electric, Johnson Controls, Siemens, and Trane.	Currently open to customers.
Building Optimization Program (EE)	would provide qualifying non-residential customers incentives for the installation of energy efficiency improvement, consisting of recommissioning measures. The Program seeks to capture energy savings through control system audits and tune-up measures in facilities with Building Energy Management Systems.	Currently open to customers. There were two participants in 2022.
Non-Residential Customer Engagement Program (EE)	would engage commercial buildings in energy management best practices that increase awareness of operational and behavioral energy savings opportunities. The Program would educate and train businesses' facility management staff on ways to achieve energy savings through optimization of building energy performance and integrating ongoing commissioning best practices into their operations. Through a customer engagement portal, building operators can also access educational content and technical resources as part of a series of operator challenges. By completing these challenges, participants will review and implement energy efficient operational best practices, earning them points while competing against facility teams from other participating buildings.	Currently open to customers.
Enhanced Prescriptive Program (EE)	would provide qualifying non-residential customers with incentives for the installation of refrigeration, commercial kitchen equipment, HVAC improvements and maintenance and installation of other program specific, energy efficiency measures.	Currently open to customers. There were 366 participants in 2022.

Status of 2021 Petition Filings

Appalachian Power

APCo filed for approval of one program on November 30, 2021. The SCC approved the program in July 2022. The single program is:

Program	Description	Status
Custom Commercial & Industrial Pilot Program	This 3-year pilot program aims to generate energy savings for C&I customers by encouraging energy and demand reduction by large C&I customers through processes and systems that are not provided for in the Business Energy Solutions Program.	The program launched in January of 2023 and is currently accepting projects.



Dominion Energy Virginia

DEV filed for approval of nine additional programs on December 14, 2021, which were approved by the SCC in August 2022. The programs are:

Program	Description	Status
Non-residential Energy Efficiency - Data Center and Server Rooms Program	This Program would identify and target data centers and should identify and implement site-specific, retrofit, and new construction energy efficiency opportunities, largely focused on cooling efficiency and power distribution.	Program implementation is being finalized and is expected to launch in the Summer of 2023.
Non-Residential Energy Efficiency – Health Care Targeted Program	This program would identify and target health care facilities and include measures that are specific to hospitals, long term care facilities, group home and small medical providers while providing energy advisors to assist in selecting / implementing energy savings measures.	Program implementation is being finalized and is expected to launch in the Summer of 2023.
Non-Residential Energy Efficiency – Hotel and Lodging Targeted Program	This program would identify and target hotel and other lodging facilities and include measures that are specific to hotel/motel facilities and operation such as room sensors and active energy conservation measures triggered by key cards.	Program implementation is being finalized and is expected to launch in the Summer of 2023.
Small Business Behavioral	This program would provide incentives, education, and/or information to qualifying customers with specific suggestions for reducing electrical usage based on historical usage patterns.	Program implementation is being finalized and is expected to launch Summer of 2023.
Non-Residential Lighting and Controls Extension	Extends and expands budget for lighting upgrades and controls of qualifying non-residential facilities.	Program implementation is being finalized and is expected to launch in the Summer of 2023.
Income and Age Qualifying Program Enhancement & Income and Age Qualifying Home Energy Reports & Non-Residential Income and Age Property Owners	Proposed program designs should generally include measures appropriate for single- and multi-family residences to the extent practical as the Company is considering enhancements to its options for income and age qualifying customers in order to ensure that customers in this category have as many opportunities for energy savings as possible and that the options available meet their needs. Program measure categories should include health care targeted measures for facilities with focus on income and age qualifying individuals; expansion of the Company's current low-income program to include additional measures, such as energy efficient windows or window enhancements; home energy reports for income and age qualifying customers which would provide relevant advice on how to improve energy efficiency and lower their monthly bill; and pay for performance options.	Program implementation is being finalized and is expected to launch in the Summer of 2023.
Voltage Optimization O&M Software	The principle of Voltage Optimization is that most types of customers load use less energy when supplied with lower input voltage. This program will focus on supporting the enablement software for the overall Voltage Optimization initiative.	Program implementation is being finalized.



Status of 2022 Petition Filings

Appalachian Power

APCo did not submit a full EE-RAC filing for 2022. However, as stated in the SCC Order dated July 15, 2022, in Case No. PUR-2021-00236, the Company moved from a one-year cycle to a two-year cycle for filing a full EE-RAC case. In the years where a full EE-RAC filing was not required, the Company was ordered to submit a report, pursuant to Ordering Paragraph 5, related to the program costs, revenues, participation, and other relevant information on the status of the Company's energy efficiency programs. This status report was filed on November 30, 2022. The Company's next full EE-RAC filing will occur on or before November 30, 2023.

Dominion Virginia Energy

On December 13, 2022, DEV filed for approval of 5 DSM programs, and 4 program bundles. The proposed programs and program bundles are:

Program	Description	Status
Residential Income and Age Qualifying Bundle	The proposed bundled version of the Residential Income and Age Qualifying Home Improvement Program combines the Company's existing HB 2789 HVAC Program measures in addition to the Phase 9 and 10 low-income program measures while adding several new program measures and creating a bundled income qualifying program that would provide income and age qualifying residential customers with in-home energy assessments and installation of select energy-saving measures.	Pending SCC approval
Non-residential Income and Age Qualifying Bundle	The Non-residential Income and Age Qualifying Program would offer installation of select energy-saving measures to be installed in properties that house low-income and aging residents, but the electric bill is paid by the property, rather than the individual resident.	Pending SCC approval
Residential EE Products Marketplace	The program provides residential customers an incentive to purchase specific energy efficient appliances with a rebate through an online marketplace and through stores. The Program offers rebates for the purchase of specific energy efficient appliances.	Pending SCC approval
Residential Customer Engagement	The Residential Customer Engagement Program would provide educational insights into the customer's energy consumption via a Home Energy Report (on-line and/or paper version). The Home Energy report is intended to provide periodic suggestions on how to save on energy based upon analysis of the customer's energy usage. Customers can opt-out of participating in the Program at any time.	Pending SCC approval
Residential Peak Time Rebate	This Program would enable residential customers to reduce their energy usage consumption during peak time periods as called upon by the Company. During peak time rebate event days, proposed program design will alert customers with text messaging, emails, or outbound telemarketing voicemail, as well as by utilizing the Company's dominionenergy.com website with banner announcements informing participants an event is in progress.	Pending SCC approval



Program	Description	Status
Residential Retrofit Bundle	The proposed program re-design incorporates key program measures from the Company's Phase VII Residential Home Energy Assessment Program A-line LEDs are not included in the program redesign in response to recent EISA driven changes to baseline efficiency. Program design introduces a handful of select new measures including the replacement of Electric Baseboard Heating with Air Source Heat Pump, High Efficiency Room AC Upgrades, and Shower Thermostats.	Pending SCC approval
Residential EV Telematics Pilot	The proposed program pilot would run in parallel with the current Electric Vehicle Demand Response Program. Instead of communicating with the electric vehicle charger, the proposed pilot program would allow for integration with the onboard vehicle telematics to capture charging data and control the charging rate during load curtailment events dispatched by the Company.	Pending SCC approval
Non-residential Enhanced Prescriptive Bundle	The proposed program design would offer a more comprehensive program bundle that would incorporate the Company's expiring DSM Phase VII Non-residential Heating and Cooling Efficiency, Non-residential Manufacturing and Non-residential Window Film Programs into the overarching DSM Phase IX Non-residential Enhanced Prescriptive Program offering. The consolidation of various program measures into a more enhanced version of the Phase IX Non-residential Prescriptive Program would allow the Company to consolidate programs and offer qualifying non-residential customers the ease of implementing a wide variety of energy efficiency measures.	Pending SCC approval
Non-residential Custom Program	This Program would provide qualifying non-residential customers, with a focus on larger facilities with demand greater than 300 kW, with the technical support and incentives needed to pursue non-standard, more complex energy efficiency projects. Through this proposed program, the Company can help qualifying customers develop tailored projects that best meet their unique facility and organizational goals while achieving savings from a diverse mix of measures.	Pending SCC approval

Next Steps

The fifth year of the stakeholder process attempted to bring more innovation into the process by focusing on pilot projects, turning over subgroup leadership to stakeholders directly from the independent monitor, and increasing the communication and use of the subgroups. Stakeholders have noted that the Virginia Energy Efficiency Stakeholder Process has always been open to all participants to collaborate on great ideas and ultimately the development of useful programs serving the customers of the utility companies and strengthening the energy efficiency of homes across Virginia. It seems that stakeholders appreciate the opportunity to provide input and feedback on energy efficiency programs and to work collaboratively with utility companies towards common goals. The addition of the new subgroup in 2023 for customer awareness and outreach for DEV programs should increase how the process can contribute even more to energy efficiency in Virginia.

Based on responses received from stakeholders in response to a survey, there are some areas for improvement in the stakeholder process raised by stakeholders. One suggestion is to improve how stakeholders can fully engage and collaborate throughout the process, so that stakeholders can provide specific and actionable recommendations about what energy efficiency and DSM programs they want to see offered by the utility companies. It may also be helpful to include more stakeholders with direct field and customer experience at the meetings, and to provide stakeholders with more input earlier in the program and measure development process. Additionally, there is a need improved tracking and transparency in how stakeholder feedback is incorporated into the RFP process, and also into the development of program offerings filed with the SCC. Overall, it may be beneficial to address these concerns and work towards a more effective and collaborative stakeholder process in the future.



INTRODUCTION

Legislative Requirements

Chapter 296 [SB 966] of § 56-585.1 of the Code of Virginia established the use of a stakeholder process, facilitated by an independent monitor, to provide input and feedback on the development of a proposed program of energy conservation measures. Any program shall provide for the submission of a petition or petitions for approval to design, implement, and operate energy efficiency programs pursuant to subdivision A 5 of § 56-585.1 of the Code of Virginia. The legislation specifically stated:

- At least 15 percent of such energy efficiency programs shall benefit low-income, elderly, or disabled individuals or veterans.
- The projected costs for the utility to design, implement, and operate such energy efficiency programs, including a margin to be recovered on operating expenses, for the period beginning July 1, 2018, and ending July 1, 2028, including any existing approved energy efficiency programs, shall be no less than an aggregate amount of:
 - o \$140 million for Phase I Utility – Appalachian Power (APCo)
 - o \$870 million for Phase II Utility – Dominion Energy (DEV)

For the energy efficiency stakeholder process, Chapter 296 directs that the process shall include representatives from:

- Each utility – Phase I (APCo) and Phase II (DEV),
- The State Corporation Commission (SCC),
- The Office of Consumer Counsel of the Attorney General,
- The Virginia Department of Energy,
- Energy efficiency program implementers,
- Energy efficiency providers,
- Residential and small business customers, and
- Any other interested stakeholder who the independent monitor deems appropriate for inclusion in such process.

The initial legislation did not provide details on how often the stakeholder groups meet or processes for obtaining the input and feedback into the development and/or review of key issues and the proposed energy efficiency programs. The legislation leaves discretion to the SCC, the utilities, the stakeholders, and the independent monitor to determine meeting schedules, times, and operational procedures.

2023 Legislative Update

There were no legislative updates or revisions to § 56-585.1 that altered the energy efficiency stakeholder feedback process, the annual reporting, or the role of the independent monitor. Previous legislative updates are provided in Appendix I. During the May 16, 2023, public comment testimony for the application of Virginia Electric and Power Company for its 2022 DMS Updates (PUR 202200210), the Honorable Michael D. Thomas, Senior Hearing Examiner, commented on the importance and mandated nature of the stakeholder process stating,

...the process needs to be open and transparent, and that everyone needs to be fully engaged, and that when issues do come up, that they are resolved or at least first vetted in that process, so that at the end of the day, when this case comes before the Commission, there are or should be no surprises, that something's not being raised for the first time before the Commission in the actual evidentiary hearing, that it has been raised, it been vetted at the stakeholder process.

Report on the Status of the Energy Efficiency Stakeholder Process

Chapter 397 [H 2293] amended Chapter 296 to direct the independent monitor to:

- Convene meetings of participants in the stakeholder process not less frequently than twice each calendar year during the period beginning July 1, 2019, and ending July 1, 2028.
- Provide a status report of the energy efficiency program stakeholder process to the Governor, the State Corporation Commission, and the Chairman of the Senate Commerce and Labor Committee and the Chairman of the House Labor and Commerce Committee beginning on July 1, 2019, and annually thereafter through July 1, 2028.

The energy efficiency stakeholder process report shall include the status of:

- (i) the objectives established by the stakeholder group during this process related to programs to be proposed,
- (ii) recommendations related to programs to be proposed that result from the stakeholder process, and
- (iii) the status of those recommendations, in addition to the petitions filed and the determination thereon.

Previous annual reports may be accessed at the following links.

- [2019 Report of the Independent Monitor](#)
- [2020 Report of the Independent Monitor](#)
- [2021 Report of the Independent Monitor](#)
- [2022 Report of the Independent Monitor](#)

¹ <https://lis.virginia.gov/cgi-bin/legp604.exe?181+sum+SB966>

² <https://scc.virginia.gov/DocketSearch#caseDocs/143710>

³ <http://lis.virginia.gov/cgi-bin/legp604.exe?191+ful+CHAP0397+hil>

⁴ <https://rga.lis.virginia.gov/Published/2019/RD234/PDF>

⁵ <https://rga.lis.virginia.gov/Published/2020/RD224>

⁶ <https://rga.lis.virginia.gov/Published/2021/RD256>

⁷ <https://rga.lis.virginia.gov/Published/2022/RD301/PDF>



2023 STAKEHOLDER PROCESS

The 2023 Virginia Energy Efficiency Stakeholder Process began on October 1, 2022. The independent monitor maintained the practice set previously of having open inclusion to the process, so all who express interest in, or are recommended by current stakeholders, are added to the contact list for the appropriate utility. During the last year, the number of participants has increased, also expanding the types of organizations represented. Most organizations continued participation by replacing and/or adding member representatives. The current number of stakeholder participants for APCo represents an increase of 1.9 percent over the previous year. The number of stakeholder participants for DEV represents an increase of 5.2 percent for DEV over the previous year. For a listing of the number of participants, see Table 1 that follows this section.

Stakeholder Representation

The stakeholder participation for each utility represents over 20 types of stakeholder affiliations, including those cited in the legislation. In accordance with the 2020 legislative changes, additional Commission staff members, including directors and deputy directors, who participate in approval and oversight of utility energy savings programs have attended stakeholder meetings. To facilitate more input and engagement from the SCC in the meetings, the stakeholders incorporated a regular time for the SCC to provide updates and respond to questions in the meeting agenda. SCC staff also participated in small group discussions during the meetings as well as attended subgroup meetings for the DEV process. During 2023, the DEV subgroups were also provided with a regular reporting time during the larger stakeholder meeting to provide briefings on their activities.

Table 1 depicts the total number of stakeholders and the distribution of stakeholder participants by affiliation type for each utility. For the 2023 report, the independent monitor has broken out program implementers by their self-identified roles.

Table 1: Representation by Stakeholder Affiliation

Affiliation ⁸	Phase I Utility	Phase II Utility
Current Number of Stakeholder Process Participants	165	324
Utility Company or COOP	8.5%	14.0%
Government -- State	12.7%	11.1%
Government -- Local Municipality	16.4%	3.1%
Government -- Federal	0.0%	0.3%
Energy Service Organization/Provider	6.1%	7.4%
Energy Conservation/Efficiency Interest or Research Group	1.8%	6.5%
Environmental Organization/Advocacy Group	6.1%	10.5%
Elderly/Disabled Advocacy or Interest Group	0.0%	0.3%
Low Income Interest or Advocacy Group	1.2%	1.2%
Residential Consumer Organization/Housing Association	4.8%	2.8%
Business (Commercial or Industrial) Consumer Organization	0.0%	1.5%
Program Implementer -- Program Manager/Integrator	6.1%	7.1%
Program Implementer -- Weatherization Provider	8.5%	6.5%
Program Implementer -- Commercial Lighting	1.8%	0.9%
Program Implementer -- Customer Engagement	3.0%	4.3%
Program Implementer -- Product Manufacturer	0.0%	0.3%
Program Implementer - Other	7.9%	7.1%
Charitable Organization	1.8%	0.3%
Utility Administrative Support Contractor and EM&V Groups	3.0%	9.3%
Law Firm	0.6%	2.5%
Educational Institution or Institute (School or University)	1.8%	0.9%
Public Health/Hospital	0.0%	0.0%
Interested Individual or Consumer	5.5%	0.9%
Other	2.4%	1.2%
TOTAL PERCENTAGE	100.0%	100.0%

⁸ Representation percentage is based upon the type of organization for which individual stakeholders either self-identify or the independent monitor has categorized based on organizational mission. Where organizations self-identified into multiple categories, the independent monitor selected a primary category.



Meeting Schedule and Participation

For the period of July 1, 2021, to June 30, 2022,⁹ the independent monitor facilitated at least two meetings for each utility. The independent monitor conducted stakeholder meetings virtually on Webex primarily due to the continuation of COVID-19 related safety practices. The independent monitor worked with the Phase II utility to identify an available, no-cost venue with adequate IT technology that can accommodate the large number of stakeholders to host a hybrid (combination of in-person and virtual) meeting. Unfortunately, due to conflicts in schedules, no hybrid or in-person meeting was conducted in 2022 or 2023. The independent monitor will continue to advocate for the in-person option for future meetings. However, one positive result of the virtual meeting format was an increase in the number of participants at each meeting. The meeting dates, purpose and number of attendees are listed below in Table 2 for each utility. It is anticipated that the independent monitor will facilitate at least one more meeting for each of the stakeholder groups after July 1, 2023, so that the utilities will be able to update stakeholders on the status of the 2022 filing and anticipated 2023 filing of their RFP processes and/or provide additional information about next steps for the 2023 petition filings.

Table 2: 2022-2023 Stakeholder Process Meetings

	Filing Year	Meeting Date	Purpose	Number of Attendees
APCo	2023	October 17, 2022	1) 1) Update stakeholders. 2) 2) Obtain Stakeholder input for 2023 stakeholder process and focus.	33
	2023	December 15, 2022	1) Discuss ideas for a pilot low-income solar program (Component #2 of HB2789)	29
	2023	March 9, 2023	1) Discuss and prioritize stakeholder program ideas for 2023 filing.	43
DEV	2022	October 12, 2022	1) Provide stakeholders with updates. 2) Obtain stakeholder ideas and input to improve customer outreach on programs. 3) Obtain stakeholder ideas and input on pilot programs.	113
		February 24, 2023	1) Provide stakeholders with Briefing on ILJA and IRA funding. 2) Update stakeholders on the first 90 days of DEV's Customer Awareness work. 3) Obtain stakeholder ideas and input to improve customer outreach on programs and on Pilot Program initiatives.	113
		June 20, 2023	1) Provide stakeholders with Briefing on 2022 EM&V results. 2) Update stakeholders progress of Customer Awareness work and upcoming subgroup. 3) Update stakeholders on open Program RFP and Pilot Project Initiative. 4) Open stakeholder discussion.	97

For the Phase II Utility 2023 filing year, the stakeholder feedback process focused on obtaining ideas for pilot projects. The pilot project development was managed through DEV's Innovation and New Technology subgroup, which held a process development meeting and two pilot project submission briefings. To assist in the development of pilot program recommendations, the independent monitor provided stakeholders with a project proposal template, which allowed for a brief description of the idea. Ideas were reviewed at two dedicated Innovation subgroup meetings, which allowed pilot project proposers to add additional information to the brief and to answer questions about the proposal from other stakeholders. The process yielded 43 ideas. At the time of the writing of the report, DEV is reviewing all 43 proposals and is preliminarily categorizing each pilot project idea into one of three groups:

- Proposals that may be best suited if treated as enhancements to current programs, rather than unique pilot proposals.
- Proposals that may require additional discussion/research prior to moving forward.
- Proposals that are beyond the scope of what can be accomplished in the regulated DSM setting.

⁹ These dates represent the time frame for this report.

¹⁰ Funds to cover the cost of a meeting venue are not authorized or appropriated for the stakeholder feedback process.



The Innovation subgroup will meet after the June 2023 stakeholder session for a follow up discussion to work through the 43 ideas to inform the 2023 filing. The independent monitor is tracking the progress of each idea, which will be reported in the 2024 Annual Report.

In addition, the Phase II Utility released a Request for Proposals (RFP) in May 2023, to obtain bids for program implementation, which has not yet closed at the time of this report. DEV will provide an update later in the summer or early fall on the categories of program ideas proposed.

DEV Stakeholder Subgroups

For the DEV stakeholder group, due to its large size, the independent monitor and the DEV team continued and expanded the use of subgroups introduced in the 2020 filing year. Through subgroups, stakeholders discuss and pursue more specific ideas and recommendations for energy conservation and efficiency in Virginia and to advance the work between the facilitated meetings to provide in-depth recommendations. The subgroups are stakeholder led, which provides additional empowerment and transparency into the overall process.

For the 2023 filing year, two subgroups were combined (Innovation and Gap Analysis) and a new subgroup is being added corresponding to DEV's expanded customer awareness and outreach initiative for a total of eight subgroups, organized as follows:

- **Income-Qualifying Programs** – To create the next generation of income-qualifying programs and lay the foundation for meeting legislative goals.
- **Non-Residential Programs** – Commercial programs are an area of high potential savings, but, because of the variety of commercial entities that exist, developing measures that are targeted to specific segments is a necessity and have stakeholder input on the viability of custom measures and those that are applicable to the wide variety of pumps and motors that are used in various commercial activities.
- **EM&V** – The group reviews EM&V reports for focus and clarity, and to discuss best practices for evaluation, measurement, and verification for the purposes of assessing compliance with the total annual energy savings.
- **Innovative Approaches and Gap Assessment** – Given the pace of certain changes in technology, it is valuable to identify how selected evolving technologies may play a role in future DSM proposals in existing programs and the near-term, as well as those that may become viable within five years or beyond. Customer segments have varying abilities to participate in existing Demand Side Management (DSM) programs, an important part of developing future plans is to assess gaps in existing and planned program offerings to develop a set of logical focus areas for new, expanded, and extended programs.
- **Policy** – the group discusses issues related to the political and regulatory environment that the utilities operate in. It views effective practices for discussions around potential reforms by which the General Assembly or the Commission can ensure maximum and cost-effective deployment of energy efficiency technology across the Commonwealth.
- **Agenda and Process** – To ensure the stakeholder meeting agendas contain stakeholder-driven items for discussion, to recommend improvements to the stakeholder process to increase effectiveness, efficiency, inclusivity, diversity, and transparency.
- **Program Implementation** – The group was started in 2021 to address issues related to implementing the recommended programs and to move toward potential standardization of implementation, especially for implementors managing multiple programs for DEV. The group also is used to share best practices of implementation, while balancing the competitive nature of its membership, that can inform future program development and lead to increased goal attainment.
- **Customer Awareness and Outreach** – The group will begin in July 2023 to identify and deploy marketing of DEV energy efficiency programs to increase customer participation.

Additional Stakeholder Collaboration Options

During the 2022 and 2023 filing years, the independent monitor transitioned the stakeholder collaborative website from Trello.com to Basecamp.com, which allows for better communication and sharing of documents. Any interested party may request access to the Basecamp project documents. Stakeholders are now able to review and download documents for both utilities in one location. The online collaborative platform assists to maintain transparency in the stakeholder process and to share information with all stakeholders. The collaborative site includes information about the process, meeting schedules, agendas and notes, program ideas and recommendations, and allows stakeholders to post suggestions and have online discussions. The site allows stakeholders unable to participate in the meetings to keep updated on the progress of the process. Access is also granted to the site for any interested party by a simple email request to the independent monitor at ted.kniker@ipa-llc.org.



STAKEHOLDER OBJECTIVES

(i) the objectives established by the stakeholder group during this process related to programs to be proposed

For the 2023 filing year, the independent monitor did not facilitate the development of specific programmatic or process objectives by the stakeholders as part of the stakeholder meetings. Stakeholders, including each respective utility, had a unique set of circumstances they wanted to address in the filing year. For APCo, the petition filing cadence had been set at every two years and no programs had been proposed in 2022. For 2023, APCo worked with stakeholders to identify programs to enhance current and expiring offerings. APCo also explored the possibility of designing a solar pilot program. For DEV, there was discussion related to a new contract for customer awareness and outreach and the establishment of a customer awareness and outreach subgroup. Additionally, stakeholder efforts were focused on generating ideas for pilot projects that could be included in DEV's 2023 filing.

2023 PROGRAM RECOMMENDATIONS

(ii) recommendations related to programs to be proposed that result from the stakeholder process

Stakeholder Recommendations for Phase I Utility - Appalachian Power

In preparation for the 2023 filings, the stakeholders provided input and feedback on program design ideas for the utilities' consideration. The input and feedback were developed using stakeholder meetings and stakeholders could submit program proposals using program design templates that could be submitted to the independent monitor and utilities after the meetings. After discussing program ideas with stakeholders, the utility decided to move forward with further evaluation of the programs listed in the table below.

Program Title	Program Description
Moderate Income Program	Similar to the Home Performance Program. Provides increased incentives to Moderate Income customers.
In Unit Multi Family Program	Program would be for non-income qualifying customers located in multi-family units. It would be similar to the existing Home Performance program.
Schools EE Kit Program	School kits for elementary students with lesson plans for the teachers.
EV Demand Response – Pilot	Alternative to PEV tariff. Customers are offered an incentive not to charge their EV during peak demand periods.
Water Heater Demand Response – Pilot	Adjust setpoint of water heater during peak demand. Reduces load on the grid. Provide an incentive to customers for participation.
Smart Homes Kits - Pilot	Pilot program – kit containing Smart Homes products (plugs, lights, sensors, etc.).

Subject to further review and analysis, APCo intends to file for additional programs and pilots, the extension of existing low-income programs, and potential enhancements to existing programs.



Stakeholder Recommendations for Phase II Utility – Dominion Energy Virginia

For the 2023 filing the initial focus was on the development of stakeholder submitted pilot projects ideas. The list of submissions with brief descriptions is provided below.

1. Microgrid - A DC microgrid in rural Virginia, in connection with a low-income housing development that is either already funded or has access to low-income housing tax credits.
2. LED T8 Replacement - remove existing fluorescent tube bulbs and ballasts and install LED bulbs in the existing fixtures.
3. AMI Enabled 2-way Load Control Pilot Program - targeted to residential customers with a 1-way load control switch installed on their AC system.
4. Attic Hatches - installation of prefabricated attic hatch covers.
5. Simple Weatherization - measures that can be undertaken in a home to reduce air and duct leakage and improve occupant comfort.
6. Comprehensive Retrofits - comprehensive energy efficiency retrofits to homeowners and property owners
7. Multi-family Pay for Performance - The pilot will focus on common area systems (HVAC, water heating, lighting) but may also incorporate bulk replacement of in-unit equipment nearing the end of its useful life for rental units.
8. Rebuilding Together Arlington/Fairfax/Falls Church (RT-AFF) - could improve our energy upgrades, reach more homes.
9. Arrearage Reduction - The goal of this pilot is to target specific income challenged customers with significant, but not out-of-control arrearages on their electric bills. The program will offer the income eligible customer an opportunity to have a portion of their arrearage forgiven if they agree to participate in this pilot.
10. Residential Measure Financing - The goal of the financing pilot is to both provide a source of project financing for residential customers who do not have access to financial resources to fund the customer co-pay of DSM measures, and to facilitate participation by more open market trade allies by improving cash flow.
11. Pay for Performance - The goal of this pilot is to pull together resources from multiple sources including federal incentives and private third-party financing to offer Dominion a fully Pay for Performance based whole house home performance program.
12. Heat Pump Water Heater (HPWH) Replacement - It proposes replacement of traditional storage water heaters near the end of their service life, with heat pump water heaters (HPWHs), in income-restricted single-family and multifamily homes.
13. Landlord and Property Manager Load Shed Outreach -- This pilot envisions partnering with the local trade allies to outreach to landlords and property managers of multi-family properties to provide value related to system hardware, software, connectivity, and maintenance charges subsidized by demand response participation and corresponding incentives.
14. National Account High-Efficiency Supply Chain Pilot to complement Dominion Energy's existing Demand-Side Management portfolio.
15. Refrigeration Optimization and Peak Shifting - test the applicability of AI for continuously optimizing refrigeration consumption at a few small-business or commercial facilities.
16. Enhanced BER support (Proprietary) - proposes combining the existing Business Energy Reports (BERs) with Power TakeOff's proprietary Virtual Commissioning (VCx) platform as an additional cost-effective savings solution.
17. Thermal IQ (Proprietary) - The participant for this pilot would be an industrial customer with thermal processes and equipment, particularly those without digitalized or connected facilities, those that rely on on-site management, have aging equipment, and/or 24/7 production demands.
18. Indoor Agriculture - This pilot is designed to provide education, outreach, and energy project support for prescriptive and custom measures tailored to their unique business needs.
19. Measure Financing Program - The goal of the financing pilot is to both provide a source of project financing for customers who do not have access to financial resources to fund the customer co-pay of DSM measures, and to facilitate participation by more open market trade allies by improving cash flow.
20. Dual-Fuel Partial Electrification - The pilot is designed to be a first step towards complete electrification, enabling customers to gradually shift their energy mix through the adoption of dual fuel technologies.
21. Energy Audit Program - an energy audit pilot program to serve medium-to-large commercial and industrial customers within Dominion Energy's service territory.
22. Grocery Store Incentive Pilot - It will offer monetary incentives to customers for installing energy-efficient equipment and controls in their facility.
23. Industrial Electrification Assessment- The pilot program is designed for customers who would like to understand their electrification potential, cost to transition, return on investment, and conversion benefits so that they can incorporate these actions into their facility investment plan and long-term corporate sustainability strategy.
24. Industrial Electrification Audits – A pilot program to serve non-residential Dominion Energy customers who are ready to electrify their facility spaces, equipment, and processes.
25. Industrial New Construction - The INC pilot will provide customers with customized recommendations during the design phase, a design documents review after project plans are finalized, and an on-site verification after project completion. Incentives will be available for both the building owner and the design team for energy-efficient designs.
26. Strategic Energy Management - The program will offer hands-on energy management training to help customers build energy efficiency into their organizational and operational practices by developing a long-term energy plan with energy efficiency projects.



27. Contractor Rebate Program - This pilot envisions Dominion providing the local contractors (rebate) with a low-cost monitoring and fault detection system with geo-location capabilities that they can use to upsell a software-as-a-service (SaaS) based condition- based maintenance (CBM) offering to small-to-medium businesses.
28. Phase Change Materials - technology advancement pilot focused on the application of phase change materials (PCMs) in building space conditioning and refrigeration to expand the existing DSM programs that serve Dominion Energy customers.
29. Advanced Analytics for Pay for Performance - Incentives are paid when savings are delivered at the meter and are tied to cost-effectiveness. Use of a digital platform for advanced analytics that enables the targeting of high propensity customers, revenuegrade measured savings at the customer's facility meter, and performance payments tied to actual grid impacts realized.
30. Residential and Small Business Window Technology - The goal of this pilot is to leverage newly developed energy efficient window technologies now available at lower price points to add new cost-effective DSM measures.
31. Small Business Shared Savings - A more effective form of the traditional direct install program can be implemented by solving for the small-business customer hurdles of capital, expertise, time, and bankability through an EEaaS model.
32. HVAC Full-Service Leasing - HVAC full-service lease pilot program that could be directed to either residential or small to medium commercial customers within Dominion Energy's service territory. The goal of the pilot is to increase the installation rate of high efficiency HVAC systems by addressing two barriers, providing an alternative means of securing the system by participants and providing lifetime service.
33. HVAC Equipment Lease and Private Financing - This pilot envisions partnering with an HVAC equipment-leasing provider to combine private financing and utility incentives to reduce financial barriers on potential general residential or income-qualified participants.
34. Resident Education - proposes printing and distributing materials to educate consumers on ways they can reduce consumption through simple activities.
35. Advancing Equity with Financing for LMI Customers - financing is effective at reaching more LMI/HTR residential households, empowering them to purchase efficient products that they otherwise would not and making LMI programs more equitable.
36. Customer Data Analysis - By analyzing the past data of customers, it's possible to know in advance who in the future will see significant savings and those customers who will not, for a wide range of efficiency and demand-side programs.
37. Duct Sealing Testing - This pilot has two objectives – The first is to test how much more effective is this type of sealing to determine if an advanced duct sealing incentive is warranted. The second is to design the appropriate go-to-market approach to scale this for the general residential and/or income-qualified segments.
3. The Citizen Energy Ambassador pilot is an energy efficiency program designed for and taught by individuals with developmental and/or physical disabilities. This program would target assisted and senior living communities, rehab facilities, and community centers for disabled citizens.
38. Residential Low/Moderate Income Targeted Outreach - The goal of this pilot is to target specific income challenged communities, such as communities near or on military bases, and enable efficient full participation delivery of services across the residential community working in conjunction with a community leader or organizer to drive full participation.
40. Expanded Lineset Insulation - to add a measure to the Dominion IAQEE, ESWS, and HVC programs reimbursing HVAC technicians for replacing worn, damaged, and/or missing lineset insulation as part of a system tune-up.
41. Integrated Demand Management Solution - Would connect multiple acquisition channels to help eligible technologies enroll in a residential demand management (demand response, time of use rate, and/or demand flex) program. Software communicating with devices that Dominion Energy can operate will modify device settings to reduce energy consumption.
42. Community Renaissance - The goal of this pilot is to target specific distressed communities and use high visibility demonstration projects and community leader partnerships combined with coordinated intensified promotion efforts to drive high enlistment penetration in these targeted communities.
43. Energy Efficiency Benchmarking - This pilot would conduct an evaluation of different certification options that would best fit Dominion's territory and needs based upon the estimated costs for supporting a commercial customers LEED, Energy Star, 50001 Ready or SEP 50001 certification.

Status of recommendations: After stakeholder review and discussion of each idea, using the Innovation subgroup, DEV is reviewing each proposal to determine whether:

- Proposals that may be best suited if treated as enhancements to current programs, rather than unique pilot proposals.
- Proposals that may require additional discussion/research prior to moving forward.
- Proposals that are beyond the scope of what can be accomplished in the regulated DSM setting.

As noted earlier in this report, the Innovation subgroup will meet after the June 2023 stakeholder session for a follow up discussion to work through the 43 proposals to inform the 2023 filing. The independent monitor is tracking the progress of each idea, which will be reported in the 2024 Annual Report.

At the time of this report, DEV has an open Request for Proposals (RFP) seeking program designs for numerous programs. As such, it is unknown will be brought forward for the December 2023 DSM Rider Update filing since bids have not yet been received and no program proposals have yet been cost-tested. Bids and proposals are due back to DEV in June 2023, with follow-up meetings to brief stakeholders on the results of the proposals. DEV will be reviewing, and cost-testing winning submissions to an RFP (still open at the time of this report) and will convene at least one more meeting of the stakeholder group to provide updates on the proposed set of programs.



STATUS OF RECOMMENDATIONS AND PETITIONS

(iii) the status of those recommendations, in addition to the petitions filed and the determination thereon

For the purposes of this report, recommendations are reported by filing year and follow the schedule below.

Year Developed & Petitioned	Year Approved	Year Launched
2019	2020	2021
2020	2021	2022
2021	2022	2023
2022	Pending	Pending

Recommendations by the stakeholder group(s) and the Dominion Energy Virginia subgroups are inclusive of suggestions for making improvements in programs, policies, and processes, such as cost-effectiveness calculations. What is being reported below are the recommendations for full programs to align with utility filings. The independent monitor will be engaging the stakeholders and subgroups to identify improved ways to document the recommendations for policies, processes, and program improvements so that these may be included in future annual reports.

Appalachian Power

To date, APCo has proposed \$142.90 million, or approximately 102 percent of the goal. Of the \$142.90 million proposed, \$6.81 million for one pilot program (3-year cost cap), was approved in July 2022 and launched in January 2023.

2019 APCo Programs

Table 5: 2019 APCo Program Status

Date Petitioned: 09/30/2019		Date Approved: 05/21/2020		EM&V Report Link: https://www.scc.virginia.gov/DocketSearch#/caseDetails/133464	
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Residential Low-Income Single-Family Program	This program replaced APCo's existing Low Income Weatherization Program, which was in place since 2015 and expired at the end of 2020. The new 5-year program is better funded and therefore will generate savings for residential low-income customers through, among other things, the evaluation of energy improvement opportunities and the installation of weatherization upgrades, and other energy savings for dwellings.	Renewal of an expired program	Stakeholder Process	Approved	The program is actively enrolling and serving customers throughout the territory. The 2022 verified savings were 1,213,006 kWh.
Residential Low-Income Multifamily Program	This new 5-year program provides and installs energy efficiency measures in income-qualified multifamily properties. The program also educates and motivates owners to participate in additional programs offered by APCo in Virginia and will include an education component to help participating customers to effectively manage their energy usage.	New program	Stakeholder Process	Approved	A strong interest in the program has led to successful upgrades at numerous properties. APCo expects this success to continue through the life of the program. The 2022 verified savings were 564,165 kWh.
ENERGYSTAR® Manufactured Housing Program	This program provides an incentive to the homeowner to offset a portion of the difference in price between a standard manufactured home and an ENERGY STAR® manufactured home.	New program	Stakeholder Process	Approved	A total of 295 rebates have been paid to date. The program ended in December 2022. It was determined that the manufactured homes market has now transformed to mainly ENERGY STAR or ENERGY STAR equivalent homes in Virginia.



2020 APCo Programs

Table 6: 2020 APCo Program Status

Date Petitioned: 11/20/2020 Date Approved: 07/29/2021 EM&V Report Link: https://www.scc.virginia.gov/DocketSearch#caseDocs/133464					
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Residential Home Energy Report Program	This program will help customers reduce energy needs by encouraging them to alter their electricity usage habits by providing positive reinforcement. The reports will compare the participant's energy usage with similar homes, which will, ideally, motivate the customer to take action to save energy and maintain those savings.	New program	Stakeholder Process	Approved	The program is actively engaging with customers throughout the service territory. The 2022 verified savings were 26,612,523 kWh.
Residential Efficient Products Program	This new program will generate energy savings for consumers through the promotion of high efficiency lighting and appliances. This program was previously included in Appalachian's EE portfolio and ended in December 2018. Based on discussions and recommendations in the stakeholder process, the Company seeks approval to re-launch the program	Renewal of an expired program	Stakeholder Process	Approved	The program is currently providing instant discounts and rebates to customers throughout the service territory. The 2022 verified savings were 8,326,219 kWh.
Residential Energy Efficiency Kit Program	This program will generate energy savings for customers by providing energy efficiency kits to residential customers. The kits will provide cost-effective energy saving measures for customers while promoting other programs in the Company's EE portfolio. The kits will include products with verified electric energy savings that customers can self-install.	New program	Stakeholder Process	Approved	Customers are actively requesting kits as well as purchasing energy efficient products from the marketplace. The 2022 verified savings were 2,733,029 kWh.
Residential Home Performance Program	This program will generate savings for the Company's residential customers through the promotion of energy efficient homes. The primary objective for the program is to produce long-term electric energy reduction in the residential sector. The program will provide customers with a comprehensive in-home energy audit to identify immediate and larger-scale measures that the customer can implement to reduce energy usage.	Renewal of an expired program Revision of previously denied program	Stakeholder Process	Approved	The program is actively providing home assessments to customers throughout the service territory. The 2022 verified savings were 1,230,687 kWh.
Business Energy Solutions ("BES") Program	The new BES program replaces the C&I Lighting and non-lighting programs and is designed to generate energy savings for C&I customers through the promotion of high efficiency lighting and non-lighting upgrades. The BES Program will accelerate energy efficiency by incorporating both lighting and non-lighting measures under one program.	New program	Stakeholder Process	Approved	The program is actively enrolling customers in the program throughout the service territory. The 2023 verified savings were 8,802,494 kWh.



Date Petitioned: 11/20/2020		Date Approved: 07/29/2021		EM&V Report Link: https://www.scc.virginia.gov/DocketSearch#caseDocs/133464	
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Residential Bring Your Own SMART Thermostat ("BYOT") Program	The Commission initially approved for a three-year period ending December 31, 2021. The program was approved for an additional 5 years in Case No. PUR-2020-00251 beginning in the calendar year 2022. The BYOT Program allows residential customers to enroll in a qualifying Wi-Fi-enabled smart thermostat in a demand response program. During a load management event, the Company will either cycle the customer's HVAC equipment or raise the set point of the thermostat.	Renewal of an expired program	Stakeholder Process	Approved	The program is actively enrolling customers throughout the service territory. The 2022 verified savings were 189,881.
Small Business Direct Install ("SBDI") Program	This program offers on-site energy assessments at small businesses, direct install of certain energy efficiency measures, and financial incentives for other cost-effective measures to capture deeper energy savings	Renewal of an expired program	Stakeholder Process	Approved	The program is actively enrolling customers throughout the service territory. The 2022 verified savings were 1,297,479 kWh.
Volt Var Optimization ("VVO") Pilot Program	The VVO Pilot Program will reduce energy and demand usage without any interaction by the customer. The VVO Pilot Program will more closely control the voltage that is delivered to the meter and, subsequently, to the customer's end-use electrical devices, VVO technology allows customer devices to operate more closely to the design voltage, which can provide an annual reduction of two to four percent in energy use. All residential, commercial, and industrial customers of Appalachian Power Company, who are served from circuits equipped with VVO, would benefit from the technology.	New program	Stakeholder Process	Approved	The first phase of the project is complete. The first 2 of 6 circuits planned under the pilot were placed in service in Dec 2022. The second phase of the project is currently under construction. The next 2 circuits planned under the pilot will be placed in service in late 2023.

2021 APCo Programs

Table 7: 2021 APCo Program Status

Date Petitioned: 11/30/2021		Date Approved: Expected late July 2022		EM&V Report Link: Report to be issued in 2024	
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Custom Commercial & Industrial Pilot Program	This 3-year pilot program aims to generate energy savings for C&I customers by encouraging energy and demand reduction by large C&I customers through processes and systems that are not provided for in the Business Energy Solutions Program.	New program	Stakeholder Process	Approved	The program launched in January of 2023 and is currently accepting projects.



2022 APCo Programs

APCo did not submit a full EE-RAC filing for 2022. However, as stated in the SCC Order dated July 15, 2022, in Case No. PUR-2021-00236, the Company moved from a one-year cycle to a two-year cycle for filing a full EE-RAC case. On the years where a full EE-RAC filing was not required, the Company was ordered to submit a report, pursuant to Ordering Paragraph 5, related to the program costs, revenues, participation, and other relevant information on the status of the Company's energy efficiency programs. This status report was filed on November 30, 2022. The Company's next full EE-RAC filing will occur on or before November 30, 2023.

Dominion Energy Virginia

To date, DEV has proposed \$712.9 million, or approximately 82 percent of the legislative goal. Of the \$712.9 million proposed, with \$107.8 million in Phase XI filing (5-year cost caps), is pending approval.

2019 DEV Programs

Table 8: 2019 DEV Program Status

<p>Date Petitioned: 12/3/2019 Date Approved: 07/30/2020</p> <p>EM&V Report Link: The EM&V Report can be found under the SCC's website located here by searching for case number: PUR-2020-00274 https://www.scc.virginia.gov/DocketSearch#caseDocs/141608. An executive overview of the 2022 EM&V Report can be located on the Company's website here: https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/save-energy/key-docs/emv-report.pdf?la=en&rev=b00506c600b744bfb-fe08e004903d287&hash=4B416A5F2F58973FAD7AC8D66F2BB443</p>					
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Residential Electric Vehicle (EE and DR)	This program encourages efficient charging of electric vehicles and shifting of electric vehicle charging load to off-peak periods.	New program	Stakeholder Process Utility (adding DR) Vendor or RFP process	Approved	Enrolled 299 customers through 2022; Program is still available to customers.
Residential Electric Vehicle (Peak Shaving)	This Program would provide customers who already have a qualifying electric vehicle charger with an annual incentive in exchange for allowing the Company to reduce the operating cycle of their charger by remote control during periods of high demand.	New program	Utility Vendor or RFP process	Approved	Enrolled 686 customers through 2022. Program is still available to customers.
Residential Energy Efficiency Kits (EE)	This program provides energy efficiency kits to customers as a welcome gift or in response to requests under specific conditions.	New program	Stakeholder Process Vendor or RFP process	Approved	Enrolled 54,903 customers through 2022. Program is still available to customers.
Residential Home Retrofit (EE)	This program incentivizes retrofit of participating customer homes using measures that may extend beyond what would be considered a typical measure in a home energy assessment program.	New program	Stakeholder Process Vendor or RFP process	Approved	Enrolled 149 customers through 2022. Program is still available to customers.
Residential Manufactured Housing (EE)	This program offers incentives for the installation of energy efficiency measures designed specifically for manufactured and modular housing.		Stakeholder Process Vendor or RFP process		Enrolled 6 customers through 2022. Program is still available to customers.
Residential New Construction (EE)	This program encourages the use of energy efficient materials and practices in new home construction through a combination of incentives and education.		Stakeholder Process Vendor or RFP process		Enrolled 3,578 customers through 2022. Program is still available to customers.



<p>Date Petitioned: 12/3/2019 Date Approved: 07/30/2020</p> <p>EM&V Report Link: The EM&V Report can be found under the SCC's website located here by searching for case number: PUR-2020-00274 https://www.scc.virginia.gov/DocketSearch#caseDocs/141608. An executive overview of the 2022 EM&V Report can be located on the Company's website here: https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/save-energy/key-docs/emv-report.pdf?la=en&rev=b00506c600b744bfb-fe08e004903d287&hash=4B416A5F2F58973FAD7AC8D66F2BB443</p>					
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Residential/ Non-residential Multifamily (EE)	This program identifies and targets multi-family residences with incentives and measures specifically designed to take advantage of energy-saving opportunities in this type of residence. For the purpose of this program, the assumption is that a multi-family residence is defined as a residence with a shared envelope, wall, or floor/ceiling, with no specific limitation on the number of residences within a given structure.	New Program	Stakeholder Process Vendor or RFP process	Approved	Enrolled 1,643 customers through 2022. Program is still available to customers.
Non-residential Midstream Energy Efficiency Products (EE)	A companion program to the residential efficient products program that takes advantage of additional savings opportunities that can be realized through upstream and midstream incentives applied to energy efficient products but targeted at non-residential customers. The non-residential program includes incentives for purchasing high efficiency commercial kitchen appliances, freezers and refrigerators, and HVAC systems.	New Program	Stakeholder Process Utility (research) Vendor or RFP process	Approved	Enrolled 120 customers through 2022. Program is still available to customers.
Non-residential New Construction (EE)	This program encourages the use of energy efficient materials and practices in new construction through a combination of incentives and education.	New Program	Stakeholder Process Vendor or RFP process	Approved	Program currently available to customers. The nature of non-residential new construction projects can cause long lag between construction design and rebate approval.
Small Business Improvement Enhanced (EE)	This program provides 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.	Supplement to an existing program	Stakeholder Process Vendor or RFP process	Approved	Enrolled 898 customers through 2022. Program is still available to customers.
HB 2789 (Heating and Cooling/Health and Safety) (EE)	This program provides incentives to low-income, elderly, and disabled individuals for the installation of measures that reduce heating and cooling costs and enhance health and safety of residents.	New Program	Stakeholders: mandated by law and passed by the Virginia General Assembly as House Bill 2789	Approved	Enrolled 7,021 customers through 2022. Program is still available to customers.
Residential Thermostat (EE) and (DR) Programs	The EE program offers rebates to customers who either purchase a qualifying smart thermostat and/or enroll in an energy efficiency program. The DR program manages heat pumps and air-conditioning units using smart thermostats to reduce peak demand.	New Program	Stakeholder Process Vendor or RFP process	Approved	Enrolled 14,196 customers in the EE component through 2022, and 13,084 in the DR component. Program is still available to customers.



Date Petitioned: 12/3/2019 Date Approved: 07/30/2020

EM&V Report Link: The EM&V Report can be found under the SCC's website located here by searching for case number: PUR-2020-00274

<https://www.scc.virginia.gov/DocketSearch#caseDocs/141608> An executive overview of the 2022 EM&V Report can be located on the Company's website here:
<https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/save-energy/key-docs/emv-report.pdf?la=en&rev=b00506c600b744bfb-fe08e004903d287&hash=4B416A5F2F58973FAD7AC8D66F2BB443>

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Residential Customer Engagement Program (EE)	This program provides staffing and subject matter experts to interact with customers directly by phone, e-mail, and/or social media to provide energy efficiency advice on request. The program also includes staffing to provide experts at public events and meetings of local organizations.	New Program	Stakeholder Process Vendor or RFP process	Approved	265,150 reports will be sent in 2022. Program is still active.

2020 DEV Programs

Table 9: 2020 DEV Program Status

Date Petitioned: 12/2/2020 Date Approved: 09/07/2021 EM&V Report Link: Published 6-15-22: The EM&V Report can be found under the SCC's website located here by searching for case number: PUR-2020-00274; <https://www.scc.virginia.gov/DocketSearch#caseDocs/141608>
An executive overview of the 2022 EM&V Report can be located on the Company's website here:
<https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/save-energy/key-docs/emv-report.pdf?la=en&rev=b00506c600b744bfb-fe08e004903d287&hash=4B416A5F2F58973FAD7AC8D66F2BB443>

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Virtual Audit	The program will offer customers a self-directed home energy assessment using audit software, completed entirely by the customer, with no trade ally entering the home. Customers would be directed to a website or toll-free number where they would answer a set of questions with answers specific to the conditions and systems in their home with aids to help them answer accurately. From this information, the software would generate a report of recommended measures and actions the customer could take to improve the efficiency of their home. The report would also identify the Company's other active energy efficiency programs that fit each customer's needs.	New program	Stakeholder Process Vendor or RFP process	Approved	Currently open to customers. There were 2,149 participants in 2022.



Date Petitioned: 12/2/2020 Date Approved: 09/07/2021 EM&V Report Link: Published 6-15-22: __ The EM&V Report can be found under the SCC's website located here by searching for case number: PUR-2020-00274; <https://www.scc.virginia.gov/DocketSearch#caseDocs/141608>
An executive overview of the 2022 EM&V Report can be located on the Company's website here:
<https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/save-energy/key-docs/emv-report.pdf?la=en&rev=b00506c600b744bfb-fe08e004903d287&hash=4B416A5F2F58973FAD7AC8D66F2BB443>

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Smart Home	The program will provide the Company's residential customers with a suite of smart home products that provide seamless integration in the home. The program will deliver energy efficient measures bundled in two versions of a Smart Home Kit, so that customers can benefit from a fully integrated set of compatible smart products. The Smart Home Kit will include general instructions for installing the specific energy efficient measure within their home.	New Program	Stakeholder Process Vendor or RFP process	Approved	Currently open to customers. There were 15 participants in 2022.
Residential Water Savings (EE)	The program is designed to give the Company's residential customers control over their water-related energy use. The proposed Program leverages the installation of smart communication water heating and pool pump technologies to facilitate more efficient operation while reducing overall electricity usage and peak demand response. Customers have the option to purchase a qualified program product online, in-store, equipment distributor, or through qualified local trade allies.	New program	Stakeholder Process Vendor or RFP process	Approved	Currently open to customers. There were 62 participants in 2022.
Residential Water Savings (DR)	All customers who purchase and install a qualified product (EE component) will be offered the opportunity to enroll in the peak demand reduction (DR) component of the DR Program. Additionally, Customers who have previously purchased a qualifying product and who have the eligible products installed, will be offered the opportunity to enroll in the DR component of the Program. Customers will be offered an annual incentive (above the product purchase incentive amount) to participate in the peak reduction component year-round and an additional reduced incentive for each subsequent year they continue to participate. Customers would be allowed to opt-out of a certain number of events.	New program	Utility Vendor or RFP process	Approved	Currently open to customers.



Date Petitioned: 12/2/2020 Date Approved: 09/07/2021 EM&V Report Link: Published 6-15-22:___ The EM&V Report can be found under the SCC's website located here by searching for case number: PUR-2020-00274; <https://www.scc.virginia.gov/DocketSearch#caseDocs/141608>
An executive overview of the 2022 EM&V Report can be located on the Company's website here:
<https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/save-energy/key-docs/emv-report.pdf?la=en&rev=b00506c600b744bfb-fe08e004903d287&hash=4B416A5F2F58973FAD7AC8D66F2BB443>

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Income and Age Qualifying Program (EE)	The program will provide in-home energy assessments and installation of select energy-saving products at no cost to eligible participants. As with the Company's other low-income programs, the Company will partner with Weatherization Service Providers (WSPs) to perform community outreach and install program measures to eligible customers. Moreover, the proposed Program would allow for providers to charge up to 10 percent of their yearly allocation for administrative costs on single family jobs. In addition, the proposed program design has a 15% health & safety cap to bring additional benefits to customers in the form of wider opportunities for bill savings.	Renewal of an expired program	Stakeholder Process Vendor or RFP process	Approved	Currently open to customers. There were 4,782 participants in 2022.
Income & Age Qualifying Solar (HB 2789 program)	The program will provide a mechanism for customers who meet certain income, age, disability, and previous program participation requirements regarding weatherization to receive, at no cost to the customer, photovoltaic solar panels installed at their residence.	New program	Stakeholder Process; Mandated by law and passed by the Virginia General Assembly as House Bill 2789	Approved	Currently open to customers. There were 7 participants in 2022.
Agricultural Program (EE)	The program will provide qualifying non-residential customers with incentives to implement specific energy efficiency measures to help agribusinesses replace aging, inefficient equipment, and systems with new, energy-efficient technologies. The Program is designed to help agricultural customers make their operations more energy-efficient by providing incentives for efficient agricultural equipment and lighting specifically used in agricultural applications.	New program	Stakeholder Process Vendor or RFP process	Approved	Currently open to customers. There were 3 participants in 2022.
Building Automation Program (EE)	The program will provide qualifying non-residential customers with incentives to install new building automation systems in facilities that do not have centralized controls or have an antiquated system that requires full replacement. The Program would be marketed and promoted to controls contractors who design, install, and maintain fully functional building automation systems. Product lines would include brands like Carrier, Schneider Electric, Johnson Controls, Siemens, and Trane.	New program	Stakeholder Process Vendor or RFP process	Approved	Currently open to customers.



Date Petitioned: 12/2/2020 Date Approved: 09/07/2021 EM&V Report Link: Published 6-15-22:___ The EM&V Report can be found under the SCC's website located here by searching for case number: PUR-2020-00274; <https://www.scc.virginia.gov/DocketSearch#caseDocs/141608>
An executive overview of the 2022 EM&V Report can be located on the Company's website here:
<https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/save-energy/key-docs/emv-report.pdf?la=en&rev=b00506c600b744bfb-fe08e004903d287&hash=4B416A5F2F58973FAD7AC8D66F2BB443>

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Building Optimization Program (EE)	The program will provide qualifying non-residential customers incentives for the installation of energy efficiency improvement, consisting of recommissioning measures. The Program seeks to capture energy savings through control system audits and tune-up measures in facilities with Building Energy Management Systems.	New program	Stakeholder Process Vendor or RFP process	Approved	Currently open to customers. There were two participants in 2022.
Non-Residential Customer Engagement Program (EE)	The program will engage commercial buildings in energy management best practices that increase awareness of operational and behavioral energy savings opportunities. The Program would educate and train businesses' facility management staff on ways to achieve energy savings through optimization of building energy performance and integrating ongoing commissioning best practices into their operations. Through a customer engagement portal, building operators can also access educational content and technical resources as part of a series of operator challenges. By completing these challenges, participants will review and implement energy efficient operational best practices, earning them points while competing against facility teams from other participating buildings.	New program	Stakeholder Process Vendor or RFP process	Approved	Currently open to customers.
Enhanced Prescriptive Program (EE)	The program will provide qualifying non-residential customers with incentives for the installation of refrigeration, commercial kitchen equipment, HVAC improvements and maintenance and installation of other program specific, energy efficiency measures.	Supplement to an existing program	Stakeholder Process Vendor or RFP process	Approved	Currently open to customers. There were 366 participants in 2022.



2021 DEV Programs

Table 10: 2021 DEV Program Status

Date Petitioned: 12/14/2021 Date Approved: 09/15/2022 (Expected) EM&V Report Link: Published 6-15-23 The EM&V Report can be found under the SCC's website located here by searching for case number: PUR-2021-00247 https://www.scc.virginia.gov/docketsearch/DOCS/7sxx011.PDF					
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Non-residential Energy Efficiency - Data Center and Server Rooms Program	This Program would identify and target data centers and should identify and implement site-specific, retrofit, and new construction energy efficiency opportunities, largely focused on cooling efficiency and power distribution.	New program	Stakeholder Process Vendor or RFP process	Approved	Program implementation is being finalized and is expected to launch Summer of 2023.
Non-Residential Energy Efficiency – Health Care Targeted Program	This program would identify and target health care facilities and include measures that are specific to hospitals, long term care facilities, group home and small medical providers while providing energy advisors to assist in selecting / implementing energy savings measures.	New program	Stakeholder Process Vendor or RFP process	Approved	Program implementation is being finalized and is expected to launch Summer of 2023.
Non-Residential Energy Efficiency – Hotel and Lodging Targeted Program	This program would identify and target hotel and other lodging facilities and include measures that are specific to hotel/motel facilities and operation such as room sensors and active energy conservation measures triggered by key cards.	New program	Stakeholder Process Vendor or RFP process	Approved	Program implementation is being finalized and is expected to launch Summer of 2023.
Small Business Behavioral Income and Age Qualifying Program	This program would provide incentives, education, and/or information to qualifying customers with specific suggestions for reducing electrical usage based on historical usage patterns.	New program	Utility Vendor or RFP process	Approved	Program implementation is being finalized and is expected to launch Summer of 2023.
Enhancement & Income and Age Qualifying Home Energy Reports & Non-Residential Income and Age Property Owners	Proposed program designs should generally include measures appropriate for single- and multi-family residences to the extent practical as the Company is considering enhancements to its options for income and age qualifying customers to ensure that customers in this category have as many opportunities for energy savings as possible and that the options available meet their needs. Program measure categories should include health care targeted measures for facilities with focus on income and age qualifying individuals; expansion of the Company's current low-income program to include additional measures, such as energy efficient windows or window enhancements; home energy reports for income and age qualifying customers which would provide relevant advice on how to improve energy efficiency and lower their monthly bill; and pay for performance options.	Supplement to an existing program	Stakeholder Process Vendor or RFP process	Pending	Pending



Date Petitioned: 12/14/2021 Date Approved: 09/15/2022 (Expected) EM&V Report Link: Published 6-15-23 The EM&V Report can be found under the SCC's website located here by searching for case number: PUR-2021-00247 https://www.scc.virginia.gov/docketsearch/DOCS/7sxx011.PDF					
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Voltage Optimization O&M Software	The principle of Voltage Optimization is that most types of customers load use less energy when supplied with lower input voltage. This program will focus on supporting the enablement software for the overall Voltage Optimization initiative.	New program	Stakeholder Process Utility In conjunction with the Grid Modernization Phase II filing	Pending	Program implementation is being finalized.
Non-Residential Lighting and Controls Extension	Extends and expands budget for lighting upgrades and controls at qualifying non-residential facilities.	Expansion to existing program	Stakeholder Process Utility	Pending	Program implementation is being finalized and is expected to launch in the Summer of 2023.

2022 DEV Programs

Table 11: 2022 DEV Program Status

Date Petitioned: 12/13/2022 Date Approved: 09/15/2022 (Expected) Date Approved: 09/15/2022 (Expected)					
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Residential Income and Age Qualifying Bundle	The proposed bundled version of the Residential Income and Age Qualifying Home Improvement Program combines the Company's existing HB 2789 HVAC Program measures in addition to the Phase 9 and 10 low-income program measures while adding several new program measures and creating a bundled income qualifying program that would provide income and age qualifying residential customers with in-home energy assessments and installation of select energy-saving measures.	Bundling of Currently Approved Program	Utility Vendor or RFP process	Pending	Pending
Non-residential Income and Age Qualifying Bundle	The Non-residential Income and Age Qualifying Program would offer installation of select energy-saving measures to be installed in properties that house low-income and aging residents, but the electric bill is paid by the property, rather than the individual resident.	Bundling of Currently Approved Program	Utility Vendor or RFP process	Pending	Pending
Residential EE Products Marketplace	The program provides residential customers an incentive to purchase specific energy efficient appliances with a rebate through an online marketplace and through stores. The Program offers rebates for the purchase of specific energy efficient appliances.	Renewal of an expiring program	Utility Vendor or RFP process	Pending	Pending



Date Petitioned: 12/13/2021 Date Approved: 09/15/2022 (Expected) Date Approved: 09/15/2022 (Expected)					
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Residential Customer Engagement	The Residential Customer Engagement Program would provide educational insights into the customer's energy consumption via a Home Energy Report (on-line and/or paper version). The Home Energy report is intended to provide periodic suggestions on how to save on energy based upon analysis of the customer's energy usage. Customers can opt-out of participating in the Program at any time.	Renewal of an expiring program	Utility Vendor or RFP process Stakeholder Process	Pending	Pending
Residential Peak Time Rebate	This Program would enable residential customers to reduce their energy usage consumption during peak time periods as called upon by the Company. During peak time rebate event days, proposed program design will alert customers with text messaging, emails, or outbound telemarketing voicemail, as well as by utilizing the Company's dominionenergy.com website with banner announcements informing participants an event is in progress.	New Program	Utility In conjunction with the Grid Modernization Phase II filing	Pending	Pending
Residential Retrofit Bundle	The proposed program re-design incorporates key program measures from the Company's Phase VII Residential Home Energy Assessment Program. A-line LEDs are not included in the program redesign in response to recent EISA driven changes to baseline efficiency. Program design introduces a handful of select new measures including the replacement of Electric Baseboard Heating with Air Source Heat Pump, High Efficiency Room AC Upgrades, and Shower Thermostats.	Bundling of existing programs	Utility Vendor or RFP process	Pending	Pending
Residential EV Telematics Pilot	The proposed program pilot would run in parallel with the current Electric Vehicle Demand Response Program. Instead of communicating with the electric vehicle charger, the proposed pilot program would allow for integration with the onboard vehicle telematics to capture charging data and control the charging rate during load curtailment events dispatched by the Company.	New Program	Utility	Pending	Pending
Non-residential Enhanced Prescriptive Bundle	The proposed program design would offer a more comprehensive program bundle that would incorporate the Company's expiring DSM Phase VII Non-residential Heating and Cooling Efficiency, Non-residential Manufacturing and Non-residential Window Film Programs into the overarching DSM Phase IX Non-residential Enhanced Prescriptive Program offering. The consolidation of various program measures into a more enhanced version of the Phase IX Non-residential Prescriptive Program would allow the Company to consolidate programs and offer qualifying non-residential customers the ease of implementing a wide variety of energy efficiency measures.	Bundling of current programs	Utility Vendor or RFP process	Pending	Pending



Date Petitioned: 12/13/2021 Date Approved: 09/15/2022 (Expected) Date Approved: 09/15/2022 (Expected)					
Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Non-residential Custom Program	This Program would provide qualifying non-residential customers, with a focus on larger facilities with demand greater than 300 kW, with the technical support and incentives needed to pursue non-standard, more complex energy efficiency projects. Through this proposed program, the Company can help qualifying customers develop tailored projects that best meet their unique facility and organizational goals while achieving savings from a diverse mix of measures.	New Program	Stakeholder process Vendor or RFP process	Pending	Pending



STAKEHOLDER FEEDBACK ABOUT THE PROCESS

To obtain feedback about the 2023 Stakeholder Process year so far for this report, the independent monitor conducted an online survey between May 15 and June 2, 2023. An email invitation was sent to 405 stakeholders,¹⁰ a total of 59 of whom provided input for a response rate of 14.6 percent. The full set of frequency distributions (responses) are available by request from the independent monitor. The 2023 response rate represents a significant drop in response from previous year surveys. However, the confidence level and interval are still within an acceptable range to support the findings.

Approximately two-thirds (63.7% to 68.2%) of the respondent stakeholders are satisfied with the stakeholder process, the opportunity to discuss issues of concern, and the opportunity to provide direct input to the utilities for energy efficiency program recommendations. The satisfaction rates have dropped from previous years, which were generally between 68 and 77 percent. While the rates are relatively consistent within the margin of error of 9.9 percent, the responses indicate less favorable views held by those stakeholders who responded to the survey. However, it should be noted that in previous years over 80 stakeholders responded, so with the significant drop to 59, each individual response may skew the overall results more. The total number of individuals who answered these questions is approximately half of the numbers from previous years.

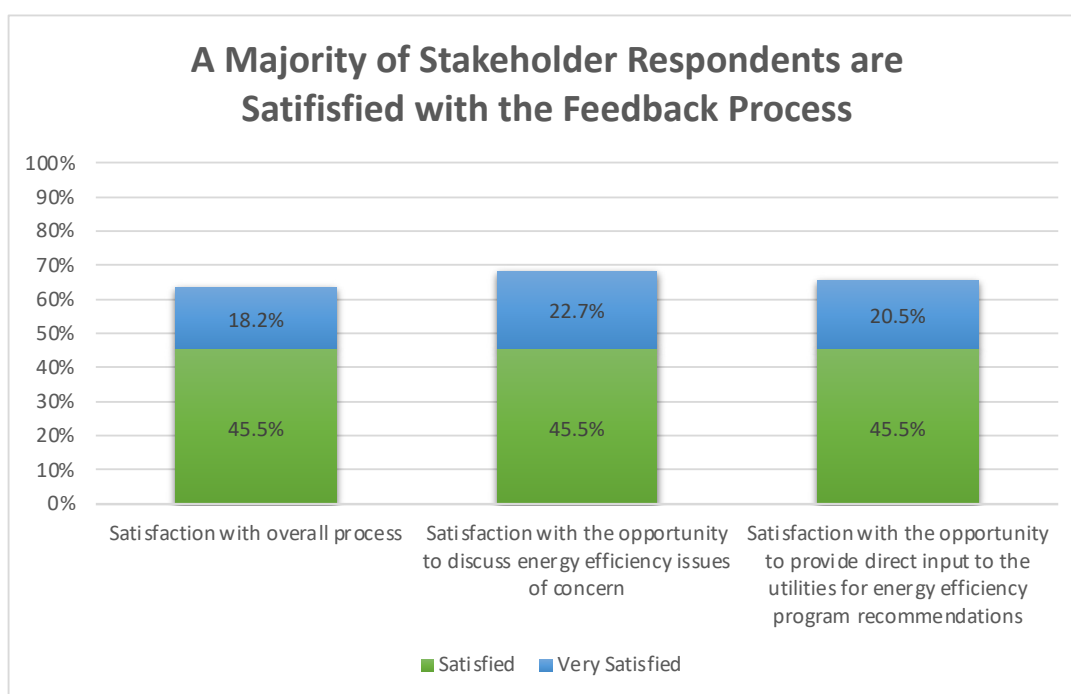


Figure 1: Satisfaction with the Virginia Energy Efficiency Stakeholder Process (n=44)

More than half (57.5%) of the stakeholder respondents agree that the utilities are willing to consider their input, and nearly the same percentage (58.5%) agree the process is increasing trust and collaboration between stakeholders and the utilities. Both levels have dropped from the 2022 levels of 78.8 percent and 77.3 percent, respectively.

¹⁰ The total number of potential stakeholders is lower than the combined numbers for APCo and DEV because it includes 85 members who participate in both stakeholder groups.

¹¹ The confidence level for the results is 90% with a margin of error of + 9.9%.

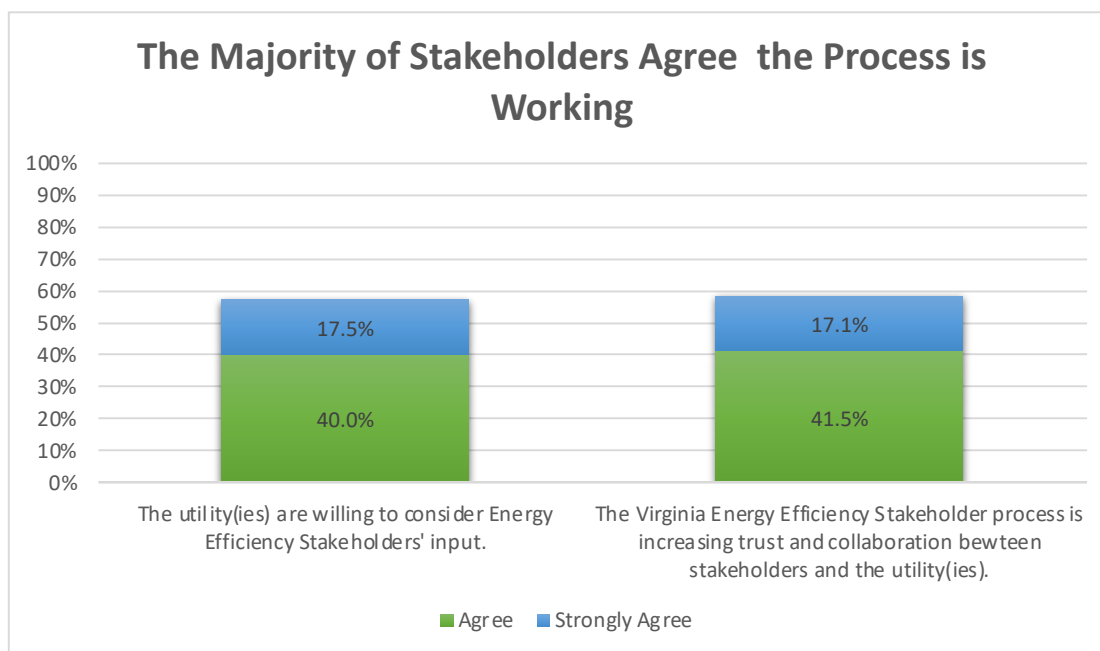


Figure 2: Stakeholder Agreement with the Relationship with the Utilities (n=40)

The rate of agreement of these questions varies depending on which stakeholder processes the respondent affiliates with. Those stakeholder respondents who participate only in the Phase I stakeholder process rate their agreement at 83.3 percent that the utility is willing to consider their input, and 50 percent that the process is increasing trust and collaboration between stakeholders and the utility. For stakeholders who participate only in the Phase II stakeholder process, respondents rate their agreement at 40 percent that the utility is willing to consider their input, and 53.3 percent that the process is increasing trust and collaboration. For stakeholders who indicated they participate in both Phase I and Phase II stakeholder processes, ratings for these two questions were higher than respondents who participate in only one utility process. Dual-utility respondents rated their agreement at 63.2 percent for utilities considering their input and 65.0 percent that the process is increasing trust and collaboration. Based upon this data, it appears that more participation in the stakeholder process and participation with both utilities results in higher perception of positive interaction with the utilities.

Sixty percent of stakeholder respondents who participated in the first four years of the stakeholder process see the results of the stakeholder process in the energy efficiency RFPs developed by the utilities. A slightly higher percentage (61.5%) of respondent stakeholders see the results of their input in the utilities' filings to the SCC. Slightly more than half (59.4%) of respondents, who participated in the first three years of the process can see their input reflected in the recommendations and programs approved by the SCC.

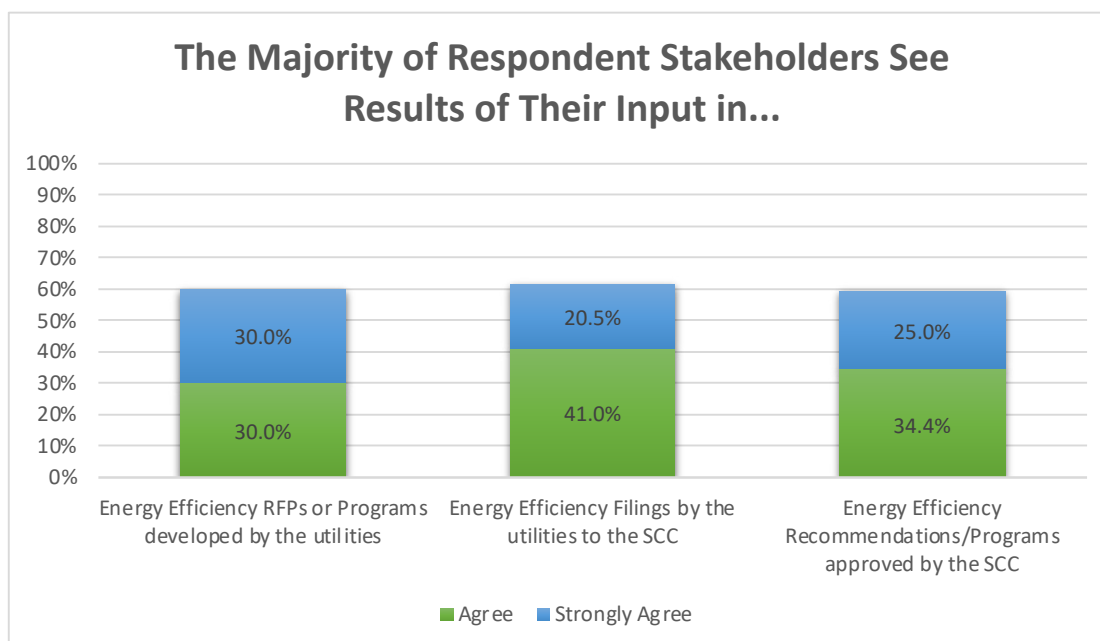
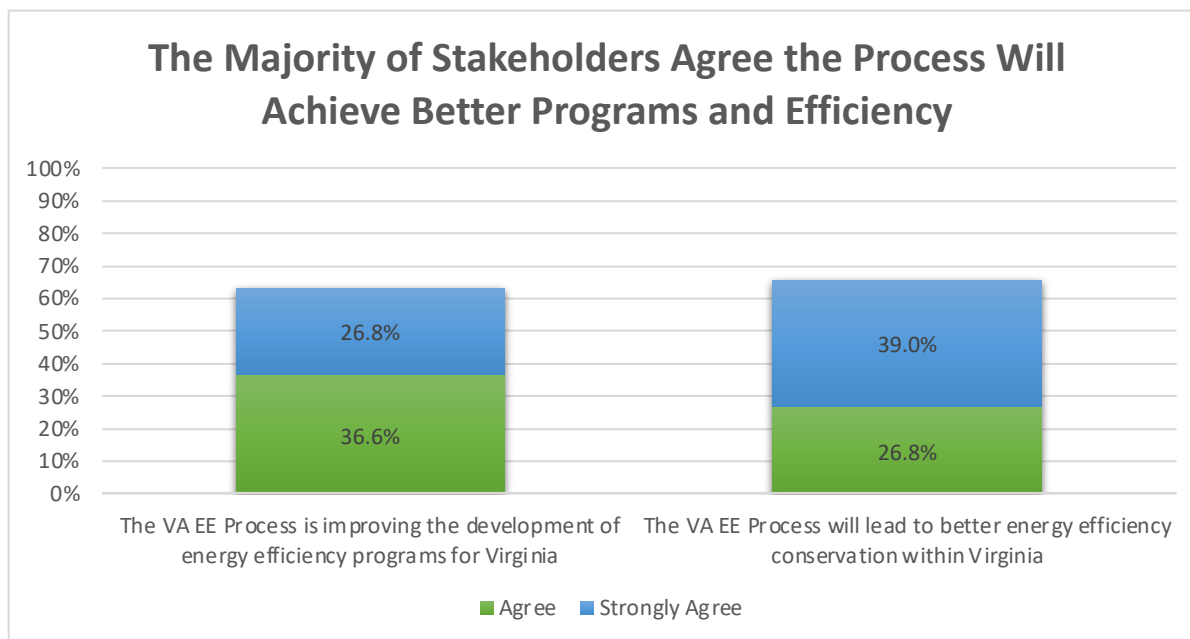


Figure 4: Stakeholder Agreement that the Process will Improve Energy Efficiency (N=41)



Over 60 percent of respondent stakeholders report the Virginia Energy Efficiency Stakeholder Process is improving the development of energy efficiency programs in Virginia (63.3%) and that the process will lead to better energy efficiency conservation within Virginia (64.8%). Both results demonstrate almost a 20 percent decline from previous years. This significant change is something to be further explored as to whether it is the process or the constraints within Virginia that are contributing to this perspective.



Overall, most stakeholders are very supportive of the process and acknowledge that over time it has improved with more opportunities for feedback and dialog related to energy efficiency in Virginia. The stakeholders also, though, acknowledge there is ample opportunity to continue to improve the feedback planning, process, and results. For example, use of the subgroups has increased to promote conversation and dialog between stakeholders, but that use is still not driving the content of the overall process or input of the stakeholders to the utilities. Based upon the survey responses, and discussions the independent monitor has held with several stakeholders during the 2023 process, the most significant improvements that would make the most difference to stakeholders are:

1. More accountability and transparency from utility companies in how they are incorporating stakeholder input and feedback into their energy efficiency programs to make them better.
2. More in-person meetings instead of WebEx meetings, which helps form stronger listening and collaboration.
3. More incentive for utility companies to bring innovative ideas to the stakeholder process, as well as more direct feedback from non-participants outside of the stakeholder process.
4. Layers of confusion and complexity have been added to the process while limiting direct utility feedback. Make the process clearer to all stakeholders and where they have touchpoints to lead and participate.
5. Not nearly enough people and organizations with direct field experience participate in the stakeholder process. Providing stakeholders with just a little leverage in the process would improve the process.

Several of these recommendations continue from previous years, especially the perception that the process is utility driven and not stakeholder driven, and the desire for in-person meetings. The Independent Monitor intends to begin hybrid (combination of in-person and online) meetings in summer 2023.



Next Steps

The fifth year of the stakeholder process attempted to bring more innovation into the process by focusing on pilot projects, turning over subgroup leadership to stakeholders directly from the independent monitor, and increasing the communication and use of the subgroups. Stakeholders have noted that the Virginia Energy Efficiency Stakeholder Process has always been open to all participants to collaborate on great ideas and ultimately the development of useful programs serving the customers of the utility companies and strengthening the energy efficiency of homes across Virginia. It seems that stakeholders appreciate the opportunity to provide input and feedback on energy efficiency programs and to work collaboratively with utility companies towards common goals. The addition of the new subgroup in 2023 for customer awareness and outreach for DEV programs should increase how the process can contribute even more to energy efficiency in Virginia.

Based on the responses received from stakeholders in response to a survey, there are some areas for improvement in the stakeholder process raised by stakeholders. One suggestion is to improve how stakeholders can fully engage and collaborate throughout the process, so that stakeholders can provide specific and actionable recommendations about what energy efficiency and DSM programs they want to see offered by the utility companies. It may also be helpful to include more stakeholders with direct field and customer experience at the meetings, and to provide stakeholders with more input earlier in the program and measure development process. Additionally, there is a need for improved tracking and transparency in how stakeholder feedback is incorporated into the RFP process, and also into the development of program offerings filed with the SCC. Overall, it may be beneficial to address these concerns and work towards a more effective and collaborative stakeholder process in the future.



APPENDIX I: PREVIOUS YEAR LEGISLATIVE CHANGES

2020 Legislative Update

In the 2020 General Assembly session, under House Bill 575 , § 56-585.1 relating to energy efficiency was amended and reenacted. The amended legislation included the following provisions that directs the stakeholder process to provide input and feedback on:

- (i) the development of such energy efficiency programs and portfolios of programs.
- (ii) compliance with the total annual energy savings and how such savings affect utility integrated resource plans.
- (iii) recommended policy reforms by which the General Assembly or the Commission can ensure maximum and cost-effective deployment of energy efficiency technology across the Commonwealth; and
- (iv) best practices for evaluation, measurement, and verification for the purposes of assessing compliance with the total annual energy savings.

The revised legislation expanded the identified stakeholder representatives to include participation from

- Relevant directors, deputy directors, and staff members of the Commission [State Corporation Commission] who participate in approval and oversight of utility energy efficiency savings programs

The legislative changes reflected input provided by stakeholders in the 2018-2019 (2019) stakeholder process and began on July 1, 2020, for the 2020-2021 (2021) stakeholder process and subsequent years and will be reported in future annual reports. The legislation did not change any of the requirements for the independent monitor's Annual Report.

2021 Legislative Update

There were no legislative updates or revisions to § 56-585.1 that altered the energy efficiency stakeholder feedback process, the annual reporting, or the role of the independent monitor.

2022 Legislative Update

There were no legislative updates or revisions to § 56-585.1 that altered the energy efficiency stakeholder feedback process, the annual reporting, or the role of the independent monitor.

