

JUNE 30, 2024 TO: The Honorable Glenn Youngkin Governor, Commonwealth of Virginia The Honorable R. Creigh Deeds Chair, Senate Commerce and Labor Committee The Honorable Jeion A. Ward Chair, House Labor and Commerce Committee The Honorable Jehmal T. Hudson Chair, State Corporation Commission The Honorable Samuel T. Towell **State Corporation Commission** The Honorable Kelsey A. Bagot 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 Small, Women and Minority-Owned Supplier Diversity Strengthens the Commonwealth by the Virginia Department of Small Business & Supplier Diversity



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GLOSSARY OF TERMS

AC Alternating current

AMI Advanced Meter Infrastructure
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 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



During the 2018 General Assembly session, legislation was passed requiring Appalachian Power (APCo) and Dominion Energy Virginia (DEV) to use a stakeholder process to develop energy efficiency programs. This process aims to gather input and feedback from energy efficiency stakeholders to inform petitions submitted to the State Corporation Commission (SCC) for approval, supporting state energy conservation goals. Chapter 397 of the 2019 Virginia Acts mandates that this process be facilitated by an independent monitor to ensure stakeholder representation, track progress, and report on objectives, recommendations, and petition statuses. This report covers the stakeholder process from July 2023 to June 2024, as required by Chapter 397.

Stakeholder Process

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.

Current Number of Stakeholder Group Members					
Appalachian Power	172				
Dominion Energy	307				

Between July 1, 2023, and June 30, 2024, the stakeholder group for Appalachian Power (Phase I Utility) has met three times and the Dominion Energy Virginia (Phase II Utility) group has met twice, which is not inclusive of the numerous subgroup meetings that Dominion Energy and other stakeholders have actively participated. Large stakeholder group meetings for both utilities 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 customer awareness and outreach and program performance highlighted in EM&V reports. For DEV, the subgroup meetings included a meeting of the Agenda and Process subgroup on June 4, 2024, to discuss the DSM Recommendations.

Stakeholder Objectives

In the 2024 Stakeholder Feedback Process survey, the independent monitor asked stakeholders to identify what objectives they wanted to accomplish over the next five years to reach energy efficiency goals and what would constitute "success" for them for the process for the upcoming year. Collectively the stakeholder group identified the following five categories and 11 objectives¹:

Transparency, Data-Driven Conversations, and Stakeholder Engagement

1. Increase Transparency:

- Provide clear insights on how savings are calculated.
- Explain reasons for low program participation.

2. Data-Driven Focus:

- Share key data points, such as gaps between current performance and VCEA goals, in stakeholder meetings.
- Focus discussions on specific actions to bridge identified gaps and track progress with regular updates.

3. Stakeholder Involvement:

- Solicit and incorporate input from stakeholders, providing feedback on their suggestions.
- Ensure active engagement of small working groups, possibly through in-person meetings.
- Increase representation of diverse entities, including those not currently involved in program design.

Program Design, Expansion, and Cost Management

4. Innovative Program Design:

- Build programs from the ground up with diverse input, moving beyond current design constraints.
- Learn from successful ratepayer-funded energy efficiency programs in other states (e.g., WI, VT, OH, MA).

5. Program Expansion:

- Continue and expand successful programs like IAQ Solar.
- Increase the range of measures available for reimbursement.

6. Cost Stabilization:

- Aim to stabilize energy costs, protecting consumers, especially retirees and the working class, from high energy burdens.
- Generate energy savings with minimal impact on ratepayers/customers.

Performance, Compliance, and Reward Systems

7. Meeting Targets and Compliance:

- Achieve VCEA savings targets and EERS targets.
- Ensure thorough follow-through and reporting on SCC-mandated topics by Dominion.

8. Performance-Based Programs:

- Deploy pay-for-performance energy efficiency programs.
- Reward demand reduction with significant incentives rather than token payments.

¹Please note that some objectives apply to only one of the utilities, i.e., specific to DEV or APCo, while most apply to both utilities.



Awareness, Participation, and Effective Processes

9. Increase Awareness:

- Enhance the visibility and understanding of energy efficiency programs among consumers.
- Promote broader participation through targeted education and outreach.

10. Effective Processes:

- Consolidate programs for better cost-effectiveness and increased savings and participation.
- Streamline planning cycles and coordinate with IRA programs to avoid overlapping and confusion.

Continuous Improvement and Feedback Loops

11. Continuous Improvemen:

- Regularly evaluate and improve the stakeholder process to ensure it remains productive and inclusive.
- Set clear goals and regularly assess progress to ensure the process benefits all involved parties.

Recognition of the Influence of the Stakeholder Process

In August 2023, the American Council for an Energy-Efficient Economy (ACEEE) published the 2023 Utility Energy Efficiency Scorecard², which evaluates and ranks the 53 largest U.S. utilities on policy and program efforts related to energy efficiency. As a key finding in the report, the ACEEE noted that Dominion Virginia "was the most improved utility in both absolute and relative terms, jumping from 50th place... to 27th place." The report commented that the increase was driven by expanded programs following the passage of the Virginia Clean Economy Act. Dominion Energy Virginia has stated that the stakeholder process has contributed to the growth of the number of programs.

Dominion Energy Virginia DSM Recommendations

A special focus for the Phase II Utility emerged during the 2023 filing year and continued into the 2024 filing year. In the 2022 DSM Final Order for Dominion Energy (<u>CASE NO. PUR-2022-00210</u>), the Commission directed four recommendations out of a total of 26 to be reviewed by the stakeholder process. The four recommendations referred to the stakeholder group were:

- 1. Recommendation 12: Refer the issues regarding how the cost-effectiveness of DSM Programs is currently measured, including: (i) How the Inflation Reduction Act will reduce the cost of some DSM Programs; (ii) how the inclusion of non-energy benefits (e.g., the social cost of carbon) can better quantify the benefits for all programs and bundles; and (iii) how building codes impact the measurement of cost-effectiveness of DSM Programs to the Stakeholder Group and require a report from the Company on these issues in next year's DSM case.
- 2. Recommendation 24: Refer the issue of dual-fuel customers to the Stakeholder Group and require a report from the Company on the issue in next year's DSM case.
- 3. Recommendation 25: Refer the issue of the Long-Term Plan and DSM Program consolidation to the Stakeholder Group and require a report from the Company on the issue in next year's DSM case.
- 4. Recommendation 26: Refer the issue of leveraging the functionalities of [Advanced Metering Infrastructure], including geo-targeting, in demand-response programs to the Stakeholder Group and require a report from the Company on the issue in next year's DSM case.

At the October 23, 2023, Dominion Energy Virginia Energy Efficiency Stakeholder meeting, several external experts were brought in to present their thoughts on the four recommendation areas. The stakeholders held some brief discussions and then request-ed an opportunity to provide written feedback to Dominion Energy Virginia (DEV) regarding the four recommendations. From October 26, 2023, to November 17, 2023, the independent monitor used an online survey to gather stakeholder input. The survey contained a total of 29 questions that had been provided to the independent monitor from stakeholders, including DEV.

The stakeholders' feedback can be summarized in several key points. They emphasized the need for better coordination and consolidation of Dominion Energy's programs to streamline efforts and improve performance. They also highlighted the importance of including non-energy benefits in program evaluations, such as improved comfort, health benefits, and job creation. The stakeholders also discussed the potential impact of IRA funds on program participation and suggested that these funds could enhance the cost-effectiveness of the programs, accelerate participation, and increase the number of participants. They stressed the need for improved marketing and outreach efforts to increase program awareness and participation. The stakeholders also suggested align-ing vendor contracts with program bundling for better efficiency. They recommended better utilization of AMI data for geotar-geting and demand response programs. They also pointed out the need for clearer information on IRA funding opportunities and the importance of considering the social cost of carbon in cost-effectiveness analysis. Lastly, they emphasized the need for ongoing updates and improvements to the stakeholder process to ensure continuous alignment with best practices and regulatory impacts.

¹ https://www.aceee.org/research-report/u2304



The full set of responses were included in Dominion Energy's 2023 filing. A copy of the summary information from the survey is provided in Appendix IV of this report.

The DEV Agenda and Process subcommittee met on June 4, 2024, to continue the discussion around the four recommendations and how the Stakeholder group should address each. The group conducted a preliminary force field analysis for each recommendation, which will be shared with the entire stakeholder group for revision and prioritization. During the discussion, several items in the recommendations were determined to either have been overtaken by events, including the passage of the Savings Achieved Via Efficiency (SAVE) Act by the General Assembly, or to be waiting further information from Virginia Energy. At the time of the writing of this report, the process for further stakeholder discussions and recommendations is being designed by the Independent Monitor and will be implemented between July and December 2024.



2024 Stakeholder Program Recommendations

In preparation for the 2024 filings, or the next applicable filing³, the stakeholders provided input on program design ideas for the utilities' consideration. The input was developed during stakeholder meetings and using program design templates that could be submitted to the independent monitor and utilities after the meetings. At the time of writing of the report, each utility is finalizing the list of program idea categories that may be issued for bid using a request for proposal (RFP) process.

APCo Stakeholder Recommendations

Stakeholders submitted 42 program or measure ideas through multiple meetings and an open call for ideas. The list is being further refined and prioritized through the June 25, 2024, stakeholder meeting.

- Commercial Multifamily
- Strategic Energy Management
- New Construction/Major Retrofit
- State Energy Office (IRA Funding) Bridge
- Small Business Online Assessment/Kits
- Marketplace/Project Marketplace
- Kit Program 2.0 Semi-Custom, Custom and/or Subscription Kits
- Electrification Readiness Additions to Home Performance Program
- POS Appliance Rebates
- Heat Pump Appliance Program (Residential, Income Qualified, Demand Response)
- Behavioral Demand Response
- Small Business Thermostat Control-Demand Response
- Realtor Ambassadors
- Transportation Electrification—Shared Charging
- Transportation Electrification—Fleet Electrification
- Transportation Electrification—Choose EV
- Transportation Electrification—Vehicle to Grid
- Transportation Electrification—E-Mobility Program Pilots and Measures
- Enhance—Energy Saving Trees
- · Midstream HVAC
- Efficient Products Program Enhancement
- MF Electric Water Heater (DR)
- Tech Demo: Refrigerant Swap R404A to R448A
- Upstream/Midstream Conventional Agriculture
- · Grocery Refrigerant Leak Reduction Pilot
- High-Efficiency Homes/New Construction Program
- Commercial Efficiency Foodservice Program (CHEF)
- ENERGYSTAR® Manufactured Homes Program Check-Up
- High-Energy Use Program
- CoolSaver A/C Tune-Up Program
- School Uplift Program
- Commercial EV Charger Rebate
- Expansion of Efficient Products to include Commercial Products
- Commercial Midstream (Instant Discount) Program
- · Compressed Air Program, including System Audit and Leak Survey/Repair
- Customer Engagement Program
- New Construction Program
- Agriculture Program w/Ag Energy Audits
- Data Center Program
- HVAC Tune-Up Program with Duct Testing and Sealing
- Industrial Energy Service
- Grocery and Food Service Offering (Refrigeration-Focused)
- Schools K-12 Energy Education and Kit Program

DEV Stakeholder Recommendations

Stakeholders provided feedback on program ideas during the March 22 stakeholder meeting. Additional ideas could be submitted through an open call for ideas process. Upon initial review of submissions, DEV has grouped the ideas into the following categories that will comprise its 2024 DSM RFP

- Residential Electric Vehicle Charger Purchase (EE) Program
- Residential Electric Vehicle Charger Purchase Demand Response (DR) Program
- Residential Home Retrofit Bundle
- Small Business Improvement/Enhancement Program
- Non-residential Electric Vehicle Demand Response Program
- Non-residential Enhanced Prescriptive Program
- Non-residential Data Center Program
- Non-residential Demand Response Program
- Any other program design ideas as it pertains to Advanced Metering Infrastructure (AMI) enablement and DSM programs.
- Other Program Enhancements/Recommendations as suggested through the Stakeholder Review Process

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³ APCo files on a two-year cycle.



Status of Previous Year Petition Filings

The program recommendations proposed and approved by the Commission, as of the writing of this report, represent:

- Phase I Utility (APCo): \$217.5 million, or approximately 155 percent of the original \$140 million goal. Of the \$217.5 million proposed, \$87.92 million for two new programs, and the extension of three existing programs (5-year cost cap) were proposed in the Company's 2023 EE-RAC filing.
- Phase II Utility (DEV): \$797 Million, or approximately 92 percent of the legislative proposed \$870 million goal. Of the \$797 Million proposed programs, approximately \$84.1M is from Phase XII, pending approval.

Phase I Utility Filings

Details about the APCo programs by filing year are provided in Appendix II.

Petition Year	Date Petitioned	Date Approved	Number of Programs Filed	Number of Programs Approved	Status ⁴
2019	09/30/2019	05/21/2020	3	3	 Residential Low-Income Single-Family Program: 2023 gross verified savings were 1,459,126 kWh. Residential Low-Income Multifamily Program: 2023 gross verified savings were 320,034 kWh. ENERGYSTAR* Manufactured Housing Program: 295 rebates paid. Program ended in 12/2022.
2020	11/20/2020	07/29/2021	8	8	 Residential Home Energy Report Program: 2023 gross verified savings were 31,578,044 kWh. Residential Efficient Products Program: 2023 gross verified savings were 6,681,231 kWh. Residential Energy Efficiency Kit Program: 2023 gross verified savings were 1,071,855 kWh. Residential Home Performance Program: 2023 gross verified savings were 2,694,520 kWh. Business Energy Solutions ("BES") Program: 2023 gross verified savings were 19,028,531 kWh. Residential Bring Your Own SMART Thermostat ("BYOT") Program: 2023 gross verified savings were 90,101 kWh. Small Business Direct Install ("SBDI") Program: 2023 gross verified savings were 2,024,128 kWh. Volt Var Optimization ("VVO") Pilot Program: 2023 gross verified savings were 1,922,318 kWh.
2021	11/20/2021	07/2022	1	1	• Custom Commercial & Industrial Pilot Program: 2023 gross verified savings were 368,855 kWh.
2022	Moved to tw	vo-year filing	0	0	N/A
2023	11/30/2023	07/2024 - expected	5		Pending SCC Commission Order Case Details SCC DocketSearch (virginia.gov)
TOTAL			17	12 (to date)	Total 2023 Gross Verified Savings: 67,238,743 kWh

Phase II Utility Filings

Details about the DEV programs by filing year are provided in Appendix III.

⁴ All programs are currently in operation unless otherwise noted.



Petition Year	Date Petitioned	Date Approved	Number of Programs Filed	Number of Programs Approved	Status
2019	12/03/2019	07/30/2020	13	13	 Residential Electric Vehicle (EE and DR): 638 customers enrolled. 2023 gross verified savings were 43,375 kWh. Residential Electric Vehicle (Peak Shaving): 1.495 customers enrolled. 2023 gross verified savings were 43,300 kWh. Residential Energy Efficiency Kits (EE): 86,301 customers enrolled. 2023 gross verified savings were 3,721,439 kWh. Residential Home Retrofit (EE): 193 customers enrolled. 2023 gross verified savings were 106,684 kWh. Residential Manufactured Housing (EE): 560 customers enrolled. 2023 gross verified savings were 118,811 kWh. Residential New Construction (EE): 6,503 customers enrolled. 2023 gross verified savings were 7,329,239 kWh. Residential/Non-Residential Multifamily (EE): 2,950 customers enrolled. 2023 gross verified savings were 231,957 kWh. Non-Residential Midstream Energy Efficiency Products (EE): 203 customers enrolled. 2023 gross verified savings were 2,220,361 kWh. Non-Residential New Construction (EE): 8 customers enrolled. 2023 gross verified savings were 28,749,726 kWh. Small Business Improvement Enhanced (EE): 1,845 customers enrolled. 2023 gross verified savings were 5,161,646 kWh. HB 2789 (Heating and Cooling/Health and Safety) (EE): 10,715 customers enrolled. 2023 gross verified savings were 796,194 kWh. Residential Thermostat (EE) and (DR) Programs: 19.336 customers enrolled in EE; 39,817 enrolled in DR component. 2023 gross verified savings were 1,382,048 kWh. Residential Customer Engagement Program (EE): 256.468 reports sent in 2023. Program closed 12/31/2023. 2023 gross verified savings were 33,218,144 kWh.
2020	12/02/2020	09/07/2021	11	11	 Virtual Audit: 10,193 customers enrolled. 2023 gross verified savings were 5,960,092 kWh. Smart Home: 62 participants. 2023 gross verified savings were 22,616 kWh. Residential Water Savings (EE): 430 participants. 2023 gross verified savings were 513,620 kWh. Residential Water Savings (DR): 8 participants. Income and Age Qualifying Program (EE): 9,933 participants. As of 01/01/2024 program included in DSM Phase 11 Income and Age Qualifying Bundle. 2023 gross verified savings were 4,090,052 kWh. Income and Age Qualifying Solar (HB 2789 program): 137 participants. 2023 gross verified savings were 822,872 kWh.



Petition Year	Date Petitioned	Date Approved	Number of Programs Filed	Number of Programs Approved	Status
					 Agriculture Program (EE): 11 participants. 2023 gross verified savings were 915,873 kWh. Building Automation Program (EE): Currently open to customers. Building Optimization Program (EE): 45 participants. 2023 gross verified savings were 13,859,112 kWh. Non-Residential Customer Engagement Program (EE): Currently open to customers. 2023 gross verified savings were 33,218,144 kWh. Enhanced Perspective Program (EE): 961 participants. 2023 gross verified savings were 14,350,446 kWh.
2021	12/14/2021	09/05/2022	9	9	 Non-Residential Energy Efficiency Data Center and Server Rooms Program: Currently available to customers. Non-Residential Energy Efficiency – Healthcare Targeted Program: Currently available to customers. Non-Residential Energy Efficiency – Hotel and Lodging Targeted Program: Currently available to customers. Small Business Behavioral Program: Currently available to customers. Income and Age Qualifying Program Enhancement: Currently active Income and Age Qualifying Home Energy Reports: Currently active. As of 01/01/2024 program included in DSM Phase 11 Income and Age Qualifying Bundle. Non-Residential Income and Age Property Owners: Currently active. Voltage Optimization O&M Software: Program implementation is being finalized. Non-Residential Lighting and Controls Extension: 260 participants. 2023 gross verified savings were 20,830,777 kWh.
2022	12/13/2022	08/04/2023	9	9	 Residential Income and Age Qualifying Bundle: Program is currently open to customers. Non-Residential Income and Age Qualifying Bundle: Program is currently available to customers. Residential EE Products Marketplace: Program is currently open to customers. 2023 gross verified savings were 2,608,640 kWh. Residential Customer Engagement: Program is currently operating. Residential Peak Time Rebate: Program is currently available to customers. Residential Retrofit Bundle: Program is currently open to customers. Residential EV Telematics Pilot: Program implementation is being finalized. Non-Residential Enhanced Prescriptive Bundle: Program is currently open to customers.



Petition Year	Date Petitioned	Date Approved	Number of Programs Filed	Number of Programs Approved	Status
					• Non-Residential Custom Program: Program is currently open to customers.
2023	12/11/2023	09/15/2024 (Expected)	5		Pending SCC Commission Order Case Details SCC DocketSearch (virginia.gov)
TOTAL			47	42 (to date)	449,134 total participant enrollments Total 2023 Gross Verified Savings 180,315,168 kWh

Next Steps

The majority of stakeholders are satisfied with the Virginia Energy Efficiency Stakeholder process and report that it is improving the energy efficiency programs in Virginia. However, the stakeholder group is also very vocal about opportunities for improvement. These include:

1. Enhance Proactivity and Regular Reporting of Dominion Subgroups:

• Subgroups within the stakeholder process should meet and report more regularly to increase their effectiveness and ensure consistent progress.

2. Increase SCC Engagement and Ownership:

• The State Corporation Commission (SCC) should actively engage in the stakeholder process, providing feedback on technical, policy, and process issues. This includes understanding the stakeholder process as part of their responsibility and ensuring it is productive and beneficial for the Commonwealth and its residents.

3. Improve Representation and Inclusivity:

• Identify and include key constituencies that are currently missing from the stakeholder process, such as insulation contractors and other relevant groups. Explore compensating participants for their time to ensure diverse and comprehensive representation, especially from smaller organizations that participate as volunteers.

4. Increase Effectiveness and Achieve Better Results:

• Implement changes to ensure the stakeholder process yields significant improvements. Given the energy efficien-cy and zero-carbon targets mandated by Virginia law, it is crucial to maximize the cost-effective benefits of ener-gy efficiency programs for all electricity consumers in Virginia. This requires a more efficient and results-driven approach to the stakeholder process. This may also include better alignment and communication of programs to the Virginia Clean Economy Act goals and identifying standardized reporting metrics.



INTRODUCTION

Legislative Requirements

Chapter 296 [SB 966]⁵ 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:
 - \$140 million for Phase I Utility Appalachian Power (APCo)
 - \$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.

2024 Legislative Update

There were no legislative updates or revisions to § 56-585.1 that altered the energy efficiency stakeholder feedback process, the role of the independent monitor, or the independent monitor's annual reporting. However, the General Assembly did pass three new bills related to energy efficiency that may drive additional conversation within the stakeholder process. These are:

- HB 746/SB565 Energy efficiency programs; incremental annual savings. Provides that for the 2029 program year and all subsequent years, "in the public interest" for the purpose of assessing energy efficiency programs means that the State Corporation Commission determines that the program is cost-effective. The bill directs the Commission to promulgate regulations no later than September 30, 2025, establishing a single, consistent cost-effectiveness test for use in evaluating proposed energy efficiency programs. The bill requires Dominion Energy Virginia and Appalachian Power Company to track, quantify, and report to the Commission the incremental annual savings, as defined in the bill, achieved by such utility's energy efficiency programs.
- SB 737 Electric utilities; energy efficiency programs, on-bill tariff program. Provides that, for the purposes of the Virginia Electric Utility Regulation Act, energy efficiency programs include electrification, including measures that electrify space heating, water heating, cooling, drying, cooking, industrial processes, and other building and industrial end uses that would otherwise be served by onsite, nonelectric fuels, provided that the electrification measures reduce site energy consumption and that, to the maximum extent practical, seek to combine with federally authorized customer rebates for heat pump technology. The bill provides that electricity consumption increases that result from State Corporation Commission-approved electrification measures shall not be considered as a reduction in energy savings under the energy savings requirements and that utilities may apply verified total site energy reductions that are attributable to Commission-approved electrification measures to the energy savings requirements. The bill specifies that energy efficiency programs and energy efficiency measures do not include electrification of any process or activity primarily fueled by natural gas.

Previous General Assembly legislative updates are provided in Appendix I.



INTRODUCTION

Report on the Status of the Energy Efficiency Stakeholder Process

Chapter 397 [H 2293]⁶ 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 Monitor⁷
- 2020 Report of the Independent Monitor⁸
- 2021 Report of the Independent Monitor9
- 2022 Report of the Independent Monitor¹⁰
- 2023 Report of the Independent Monitor¹¹

⁶ http://lis.virginia.gov/cgi-bin/legp604.exe?191+ful+CHAP0397+hil

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

⁸ https://rga.lis.virginia.gov/Published/2020/RD224/PDF

⁹ https://rga.lis.virginia.gov/Published/2021/RD256/PDF

¹⁰ https://rga.lis.virginia.gov/Published/2022/RD301/PDF

¹¹ https://rga.lis.virginia.gov/Published/2023/RD301/PDF



2024 STAKEHOLDER PROCESS

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. Between July 1, 2023, and June 30, 2024, the stakeholder groups for Appalachian Power (Phase I Utility) have met three times and for those Dominion Energy Virginia (Phase II Utility) have met twice, with numerous additional Dominion Energy and the SRP subgroup meetings taking place outside the larger stakeholder meeting. Meetings were used to inform stakeholders of the status of program recommenda-tions 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.

The Appalachian Power stakeholder group has 172 current members, and the Dominion Energy Virginia stakeholder group has 307 current members, which represents an increase of 7.9 percent for APCo and a decrease of 5 percent for DEV compared to the previous year. Most organizations continued participation by replacing and/or adding member representatives. 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. For a listing of the number of participants by affiliation, see Table 1 that follows this section.

For Dominion Energy Virginia, four subgroups held meetings--the Agenda and Process, Customer Awareness, EM&V, and Non-Residential Programs subgroups--to discuss topics and ideas.

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 stakeholder process continued the inclusion of 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 and 2024, 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 2024 report, the independent monitor has broken out program implementers by their self-identified roles.

Table 1: Representation by Stakeholder Affiliation

Affiliation ¹²	Phase I Utility	Phase II Utility
Current Number of Stakeholder Process Participants	172	307
Utility Company or COOP	9.3%	13.3%
Government State	15.1%	11.0%
Government – Local Municipality	15.7%	3.3%
Government – Federal	0.0%	0.3%
Energy Service Organization/Provider	8.1%	9.4%
Energy Conservation/Efficiency Interest or Research Group	3.0%	3.9%
Environmental Organization/Advocacy Group	5.8%	10.7%
Elderly/Disabled Advocacy or Interest Group	0.0%	0.3%
Low Income Interest or Advocacy Group	1.2%	1.3%
Residential Consumer Organization/Housing Association	3.5%	3.2%
Business (Commercial or Industrial) Consumer Organization	0.0%	0.3%
Program Implementer – Program Manager/Integrator	10.5%	13.6%
Program Implementer – Weatherization Provider	8.1%	6.8%
Program Implementer – Commercial Lighting	1.7%	0.9%
Program Implementer – Customer Engagement	3.0%	3.6%
Program Implementer – Product Manufacturer	0.0%	0.3%

¹² 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



2024 STAKEHOLDER PROCESS

Affiliation	Phase I Utility	Phase II Utility
Program Implementer - Other	1.7%	0.6%
Charitable Organization	1.7%	0.3%
Utility Administrative Support Contractor and EM&V Groups	3.0%	9.0%
Law Firm	0.6%	2.6%
Educational Institution or Institute (School or University)	1.8%	0.9%
Public Health/Hospital	0.0%	0.0%
Interested Individual or Consumer	4.7%	0.9%
Other	1.7%	1.6%
TOTAL PERCENTAGE	100%	100%

Meeting Schedule and Participation

For the period of July 1, 2023, to June 30, 2024, ¹³ the independent monitor facilitated at least two meetings for each utility. For APCo all meetings were conducted virtually. For Dominion Energy, the independent monitor held hybrid meetings (combination of in-person and virtual). The independent monitor worked with the SCC and Phase II utility to identify an available, nocost venue¹⁴ with adequate IT technology that can accommodate the large number of stakeholders to host a hybrid meeting. The October 23, 2023, meeting was held at the SCC and the March 22, 2024, meeting was held at Dominion's Innsbrook facility. For the June 4, DEV Agenda and Process subgroup meeting the independent monitor paid out of pocket for a meeting space due to the unavailability of both the SCC and Dominion spaces. After this meeting, one stakeholder suggested using a shared workplace for which they have access for other subgroup meetings. The meeting dates, purpose and number of attendees for the large stakeholder meetings are listed below in Table 2 for each utility.

Table 2: 2023-2024 Stakeholder Process Meetings

Utility	Filing Year	Meeting Date	Purpose	Number of Attendees
APCo	2023	September 9, 2023	 Updates from Independent Monitor and SCC. Update from APCo on its recent RFP. Stakeholder discussion on topics of interest. 	39
	2024	March 27, 2024	 Update Stakeholders on the Status of EERAC Case. Stakeholder Discussion about program ideas submitted by stakeholders. 	48
	2024	June 25, 2024	 Update Stakeholders on the Status of EERAC Case Stakeholder review, refinement, and prioritization of program ideas and categories for RFP.¹⁵ 	21
DEV	2023	October 23, 2023	1. Expert presentations and stakeholder discussion regarding DSM Final Order Recommendations to inform utility report back to the Commission.	86
	2024	March 22, 2024	 Stakeholder Discussion on Energy Efficiency Program Marketing and Awareness Efforts Stakeholder Discussion to inform 2024 Program Filing 	62

¹³ These dates represent the time frame for this report.

¹⁴ Funds to cover the cost of a meeting venue are not authorized or appropriated for the stakeholder feedback process.

¹⁵ APCo is on a two-year filing schedule. If the 2023 petition is approved by the SCC, APCo's next filing will be in 2026.



2024 STAKEHOLDER PROCESS

DEV Stakeholder Subgroups

For the DEV stakeholder group, due to its large size, stakeholders continued to utilize subgroups for more in-depth discussions and planning. Between July 1, 2023, and June 30, 2024, four of the subgroups held meetings. The meetings and purposes were:

Table 3: 2023-2024 Stakeholder Subgroup Meetings

Subgroup	Filing Year	Meeting Date	Purpose
Agenda and Process Subgroup ¹⁶	2023	September 27, 2023	To improve the stakeholder input and feedback process so the group can collectively attain the energy efficiency goals for the Commonwealth. Topics covered included the overall Stakeholder process's accomplishments and opportunities for improvement, use of the subgroups, information flow and expectations between the utility and stakeholders and interactions between stakeholders.
	2024	June 4, 2024	To understand and document stakeholder perspectives related to the four DSM recommendations and develop a collective action plan on next steps for the recommendations. As appropriate, produce an action strategy to align recommendations with VACEA goals.
Customer Awareness	2023	July 18, 2024	Kick-Off meeting for the subgroup. To review DEV contractor approach to customer awareness and obtain input from stakeholders on ideas and approaches.
EM&V Subgroup	2023	November 15, 2023	To review and discuss Phase XII EM&V plans that will be submitted with the 2023 Dominion filing.
Non-Residential Programs Subgroup	2024	March 19, 2024	To learn about TRC's • DSM X Hotels & Lodging Program • DSM X Healthcare Program • DSM XI Custom Program Open Discussion on other topics as raised by members.

Additional Stakeholder Collaboration Options

All stakeholders are invited to use a dedicated, collaborative online site on Basecamp.com. Use of the site allows for better communication through message boards 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.

¹⁶ The meeting list does not include meetings to discuss agendas for the upcoming larger stakeholder meetings.



STAKEHOLDER OBJECTIVES

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

For the 2024 filing year, the independent monitor asked stakeholders two questions related to their desired objectives:

- Over the next five years, what objective(s) should the stakeholder group focus upon to achieve Virginia's energy efficiency targets?
- What progress or accomplishment would indicate success, or value, of the stakeholder process to you that can be achieved within the next year?

A summary of stakeholder responses are provided in the table below.

and reduce peak time demand.

Table 4: Stakeholder Objectives (1-year and 5-year)

5-Year Objectives Success for the upcoming year 1. Equity and Broad Participation: **Transparency and Data-Driven Conversations:** Ensure energy programs are accessible to a diverse Increase transparency on how savings are calculated and reasons for low program participation. range of consumers. Develop an independent, qualified vendor Share key data points, such as gaps between current performance and VCEA goals, in stakeholder network. Deliver programs focused on whole-building meetings. Focus discussions on specific actions to bridge energy optimization. **Unified Program Design:** identified gaps. Create one program with a single set of rules. **Program Design and Engagement:** Secure buy-in from all utilities and the State Cor-Evaluate and learn from other states' ratepayer-fundporation Commission (SCC). ed energy efficiency programs (e.g., WI, VT, OH, Demand-Side Management (DSM): Explore how DSM can contribute beyond Energy Engage small working groups more actively, poten-Efficiency Resource Standard (EERS) compliance, tially through in-person meetings. such as ensuring reliable and affordable energy. Build programs from the ground up with input from Streamline planning cycles and coordinate with diverse entities, not just current designers. Inflation Reduction Act (IRA) programs. **Stakeholder Input and Involvement: Contextual Information and Barriers:** Design utility programs with stakeholder group input, including this input in RFPs and filings. Provide information in the context of achieving Solicit stakeholder input, provide feedback, and Virginia Clean Economy Act (VCEA) goals. communicate the outcomes to ensure the stakehold-Identify and address barriers to program achieveer process is effective. **Program Consolidation and Multi-Year Cycles: Program Expansion and Cost Stabilization:** Continue and expand programs like IAQ Solar and Consolidate programs and adopt multi-year cycles instead of annual RFPs. increase reimbursable measures. Focus on participation volume, equity, participant Aim to stabilize energy costs to protect retirees and benefits, and peak demand reduction. working-class individuals from high energy burdens. **Expanded Energy Efficiency Measures:** Ensure energy savings have minimal ratepayer/cus-Implement a broader range of energy efficiency tomer impact. (EE) measures. **Compliance and Performance-Based Programs:** Improve existing programs like IAQ Solar and Meet VCEA savings targets and ensure compliance prepare homes for electric vehicles (EVs). with EERS targets. Educate consumers on reducing energy consump-Deploy pay-for-performance energy efficiency programs. **Cost-Effective Savings and Accessibility:** Reward demand reduction with meaningful incen-Achieve savings at the lowest possible cost to tives rather than token payments. ratepayers. Awareness and Participation: Develop user-friendly programs. Increase awareness of energy efficiency programs. Emphasize measurable savings over non-quantifi-Consolidate portfolios for blended cost-effectiveness able social issues. and increased total savings and participation. **Focus on Results:** Ensure thorough follow-through and reporting on Prioritize results in participation and savings over SCC-mandated topics by Dominion. process improvements without tangible outcomes. Increase awareness of energy efficiency programs



STAKEHOLDER OBJECTIVES

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

5-Year C	Dijectives	Success for the upcoming year
9.	 Improving Outreach and Participation: Enhance efforts to meet EERS targets. Improve outreach, customer participation, contractor experience, and customer education. 	
10.	 Performance-Based Programs: Deploy pay-for-performance EE and demand response (DR) programs. Eliminate deemed and modeled programs. 	
11.	 Stakeholder Process Awarenes: Increase awareness of the stakeholder process. Introduce additional programs and include more incentive measures. 	

Recognition of the Influence of the Stakeholder Process

In August 2023, the American Council for an Energy-Efficient Economy (ACEEE) published the 2023 Utility Energy Efficiency Scorecard¹⁷, which evaluates and ranks the 53 largest U.S. utilities on policy and program efforts related to energy efficiency. As a key finding in the report, the ACEEE noted that Dominion Virginia "was the most improved utility in both absolute and relative terms, jumping from 50th place... to 27th place." The report commented that the increase was driven by expanded programs following the passage of the Virginia Clean Economy Act. Dominion Energy Virginia has stated that the stakeholder process has contributed to the growth of the number of programs.

Dominion Energy Virginia DSM Recommendations

A special focus for the Phase II Utility emerged during the 2023 filing year and continued into the 2024 filing year. In the 2022 DSM Final Order for Dominion Energy (<u>CASE NO. PUR-2022-00210</u>), the Commission directed four recommendations out of a total of 26 to be reviewed by the stakeholder process. The four recommendations referred to the stakeholder group were:

- 1. Recommendation 12: Refer the issues regarding how the cost-effectiveness of DSM Programs is currently measured, including: (i) How the Inflation Reduction Act will reduce the cost of some DSM Programs; (ii) how the inclusion of non-energy benefits (e.g., the social cost of carbon) can better quantify the benefits for all programs and bundles; and (iii) how building codes impact the measurement of cost-effectiveness of DSM Programs to the Stakeholder Group and require a report from the Company on these issues in next year's DSM case.
- 2. Recommendation 24: Refer the issue of dual-fuel customers to the Stakeholder Group and require a report from the Company on the issue in next year's DSM case.
- 3. Recommendation 25: Refer the issue of the Long-Term Plan and DSM Program consolidation to the Stakeholder Group and require a report from the Company on the issue in next year's DSM case.
- 4. Recommendation 26: Refer the issue of leveraging the functionalities of [Advanced Metering Infrastructure], including geo-targeting, in demand-response programs to the Stakeholder Group and require a report from the Company on the issue in next year's DSM case.

At the October 23, 2023, Dominion Energy Virginia Energy Efficiency Stakeholder meeting, several external experts were brought in to present their thoughts on the four recommendation areas. The stakeholders held some brief discussions and then requested an opportunity to provide written feedback to Dominion Energy Virginia (DEV) regarding the four recommendations. From October 26, 2023, to November 17, 2023, the independent monitor used an online survey to gather stakeholder input. The survey contained a total of 29 questions that had been provided to the independent monitor from stakeholders, including DEV.

The stakeholders' feedback can be summarized in several key points. They emphasized the need for better coordination and consolidation of Dominion Energy's programs to streamline efforts and improve performance. They also highlighted the importance of including non-energy benefits in program evaluations, such as improved comfort, health benefits, and job creation. The stakeholders also discussed the potential impact of IRA funds on program participation and suggested that these funds could enhance the cost-effectiveness of the programs, accelerate participation, and increase the number of participants. They stressed the need for improved marketing and outreach efforts to increase program awareness and participation. The stakeholders also suggested aligning vendor contracts with program bundling for better efficiency. They recommended better utilization of AMI data for geotargeting and demand response programs. They also pointed out the need for clearer information on IRA funding opportunities and the importance of considering the social cost of carbon in cost-effectiveness analysis.



STAKEHOLDER OBJECTIVES

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

Lastly, they emphasized the need for ongoing updates and improvements to the stakeholder process to ensure continuous alignment with best practices and regulatory impacts. Dominion Energy included the stakeholders' responses in its 2023 filing. A copy of the summary information from the survey is provided in Appendix IV of this report.

The DEV Agenda and Process subcommittee met on June 4, 2024, to continue the discussion around the four recommendations and how the Stakeholder group should address each. The group conducted a preliminary force field analysis for each recommendation, which will be shared with the entire stakeholder group for revision and prioritization. During the discussion, several items in the recommendations were determined to either have been overtaken by events, including the passage of the Savings Achieved Via Efficiency (SAVE) Act by the General Assembly, or to be waiting further information from Virginia Energy. At the time of the writing of this report, the process for further stakeholder discussions and recommendations is being designed by the Independent Monitor and will be implemented between July and December 2024.

2024 PROGRAM RECOMMENDATIONS

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

In preparation for the next program filings, the stakeholders provided input on program design ideas for the utilities' consideration. The input was developed using stakeholder meetings and program design templates that could be submitted to the independent monitor and utilities after the meetings. At the time of the writing of this report, each utility is preparing a request for proposals to solicit program implementers to provide plans for programs for review and cost-effectiveness testing that will be petitioned in December for the 2024 filing year.

Stakeholder Recommendations for Phase I Utility - Appalachian Power

The stakeholders recommended 42 new programs for APCo's consideration. The ideas were grouped and streamlined into 17 recommendations that the stakeholders reviewed, refined, and offered initial prioritization on, at APCo's June 25, 2024 meeting. Results from that process were not available at the time of the writing of this report. APCo anticipates working closely with stakeholders to further develop the program ideas. The list of recommendations is subject to change and is likely not the final list that will be used in a request for proposal to be subsequently issued.

Table 5: Phase I Utility Stakeholder Recommendations

Program or Measure	Description		
Commercial Multifamily	This program expands on the Market Rate multifamily program by adding measures to serve areas of the property on commercial meters and also encompass master meter buildings. Mainly common area and inclusive of major measure retrofits. In unit would also be available for master metered properties.		
Strategic Energy Management	The Strategic Energy Management ("SEM") programs are designed to optimize energy consumption for larger C&I customers through management of major energy using systems. SEM is holistic. The approach looks at strategic management of systems and processes. Typically includes benchmarking performance to identify and evaluate energy optimization efforts.		
New Construction / Major Retrofit	This Program provides incentives to builders for achieving energy efficiency targets through a combination of building shell and installed measures. This can include contractor-installed appliance and equipment upgrades. Builder must construct home to meet the energy efficiency requirements established by the ENERGY STAR program or build at a higher efficiency level than the current adopted building code. Measures can even include a 240-volt outlet in the garage, to make the new home "EV ready." Major remodels (adding square footage, major system capacity increases) can also use the HPwES model for home		
	retrofits.		
State Energy Office (IRA Funding) Bridge This program design would align with the state energy office program across residential, income-qualify tifamily sectors to ensure eligible measures and audit tool requirements are consistent, which is require funding braiding across utilities and states.			
Small Business Online Assessment / Kits	Small business customers are invited to take a streamlined online assessment to identify potential improvement projects/measures. In return, they receive a sector-appropriate EE kit and follow-up for additional identified projects/incentives.		



Program or Measure	Description				
Marketplace / Project Marketplace	This central marketplace would serve both residential and small business customers through a measure and incentive mix that shifts at the point of validation via a segmentation tool. It would offer both small DIY measures (e.g., smart thermostats, smart home, weatherization, air purifiers, water savers, lighting) and electrification measures (e.g., EV chargers), as well as optional installation (e.g., smart thermostats, EV chargers) and enrollment in DR (e.g., smart thermostats, EV chargers). Larger projects (e.g., heat pumps, heat pump water heaters) and the associated installation via a TA network is also possible.				
Kit Program 2.0 - Semi-Custom, Custom and/or Subscription Kits	Ordered through a kit portal that leverages a quiz to provide recommendations, these kits could be completely or partially aligned with a customer's needs and preferences to improve realization rates and customer satisfaction. For example, semi-custom kits may have different options for electric vs. gas vs. combo customers. Fully-custom kits car allow choice in product type (e.g., water product models and finishes, number and type of specialty bulbs). This can be an evolution of an existing kit or education program and it may be combined with subscription kits that provide series of kits over a defined period of time and reduce overall acquisition costs while multiplying savings.				
Electrification Readiness Additions to Home Performance Program	Add Panel Readiness assessment to current Home Performance Audit to evaluate the potential for HVAC and water heating fuel switching, as well as EV charging readiness. Panel/wiring upgrades and/or a 240-volt outlet for EVSE could be added to the qualified products list. This option could be added for LMI-only, since this target audience is more likely to be living in older homes with 100-amp panels and using delivered fuels.				
POS Appliance Rebates	Add Point of Sale rebate option for current Energy Star Appliance Rebate Program. Customers can choose the appliance and the retailer where they plan to purchase and receive a digital POS coupon that can be used during checkout at Lowe's, The Home Depot or Best Buy.				
Heat Pump Appliance Program (Residential, Income Qualified, Demand Response)	The HP Appliance program replaces outdated and inefficient appliances with new Heat Pump style of appliances. Available appliances include 120-volt HP washer/dryer combo, 120 Volt HP water heater, and Energy Star Refrigerator. Client would be income qualified, 1 appliance type per household, HP washer/dryer requires 3 or more Household members. Clients in Manufactured Homes may not be eligible for HP Washer/dryer and/or HP water heater due to limited space. Clients receiving HP water heater must sign up for Demand Response. HP Washer/Dryer incentive of \$3,000; HP Water Heater incentive of \$3,600, Refrigerator measure incentive \$1,000. In depth Client education required.				
Behavioral Demand Response	BDR stands for behavioral demand response and it consists of a set of messaging through several channels – we currently have email, IVR and SMS. The purpose of BDR is to motivate customers to reduce energy usage during peak events and lower energy demand on a large scale. In addition to peak load reduction, we've seen high levels of engagement and satisfaction. In addition, we have a lot of potential to cross promote DR programs.				
Small Business Thermostat Control-Demand Response	A thermostat control demand response program that small commercial customers can enroll in and receive incentives by participating in demand response events during the cooling and heating seasons.				
Realtor Ambassadors	Greater lead generation for home assessments and major measure upgrades To influence purchasing priorities of new homeowners during the active post-purchase investment period. Train and equip Realtors to act as ambassadors who champion the program(s) in their community.				
Transportation Electrification – Shared Charging	Recruit EV charging site hosts to build infrastructure in APCo VA territory.				
Transportation Electrification – Fleet Electrification	Recruit and work with in-territory fleet managers to transition to EVs.				
Transportation Electrification – Choose EV	Informational cost-comparison tools to educate and inform EV purchases.				
Transportation Electrification – Vehicle to Grid	Helping utilities to meet their simultaneous mandates for electrification and deploy distributed grid resiliency assets by leveraging car batteries				
Transportation Electrification – Emobility program pilots/measures	In support of beneficial electrification objectives using existing downstream portals. Can include Electric ATVs, UTVs, Motorcycles, E-bikes or E-scooters supported by outreach to mobility retailers.				
Enhance - Energy Saving Trees	Add low/no-cost trees to assessment recommendations. Trees sourced locally via partnership with Arbor Day Foundation. Implementor facilitates enrollment, assesses tree planting locations/savings potential with homeowners.				
Midstream HVAC	Working with distributors/ contractors to pass incentives down to the customers on eligible HVAC equipment				
Efficient Products Program Enhancement	Transition many measures to Instant Markdown/ Midstream and Retail Products Platform. RPP - incentivizing at the Retail level for best stocking practices of Energy Star models.				
MF Electric Water Heater DR	Water Heaters in multi-family residences can be called upon to provide meaningful load shed while minimizing tenant disruption.				



Program or Measure	Description			
Tech Demo: Refrigerant swap - R404A to R448A	Refrigerant R404A (Freon) is a blended HFC (hydrofluorocarbon) that has a GWP (global warming potential) of 3920. In comparison, R448A can replace R404A and has a GWP of 1390.			
Upstream / Midstream Conventional Agriculture	Agricultural customers are difficult to reach through conventional midstream programs – they have different networks and distribution channels. It uses an established program delivery approach but engages new stakeholders and measures.			
Grocery Refrigerant Leak Reduction Pilot	Quantifying the amount of high GWP refrigerant not emitted into the atmosphere by conducting a leak audit or installing permanent leak detection equipment.			
High-Efficiency Homes / New Construction Program	This program provides financial incentives and technical and sales assistance to production and custom homebuilders who commit to constructing energy efficient homes within the APCO service territory. Builders agree to build homes that are certified to meet ENERGY STAR® standards or homes that reduce energy use via a tiered system of various prescriptive measures. A residential new construction program is an excellent way to create long-term reductions in energy intensity. Whole-house new construction measures have one of the longest estimated useful lifespans. Many whole-house measures will continue to exist with reduced energy intensity for decades. This program can include C&I new construction as well.			
Commercial High Efficiency Foodservice Program (CHEF)	Commercial foodservice is one of the highest energy-use-per-square-foot sectors of the commercial and industrial industry. Restaurants use five to seven times more energy per square foot than other commercial buildings. The foodservice sector has also undergone significant challenges in recent years due to the COVID-19 pandemic and is impacted by ongoing supply chain issues and labor shortages—making these businesses especially vulnerable to rising energy costs. The program would be targeted to customers with commercial kitchens including full menu restaurants & virtual kitchens, bars & taverns, quick service restaurants, stadiums & entertainment venues, convenience stores, military facilities, hotels, supermarket deli & bakeries, schools & universities, and medical facilities. High-efficiency commercial kitchen equipment is market-ready and the energy-saving potential from these technologies (i.e., ENERGY STAR* refrigerators, freezers, and ovens) has been broadly verified and deemed. However, many of these technologies have achieved limited adoption through standard commercial and industrial energy efficiency (EE) programs, leaving commercial kitchen measures broadly under-utilized in utility EE portfolios due to the complex web of difficult-to-reach decisionmakers with a lack of EE knowledge. The CHEF program has the opportunity to adopt an innovative approach to driving EE in the commercial foodservice sector with our industry-specific program, the Commercial High Efficiency Foodservice (CHEF) Program. Using a hybrid approach, the midstream channel targets dealers, designers, and manufacturers with incentives that focus on ENERGY STAR products—achieving broad market education and influence with an efficient use of program resources. In parallel, the downstream channel provides the flexibility necessary to ensure that all commercial foodservice facilities can access incentives for their high-efficiency equipment, regardless of the sales stream where they purchase product.			
ENERGY STAR Manufactured Homes Program Check-Up	The Manufactured Housing Program provides customers with a low-cost in-home energy assessment where a qualified participating contractor will conduct a walk-through assessment of the manufactured home and install simple measures like LED bulbs and water heater pipe insulation, while identifying other opportunities to save energy. Pre-qualified contractors will perform both the assessment and the no cost improvements. Could add other financial incentives that help to offset cost of further improvements. Must be a dwelling with a permanent foundation built to FHA criteria when connected to the required utilities, and includes the plumbing, heating, air conditioning, and electrical systems contained therein. The structure must be designed for occupancy as a principal residence. Target Existing Manufactured Homes: Conduct assessment and install measures – can include: Air Sealing, Attic/Wall and mobile home belly insulation, Smart thermostat installation, Energy Star* refrigerator/freezer, Water heater replacement with a heat pump water heater, Heat pump tune-up / upgrade / duct sealing, Cool roof.			
High-Energy Use Program	Through this program, APCO will partner with nonprofit agencies to provide energy improvements and home repairs where needed, targeting low-income homes that have much higher-than-average electricity use. This initiative will allow customers with high electric usage to be evaluated for both health and safety concerns and potential to install compressive energy efficiency measures, leaving them with more efficient, safer homes and lower electric bills. APCO will work with a designated local government entity who would fund home repairs necessary before energy efficiency retrofits can occur. Home repairs may include window, roof, chimney, plumbing, or water heater repairs or replacements, pressure relief valve installation, mechanical ventilation, and lead-based paint hazard control. APCO would then provide energy retrofit measures that may include the replacement of heating, ventilation, and air conditioning systems as well as comprehensive air sealing, insulation, installation of LED bulbs and swapping out older refrigerators with ENERGY STAR* models. According to the Department of Energy, the national average energy burden – the percentage of gross income spent on energy costs – for lower income households is 8.6%, which is three times higher than for non-low-income households (estimated at 3%). Energy burden is defined as the average annual housing energy costs divided by the average annual household income.			



Program or Measure	Description			
	Monthly housing energy costs are based on household monthly expenditures for electricity, gas, and other fuels (including fuel oil, wood, etc.). This program seeks to address issues specific to the electrical portion of energy burden, and the outcomes can inform and influence future APCO programs toward a more equitable, low-carbon future.			
CoolSaver A/C Tune-Up Program	The CoolSaver program is designed to overcome market barriers that prevent residential and small commercial cus tomers from receiving high performance air conditioning (A/C) system tune-ups. The program works through loca A/C networks to offer key program components, including: a)Training and certifying A/C technicians on the tune-and air flow correction services and protocols. b)Paying incentives to A/C contactors for the successful implementation of A/C tune-up and air flow correction services. c) Paying incentives to A/C contractors who replace existing residential air conditioners and/or heat pumps with new high efficiency units of 16 SEER or higher. Additional incentiare paid for early retirement of operational equipment and for "right-sizing" replacement units.			
School Uplift Program	Focuses on providing Strategic Energy Management (SEM) training and capital improvement funding to schools in under-served areas. Summary of what's offered to the participants. All schools participate in SEM for behavioral and operational changes. helps school staff make smart energy choices that save money through decreased energy use and improve facilities. Through SEM, students and their communities engage and learn about the capabilities and benefits of energy conservation and renewable energy. All schools get a site assessment from our engineering team as well as energy coaching throughout the SEM process. Schools that finish the program get a \$10,000 grant that they can use for building improvement as chose by students via voting.			
Commercial EV Charger Rebate	Rebate program for the purchase of Level 2 EV chargers by commercial customers. The chargers must be either for public, multi-use dwelling, fleet, or workplace EV charging.			
Expansion of Efficient Products to Include commercial products	Expand the residential Efficient Products program to include rebates (or instant discounts) for commercial customers.			
Commercial Midstream (Instant Discount) Program	Offer a C&I midstream program to include distributor-driven measure categories such as HVAC and Food Service equipment for starters. It could also include maintenance-type measures and simple lighting retrofits (LED bulb/lamp retrofits). The program would look to add both new distributor-driven measures to the midstream program, in addition to under-utilized / low-volume downstream measures from the prescriptive program that could see more uptake and volume through a midstream offering. Consequentially, this would also lead to concentrated outreach / workforce development efforts to increase the participating midstream distributor network, ultimately increasing awareness and participation in this program offering.			
Compressed Air Program, including System Audit and Leak Survey/Repair	The Compressed Air program offers rebate incentives to eligible customers for installing or improving their compressed air equipment and systems. Customers can also receive a partial energy study reimbursement incentive for system / leak studies completed on their compressed air system by an eligible 3rd-party contractor. Potential eligible measures include air nozzles, leak repair, no-loss condensate drains, additional storage, pressure reduction, efficient air dryers/controls, and efficient air compressors.			
Customer Engagement Program	The Non-Residential Engagement program commercial and industrial customers by providing a strategic energy management (SEM)-like approach, empowering customer energy managers to achieve energy savings by optimizing building energy performance and integrating ongoing best practices into their operations through a combination of education and training and ongoing energy challenge activities. The program guides participants and equips building stakeholders with tools that provide building performance analytics and sustained communication and engineering support throughout participation. The program is designed to drive operation/behavioral energy savings as well as support planning for future projects and drive awareness of other existing energy efficiency rebates available.			
New Construction Program	The Non-Residential New Construction program serves commercial and industrial customers constructing new buildings, additions to existing buildings, or extensive building re-models. The program will provide customers and their design teams with technical design assistance using customized energy models and savings calculations for their specific building, focusing on areas where they can improve the energy efficiency of building equipment and systems above energy code baselines. The program design assistance will be provided throughout the building design and construction process, including design recommendations, a design documents review, and a verification after the project is complete. The customer and design team are eligible for monetary incentives for implementing energy efficient measures.			
Agriculture Program w/Ag Energy Audits	The Agriculture Energy Efficiency program offers rebate incentives to eligible customers for installing high efficiency equipment associated with agriculture practices common in Appalachian Power Company's territory. Potential eligible measures include high-efficiency ventilation and circulation fans, dairy equipment, VFDs and controls on agricultural equipment pumps and fans, and agriculture-specific lighting such as poultry lighting, heat lamps, and greenhouse LED lighting. The program is listed for both commercial and residential customers because our experience in the Dominion Energy territory shows that many smaller agricultural customers who can benefit from these measures are on residential accounts.			



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

Program or Measure	Description				
	For commercial agricultural customers that meet a minimum annual use threshold, an agriculture audit could be offered to identify measures specific to a given customer's operation, resulting in a tailored energy audit assessment report. Program staff would follow up with the customer to encourage project implementation via the existing agricultural program prescriptive or custom measure approaches to capture energy savings projects. The program would also refer and assist customers with pursuing additional funding (federal and state grants) such as REAP grants or other funding sources (i.e. Inflation Reduction Act (IRA)				
Data Center Program	The Data Center program offers rebate incentives to eligible customers for installing energy efficiency measures related to the equipment and operation of Data Centers. Customers can also receive a partial energy study reimbursement incentive for studies completed on their data center by an eligible 3rd-party contractor, or can receive an energy study from program staff focused on eligible program measures. Potential eligible measures include high efficiency cooling equipment, power supply units, efficient fan motors or controls, temperature adjustments, and lighting.				
HVAC Tune-Up Program with Duct Testing and Sealing	Qualified customers can have a HVAC preventative maintenance tune-up done to each unit to ensure the unit is running properly and efficient. Steps included cleaning coils, cleaning any debris from unit, electrical components working, check thermostat. While having a tune-up performed, the customer can also have their ductwork tested and sealed. This allows the customers to make sure their ductwork is connected, in working order with no inefficiencies along the duct line. Pre and Post CFM leakage test are performed.				
Industrial Energy Service	Qualified industrial/manufacturing sector participants would receive a free site assessment, including an energy audit and an analysis of the current energy management practices. Once the energy management training and audit is delivered, program staff will follow up with assistance on project implementation, such as identifying trade ally contractors for quotes and financial business case development incorporating utility rebate estimates and available state/federal funding sources.				
	Program Objectives would include: • Customer education - tailored industrial energy management training and development of a customer energy team focused on continuous improvement • Project Identi ication - facility walkthroughs and ASHRAE Level I & II audit reports identifying savings oppor-tunities • Project Implementation assistance - connect with trade ally contractors for project quotes, and identify federal/state funding available for projects (i.e. IRA funding) • Rebates - Incentives for completing energy efficiency projects via APCo prescriptive and custom measures				
Grocery & Food Service Offering (Refrigeration-fo- cused)	Grocery stores and food distribution facilities have different energy efficiency needs than other commercial buildings. They use more energy because of their large refrigeration loads, which also creates more opportunities for savings. However, most commercial programs do not address or reward specific refrigeration equipment and systems, which are often complex and specialized. This program is designed to fill this gap and provide tailored incentives and support for these customers. The program will emphasize refrigeration equipment upgrades, including efficient compressor rack systems and condensers, and refrigeration control systems. These are measures not currently offered in prescriptive programs. Other non-refrigeration measures that affect the refrigeration load, such as HVAC, lighting, or envelope improvements will also be recommended to provide a comprehensive "one-stop" experience for these customers.				
Schools K-12 Energy Education and Kit Program	The goal for providing these kits to schools and students will be to increase knowledge of energy efficiency in young adults and children. Education about energy at an early age can have a profound effect on how we deal with energy over a lifetime. An Energy Savings School program will provide teachers, students, and parents opportunities to learn about energy efficiency through APCo Savings Kits. The program can start at the school level where an energy curriculum, materials, and EE products will be provided to teachers. Students will receive EE kits that may include LED bulbs, power strips, aerators, and weather strips to take home.				

Stakeholder Recommendations for Phase II Utility – Dominion Energy Virginia

For the 2024 filing, a stakeholder meeting was held on March 22, 2024. During the meeting, stakeholders provided 19 ideas for programs or measures using Mentimeter. Initial stakeholder ideas are provided in the table below.



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

Table 6: Phase II Utility Stakeholder Recommendations

Category	Responses		
HVAC Upgrade	 Increased window, door, and water heater replacement rebate in the IAQ programs to better offset the full cost Program to specifically help non-res identify heat pump opportunities Focuses HVAC programs Replacement of central A/C and window A/C units Heat Pump Appliance Program - HP Water Heaters & HP Washer/Dryer combo - HH 3 or more 		
VPP	 +1 on VPPs. Aligned with PJM FERC 2222 rollout. +1 on VPP 		
Solar Pilot	 Continue the IAQ Solar pilot, include provisions for critical related H&S (e.g., roof work) IAQ Solar Program 		
Education Programs	 Kit program where students receive EE education and products at school, then install with their families at home +1 on student EE program. APCo's proposed educational EE program sounds very interesting! 		
Financing	Project financing opportunities		
Customer Experience	 Use AMI and customer demographics to target market. Direct integration of VE's IRA rebates to allow one-stop shop for customers 		
AMI	Pilot program to utilize AMI to reduce congestion on residential and/or non-residential transmission lines.		
Audits	Comprehensive energy audits for commercial and industrial customers		
Virtual Power Plants • Virtual power plant pilot(s)			
Pay for Performance	Residential pay for performance		
Referral Program • Dominion EE Programs - Refer a Friend! (bill credit applied after application)			

Following the meeting, stakeholders could submit additional program recommendations using a program template provided by Dominion Energy. Stakeholders submitted the following 13 ideas:

Table 7: Phase II Utility Stakeholder Additional Recommendations

Program Concept / Idea	Program Description
Energy Efficiency as a Service	Target Market: Small and medium sized commercial and industrial customers. The program would offer financing methods to this customer segment to implement energy efficiency projects. Proposed program design would provide Dominion Energy with access to the market leading EEaaS provider, especially for underserved SMBs, with market analysis, customer targeting and outreach, and program administration. Vendor indicates that they will conduct EEaaS program education, awareness, and lead generation campaigns and have a designed customer journey intended to simplify and make transparent the process of implementing ECMs. Customer qualification occurs during the discovery and site audit phases of our five-step customer journey. During the discovery phase, the customer answers qualification questions and signs a letter of intent to proceed with a site audit and provides financial statements for credit qualification. We will begin the process of underwriting the project based on the customer's financial statements and the projected project size (based on information collected in discovery) to determine whether the proposed project is feasible. The next step is an on-site audit of the customer's energy equipment to determine project feasibility, define the proposed solution, and calculate potential energy savings.
Schools K-12 Energy Education and Kit Program	The goal for providing these kits to schools and students will be to increase knowledge of energy efficiency in young adults and children. Education about energy at an early age can have a profound effect on how we deal with energy over a lifetime. An Energy Savings School program will provide teachers, students, and parents opportunities to learn about energy efficiency through APCo Savings Kits. The program can start at the school level where an energy curriculum, materials, and EE products will be provided to teachers. Students will receive EE kits that may include LED bulbs, power strips, aerators, and weather strips to take home.
Non-residential SEM Program	This SEM program design uses a cohort model. At start of the first 12-month cycle, 10 to 12 customers are brought together to participate in the program. The cohort creates a community of energy efficiency, encourages peer-to-peer learning, and provides intrinsic motivation and healthy competition to make changes and save energy. Cohorts may be made up of mixed market participants or noncompeting organizations within single market sectors – like retail, water and wastewater, or commercial property management for instance. In the case of retail – more participants from smaller businesses may be incorporated due to their commonality and traditionally more simplistic energy modeling requirements.



Program Concept / Idea	Program Description
Residential Midstream HVAC Program	The midstream HVAC program intends to capture savings by incentivizing efficient equipment above the federal baseline. The incentives will go towards distributors/manufacturers with the intent to be passed down to contractors/customers. The program is open to all residential customers and aims to reduce the administrative burden on contractors and filling out individual incentive applications. This allows for a lower incentive and more cost-effective program because the distributors will be handling the administrative burden at higher volumes. The program would focus on high efficient HVAC systems. This would include central air conditioning, heat pumps (ducted, ductless, and ground-source), and package terminal units.
Targeted Water Heater Program for Property Owners (Demand Response)	The program is a water heater demand response program that does two things. It allows Dominion Energy additional DR capacity in the winter-peaking months and gives property managers/building owners non-energy benefits in preventative maintenance of the water heaters in their building's units. Water heaters are a flexible and effective DR asset, with minimal to no customer disruption during events. These units can be called every day, or multiple times per day, in both the summer and winter seasons. This would serve residential multifamily properties with electric water heating. Success is largely driven by number of units that can be recruited into the program through outreach.
Residential Advanced EE Windows	Incentives for energy-efficient windows are already included in existing offerings. Honeywell proposes expanding measures to include advanced triple and quad-pane window technology.
Non-residential Demand Response	The program will begin by recruiting participants through targeted outreach efforts. Once enrolled, customers will receive comprehensive assessments and personalized Demand Response Action Plans (DRAPs). These DRAPs will identify specific demand response opportunities, outline clear pathways for achieving load shedding, and provide easy-to-follow action plans that can be implemented on short notice.
	To encourage participation and reward customers for their ongoing engagement, the program will offer a range of incentives. These incentives will be designed to attract new participants, maintain their commitment over time, and recognize the valuable role they play in supporting the grid during peak demand periods.
	During demand response test events, the program team will provide remote support to help customers test, refine, and measure impacts of their DRAPs to build confidence for true demand response event days. The program will primarily focus on custom demand response measures and technologies. These include:
	 <u>Load control devices</u>: Installation of lighting controls and other direct load control devices that can be remotely managed. <u>Building automation systems (BAS) augmentation</u>: Configuring BAS logic to enable easier (click button or automated) load shedding.
	 <u>Backup generator integration</u>: Identifying opportunities to leverage existing backup power sources during demand response events to reduce grid strain. This program can work in conjunction with existing distributed generation programs. <u>Process load curtailment</u>: Working with industrial customers to identify energy-intensive processes that can be safely and temporarily curtailed during peak demand periods.
Enhanced Non-res. Mid- stream Program	The objective of this recommendation is to extend the existing midstream program measures past 2026 and consider the addition of new measures. Expand the existing non-res midstream program to include additional measures. Would specifically look to add both new distributor-driven measures to the midstream program, in addition to under-utilized / low volume downstream measures from the non-res prescriptive program that could see more uptake and volume through a midstream offering. Consequentially, this would also lead to efforts to increase the participating midstream distributor network, ultimately increasing awareness and participation in this program offering. Additional Measures to consider:
	 Cogged V-belts High-Performance HVAC Filters Electric Clothes Washer / Dryer RTUs Tankless electric water heaters Food Service - Ice Machines, pre-rinse sprayers Vending Machine / Drinking water cooler misers Night Covers High-Frequency Forklift Battery Chargers



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

Program Concept / Idea	Program Description
Enhanced Non-res. Agricultural Program (Indoor Agriculture)	Provide indoor grow facilities with specific resources to invest in energy efficiency of their operations. Energy audits will be provided to investigate the energy savings opportunities each facility may have. Our agricultural team will help create a plan for each operation. The indoor agriculture measures would provide customers with the necessary equipment to set up and maintain an efficient operation in their businesses. Incentives for LED grow lights, heat curtains, control systems, and dehumidification would be offered. The program would also offer education and training on how to use equipment and how to optimize energy efficiency. Updated program design and program parameters to be requested via RFP for existing DSM Phase 9 Non-res. Agricultural Program
Enhanced Non-res. Agricultural Energy Audits	The program would use agricultural energy audits to identify measures specific to a given customer's operation, resulting in a tailored energy audit assessment report. Program staff would follow up with the customer to encourage project implementation via the existing agricultural program prescriptive or custom measure approaches to capture energy savings projects. Through the energy audit process, both capital projects and low cost/no cost behavioral energy improvements would be communicated to the customers. The goal would be a collaborative relationship and educational experience for the customer emphasizing ways to reduce energy costs and become more efficient in their operations.
Grocery and Food Service	Grocery stores and food distribution facilities have different energy efficiency needs than other commercial buildings. They use more energy because of their large refrigeration loads, which also create more opportunities for savings. However, most commercial programs do not address or reward specific refrigeration equipment and systems, which are often complex and specialized. This program is designed to fill this gap and provide tailored incentives and support for these customers.
School Kit Program	 Deliver Cost effective savings through the distribution of low cost products to students for installation at home with their familis. Educate students and their families on energy conservation strategies while cross promoting DEV programs Support Virginia schools by providing STEM based resources aligned to Virginia Standards of Learning (Note: although public schools in DEV's territory have opted out of the EE programs, school kit program costs and benefits are attributable to residential customers. schools are the distribution point, facilitating a "one-to-many" approach with distinct cost advantages over mailing to individual households). Residential customers in Virginia: The program is designed to be "opt-out" whereby all participating students receive products to take home (as compared to "opt-in" where households select the specific kit products they want to receive). In effect, schools are the distribution hub for kits, which presents considerable cost efficiencies over direct mailing to individual homes. Additionally, enrollment efforts can be focused on low/moderate income communities. NEF uses data from the USDA's meal assistance program to track low income participation, and there is precedent for this approach qualifying the program as low income.
Virtual Power Plant Pilot	Pilot proposal for a three year term. A virtual power plant enables a utility to leverage a set of distributed assets and control their energy consumption or dispatch to operate in the same way as a traditional power plant. By bundling batteries (often paired with solar), electric vehicles, water heaters, and air heating and cooling systems, Dominion Energy can leverage a portfolio of resources with different attributes to achieve different system goals. The vendor states that this is a software that would be sold to the Company and it is up to the Company to have 1 FTE or hire an implementation vendor to implement this type of a pilot without giving specifics of how the program would be delivered. Vendor also proposes to utilize battery storage systems instead of thermostat as the main measure in this program.

Upon initial review of submissions, DEV has grouped the ideas into the following categories that will comprise its 2024 DSM RFP.

- Residential Electric Vehicle Charger Purchase (EE) Program
- Residential Electric Vehicle Charger Purchase Demand Response (DR) Program
- Residential Home Retrofit Bundle
- Small Business Improvement/Enhancement Program
- Non-residential Electric Vehicle Demand Response Program
- Non-residential Enhanced Prescriptive Program
- Non-residential Data Center Program
- Non-residential Demand Response Program
- Any other program design ideas as it pertains to Advanced Metering Infrastructure (AMI) enablement and DSM programs.
- Other Program Enhancements/Recommendations as suggested through the Stakeholder Review Process



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.

Table 8: Stakeholder Recommendations Status and Petitions

Year Developed & Petitioned	Year Approved	Year Launched
2019	2020	2021
2020	2021	2022
2021	2022	2023
2022	2023	2024
2023	2024	2025
2024	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. For filing years 2019 through 2023, the annual report provided only the recommendations for full programs to align with the utility filings. Beginning with the 2024 filing, recommendations for policies, processes, and program improvements are identified separately and also listed.

Appalachian Power

To date, APCo has proposed \$217.5 million, or approximately 155 percent of the original \$140 million goal. Of the \$217.5 million proposed, \$87.92 million for two new programs, and the extension of three existing programs (5-year cost cap) were proposed in the Company's 2023 EE-RAC filing. APCo expects a Commission Order in this pending case in July 2024. Details about the APCo programs by filing year are provided in Appendix II.

Table 9: Phase I Utility Filings

Petition Year	Date Petitioned	Date Approved	Number of Programs Filed	Number of Programs Approved	Status
2019	09/30/2019	05/21/2020	3	3	 Residential Low-Income Single-Family Program: 2023 gross verified savings were 1,459,126 kWh. Residential Low-Income Multifamily Program: 2023 gross verified savings were 320,034 kWh. ENERGYSTAR* Manufactured Housing Program: 295 rebates paid. Program ended in 12/2022.
2020	11/20/2020	07/29/2021	8	8	 Residential Home Energy Report Program: 2023 gross verified savings were 31,578,044 kWh. Residential Efficient Products Program: 2023 gross verified savings were 6,681,231 kWh. Residential Energy Efficiency Kit Program: 2023 gross verified savings were 1,071,855 kWh. Residential Home Performance Program: 2023 gross verified savings were 2,694,520 kWh. Business Energy Solutions ("BES") Program: 2023 gross verified savings were 19,028,531 kWh. Residential Bring Your Own SMART Thermostat ("BYOT") Program: 2023 gross verified savings were 90,101 kWh. Small Business Direct Install ("SBDI") Program: 2023 gross verified savings were 2,024,128 kWh. Volt Var Optimization ("VVO") Pilot Program: 2023 gross verified savings were 1,922,318 kWh.
2021	11/20/2021	07/2022	1	1	Custom Commercial & Industrial Pilot Program: 2023 gross verified savings were 368,855 kWh.
2022	Moved to tv	wo-year filing	0	0	N/A
2023	11/30/2023	07/2024 - ex- pected	5		Pending SCC Commission Order Case Details SCC DocketSearch (virginia.gov)
TOTAL			17	12 (to date)	Total 2023 Gross Verified Savings: 67,238,743 kWh



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

APCo EM&V Report Links:

- 2019: https://www.scc.virginia.gov/DocketSearch#/caseDetails/133464
- 2020: https://www.scc.virginia.gov/DocketSearch#caseDocs/133464
- 2021: Report to be issued in 2024

Dominion Energy Virginia

To date, DEV has proposed \$ \$797 Million, or approximately 92 percent of the legislative goal. Of the \$797 Million proposed \$84.1M is from Phase XII, pending approval. Details about DEV's Program Filings are provided in Appendix III.

Table 10: Phase II Utility Filings

Petition Year	Date Petitioned	Date Approved	Number of Programs Filed	Number of Programs Approved	Status
2019	12/03/2019	07/30/2020	13	13	 Residential Electric Vehicle (EE and DR): 638 customers enrolled. 2023 gross verified savings were 43,375 kWh. Residential Electric Vehicle (Peak Shaving): 1.495 customers enrolled. 2023 gross verified savings were 43,300 kWh. Residential Energy Efficiency Kits (EE): 86,301 customers enrolled. 2023 gross verified savings were 3,721,439 kWh. Residential Home Retrofit (EE): 193 customers enrolled. 2023 gross verified savings were 106,684 kWh. Residential Manufactured Housing (EE): 560 customers enrolled. 2023 gross verified savings were 118,811 kWh. Residential New Construction (EE): 6,503 customers enrolled. 2023 gross verified savings were 7,329,239 kWh. Residential/Non-Residential Multifamily (EE): 2,950 customers enrolled. 2023 gross verified savings were 231,957 kWh. Non-Residential Midstream Energy Efficiency Products (EE): 203 customers enrolled. 2023 gross verified savings were 2,220,361 kWh. Non-Residential New Construction (EE): 8 customers enrolled. 2023 gross verified savings were 28,749,726 kWh. Small Business Improvement Enhanced (EE): 1,845 customers enrolled. 2023 gross verified savings were 5,161,646 kWh. HB 2789 (Heating and Cooling/Health and Safety) (EE): 10,715 customers enrolled. 2023 gross verified savings were 796,194 kWh. Residential Thermostat (EE) and (DR) Programs: 19.336 customers enrolled in EE; 39,817 enrolled in DR component. 2023 gross verified savings were 1,382,048 kWh. Residential Customer Engagement Program (EE): 256.468 reports sent in 2023. Program closed 12/31/2023. 2023 gross verified savings were 33,218,144 kWh.
2020	12/02/2020	09/07/2021	11	11	 Virtual Audit: 10,193 customers enrolled. 2023 gross verified savings were 5,960,092 kWh. Smart Home: 62 participants. 2023 gross verified savings were 22,616 kWh. Residential Water Savings (EE): 430 participants. 2023 gross verified savings were 513,620 kWh. Residential Water Savings (DR): 8 participants. Income and Age Qualifying Program (EE): 9,933 participants. As of 01/01/2024 program included in DSM Phase 11 Income and Age Qualifying Bundle. 2023 gross verified savings were 4,090,052 kWh. Income and Age Qualifying Solar (HB 2789 program): 137 participants. 2023 gross verified savings were 822,872 kWh. Agriculture Program (EE): 11 participants. 2023 gross verified savings were 915,873 kWh.



STATUS OF RECOMMENDATIONS AND PETITIONS

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

Petition Year	Date Petitioned	Date Approved	Number of Programs Filed	Number of Programs Approved	Status
					 Building Automation Program (EE): Currently open to customers. Building Optimization Program (EE): 45 participants. 2023 gross verified savings were 13,859,112 kWh. Non-Residential Customer Engagement Program (EE): Currently open to customers. 2023 gross verified savings were 33,218,144 kWh. Enhanced Perspective Program (EE): 961 participants. 2023 gross verified savings were 14,350,446 kWh.
2021	12/14/2021	09/05/2022	9	9	 Non-Residential Energy Efficiency Data Center and Server Rooms Program: Currently available to customers. Non-Residential Energy Efficiency – Healthcare Targeted Program: Currently available to customers. Non-Residential Energy Efficiency – Hotel and Lodging Targeted Program: Currently available to customers. Small Business Behavioral Program: Currently available to customers. Income and Age Qualifying Program Enhancement: Currently active Income and Age Qualifying Home Energy Reports: Currently active. As of 01/01/2024 program included in DSM Phase 11 Income and Age Qualifying Bundle. Non-Residential Income and Age Property Owners: Currently active. Voltage Optimization O&M Software: Program implementation is being finalized. Non-Residential Lighting and Controls Extension: 260 participants. 2023 gross verified savings were 20,830,777 kWh.
2022	12/13/2022	08/04/2023	9	9	 Residential Income and Age Qualifying Bundle: Program is currently open to customers. Non-Residential Income and Age Qualifying Bundle: Program is currently available to customers. Residential EE Products Marketplace: Program is currently open to customers. 2023 gross verified savings were 2,608,640 kWh. Residential Customer Engagement: Program is currently operating. Residential Peak Time Rebate: Program is currently available to customers. Residential Retrofit Bundle: Program is currently open to customers. Residential EV Telematics Pilot: Program implementation is being finalized. Non-Residential Enhanced Prescriptive Bundle: Program is currently open to customers. Non-Residential Custom Program: Program is currently open to customers.
2023	12/11/2023	09/15/2024 (Expected)	5		Pending SCC Commission Order Case Details SCC DocketSearch (virginia.gov)
TOTAL			47	42 (to date)	449,134 total participant enrollments Total 2023 Gross Verified Savings 180,315,168 kWh



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

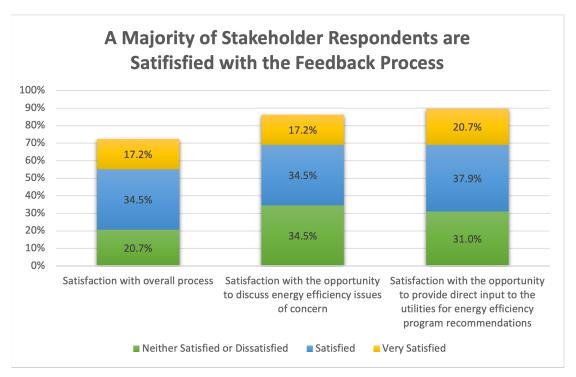
DEV EM&V Report Links:

- 2019-2020: 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/141608¹⁸
- 2021: 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/7sxk01!.PDF

STAKEHOLDER FEEDBACK ABOUT THE PROCESS

To obtain feedback about the 2024 Stakeholder Process year so far for this report, the independent monitor conducted an online survey between May 30 and June 17, 2024. An email invitation was sent to 400 stakeholders, ¹⁹ a total of 26 of whom completed the survey for a response rate of 6.5 percent. ²⁰ The full set of frequency distributions (responses) are available by request from the independent monitor. The 2024 response rate represents over a 50 percent drop in respondents and an eight percent drop in the response rate from the 2023 survey. Based upon the response rate, the confidence level and margin of error are closer to acceptable levels used for pilot programs and prototyping and should be considered directionally correct, but not fully representative. ²¹

A majority (51.7% to 58.6%) 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. However, it should be noted that in previous years over 80 stakeholders responded, so with the significant drop to 26, each individual response may skew the overall results more. The total number of individuals who answered these questions is approximately a quarter of the numbers from previous years. However, a larger percentage of respondents answered "Neither Satisfied or Dissatisfied" than in the previous years.



 $^{^{18}}$ An executive overview of the 2022 EM&V Report can be located on the Company's website here: $\frac{\text{https://cdn-dominionen-ergy-prd-001.azureedge.net/-/media/pdfs/virginia/save-energy/key-docs/emv-report.pdf?la=en&rev=b00506c600b744bfb-fe08e004903d287&hash=4B416A5F2F58973FAD7AC8D66F2BB443}$

¹⁹ Stakeholders who participate in both APCo and DEV groups received only one survey invitation.

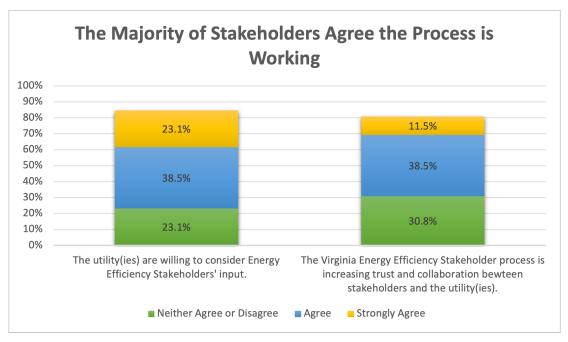
²⁰ The confidence level for the results is 90 percent with a margin of error of + 15.6%.

²¹Throughout the survey there was a consistent negative rating on all questions from 3 respondents. Given the small number of respondents, data will be skewed toward the negative, as this represents 11.5 percent of all responses, which is consistent with research related to group dynamics.



STAKEHOLDER FEEDBACK ABOUT THE PROCESS

More than half (61.6%) of the stakeholder respondents agree that the utilities are willing to consider their input, an increase of four percent from the previous year, with a higher percentage strongly agreeing with the statement. Approximately half of the respondents agree that the process is increasing trust and collaboration between stakeholders and the utilities. This represents a drop from the previous year.



The rate of agreement of these questions varies depending on which stakeholder processes the respondent affiliates with. Ratings by stakeholder group participation is provided below.:

Participate in Phase I (APCo) Only

- 100 percent of respondent stakeholders agree the utility is willing to consider their input.
- 100 percent of respondent stakeholders agree the process is increasing trust and collaboration between stakeholders and the utility.

Participate in Phase II (DEV) Only

- 44 percent of respondent stakeholders agree the utility is willing to consider their input, which is an increase of four percent over last year.
- 44 percent of respondent stakeholders agree the process is increasing trust and collaboration between the stakeholders and the utility, which represents a drop of nine percent from the previous year.

For stakeholders who indicated they participate in both Phase I and Phase II stakeholder processes, ratings for these two questions, as expected, were between the single utility participants.

Participate in both Phase I and Phase II Groups

- 67 percent of respondent stakeholders agree the utilities are willing to consider their input, which is a slight increase above the 2023 survey results.
- 47 percent of respondent stakeholders agree the process is increasing trust and collaboration between the stakeholders and the utilities.

The overall data clearly indicate that belief the utilities consider stakeholder input is increasing among respondent stakeholders. However, the sense of trust and collaboration has declined. Based upon other feedback received in the survey and through the stakeholder meetings, stakeholders have indicated they want:

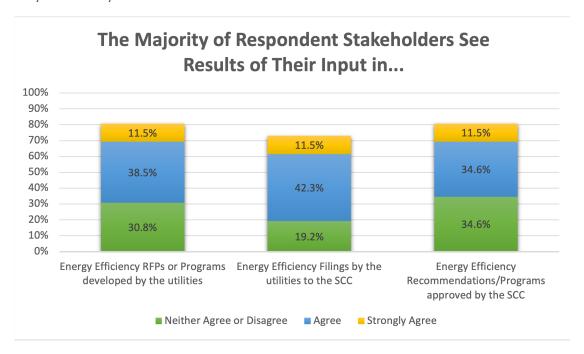


STAKEHOLDER FEEDBACK ABOUT THE PROCESS

- More options for participating in the planning and development of programs
- More two-way dialogue about program options with the utilities
- More transparency in the utilities' decision-making processes between their recommendations, consolidation of ideas, and RFP categories.

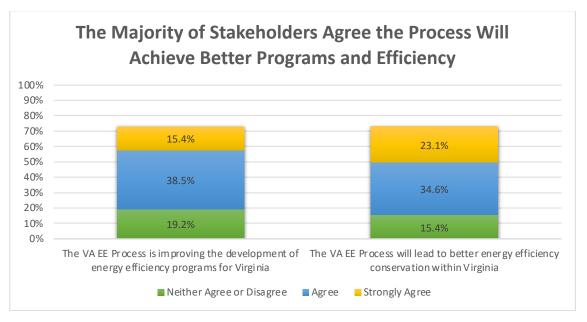
The last point is also supported by the survey data. Half (50%) of the stakeholder respondents see the results of the stakeholder process in the energy efficiency RFPs developed by the utilities. While this represents a decrease from the 2023 survey, the decrease results from an increase in the stakeholders selecting either the neutral response or the not applicable response. Those who selected "Agree" increased from previous years.

A slightly higher percentage (53.8%) of respondent stakeholders see the results of their input in the utilities' filings to the SCC. Less than half (46.1%) of the respondents see their input visible in the programs approved by the State Corporation Commission. This is the first year this response has dropped below 50 percent. A possible explanation for this is that the utilities use RFPs to solicit final ideas and that the program designs, after cost-effective tests and negotiations with implementers, may not align as closely with ideas initially submitted by stakeholders.



Over half (53.9%) of respondent stakeholders report the Virginia Energy Efficiency Stakeholder Process is improving the development of energy efficiency programs in Virginia, and 57.7 percent report the process will lead to better energy efficiency conservation within Virginia. Both results demonstrate a slight decline from previous years. Based upon discussions with a few stakeholders, the lower ratings for these may be based on stakeholder concern that project program outcomes are not linked explicitly to meeting the clean energy goals and that progress is not occurring as quickly as some stakeholders may expect.

STAKEHOLDER FEEDBACK ABOUT THE PROCESS



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. A new question was added to the survey this year asking stakeholders to describe what they perceive to be the strengths of the Virginia Energy Efficiency Process. Their responses can be summarized in the following five categories:

- Bringing interested and involved entities and people with a wide range of specialties together to build relationships and
 collaborate both within official meetings and informally.
- A space for diverse perspectives to thrive—stakeholders are encouraged to share various opinions, ideas and motivations, which are used to generate comprehensive, well thought out, and balanced programs.
- Transparent and open communication through multiple channels.
- Use of clear, transparent, formal process for solicitation of new ideas and suggestions.
- Strong participation at meetings.
- Well run by using an unbiased third party to facilitate meetings.

The stakeholders also, though, acknowledge there is ample opportunity to continue to improve the feedback planning, process, and results. Instead of leaving a question for general comments, the survey this year included a revised question related to constructive recommendations to make the process even better. Based upon feedback from the stakeholders, the following emerged as areas to focus improvement efforts.

1. Meeting Structure and Participation

- Stakeholder designed meetings that enable input and prioritization of topics.
- Introductory Session: Organize a foundational introductory session for all stakeholders to include the why behind utility programs.
- In-Person Meetings: Strong belief that stakeholder meetings should be held in person to enhance communication and facilitate networking and relationship-building.
- Feels like DEV does 80% of the talking; should hear from other groups.
- The subgroups should also be more active and engaged.
- Facilitator should take more initiative to book experts, nail down meeting times.

2. Communication and Collaboration Tools

- Basecamp Training: Include a session on effectively using Basecamp to its full potential for information sharing.
- Improved communication practices through Basecamp. The email system is confusing and often results in people replying to everyone.
- Consider adapting Basecamp for program tracking or finding a suitable alternative.
- I like the idea of Basecamp, but it seems to create so many communications issues.
- Ensure we utilize Basecamp to its full potential for information sharing.



STAKEHOLDER FEEDBACK ABOUT THE PROCESS

• With frequent program changes, it's challenging to track everything. Identify a tool to track the statuses and stages of all programs.

3. Stakeholder Engagement and Feedback

- Continue active engagement of SCC, provide more opportunity for EE advocates to lead.
- Existing providers seem to have a strong competitive advantage for any new ideas or programs.
- Not enough direct utility feedback on our ideas or concerns, we put ideas out there and have no idea how the utility perceives them.
- Results focus: It is important for the utilities to listen to stakeholders, but equally important for the utilities to lead initiatives to improve their performance.
- More sharing of feedback from the utilities and stakeholders.
- I think more people should be involved and participate. More feedback from stakeholders.

4. Data-Driven Decision Making

- Conversations need to be more data-driven.
- Start by backtracking from VCEA goal.
- Too much time is spent reviewing status rather than driving new programs.

5. Pilot Programs and Innovative Ideas

• Pilot programs, similar to the CT IES-PURA program, demonstrate what might work, and then bring working programs to full release/production.

By addressing these areas, the overall effectiveness, communication, and engagement within the stakeholder process may be significantly improved.

Next Steps

The majority of stakeholders are satisfied with the Virginia Energy Efficiency Stakeholder process and report that it is improving the energy efficiency programs in Virginia. However, the stakeholder group is also very vocal about opportunities for improvement. These include:

1. Enhance Proactivity and Regular Reporting of Dominion Subgroups:

• Subgroups within the stakeholder process should meet and report more regularly to increase their effectiveness and ensure consistent progress.

2. Increase SCC Engagement and Ownership:

• The State Corporation Commission (SCC) should actively engage in the stakeholder process, providing feedback on technical, policy, and process issues. This includes understanding the stakeholder process as part of their responsibility and ensuring it is productive and beneficial for the Commonwealth and its residents.

3. Improve Representation and Inclusivity:

• Identify and include key constituencies that are currently missing from the stakeholder process, such as insulation contractors and other relevant groups. Explore compensating participants for their time to ensure diverse and comprehensive representation, especially from smaller organizations that participate as volunteers.

4. Increase Effectiveness and Achieve Better Results:

• Implement changes to ensure the stakeholder process yields significant improvements. Given the energy efficiency and zero-carbon targets mandated by Virginia law, it is crucial to maximize the cost-effective benefits of energy efficiency programs for all electricity consumers in Virginia. This requires a more efficient and results-driven approach to the stakeholder process. This may also include better alignment and communication of programs to the Virginia Clean Economy Act goals and identifying standardized reporting metrics.



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
- iv. cost-effective deployment of energy efficiency technology across the Commonwealth; and
- v. best practices for evaluation, measurement, and verification for the purposes of assessing compliance with the total
- vi. 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.

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.

2024 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's annual reporting. However, the General Assembly did pass three new bills related to energy efficiency that may drive additional conversation within the stakeholder process. These are:

- HB 746/SB565 Energy efficiency programs; incremental annual savings. Provides that for the 2029 program year and all subsequent years, "in the public interest" for the purpose of assessing energy efficiency programs means that the State Corporation Commission determines that the program is cost-effective. The bill directs the Commission to promulgate regulations no later than September 30, 2025, establishing a single, consistent cost-effectiveness test for use in evaluating proposed energy efficiency programs. The bill requires Dominion Energy Virginia and Appalachian Power Company to track, quantify, and report to the Commission the incremental annual savings, as defined in the bill, achieved by such utility's energy efficiency programs.
- SB 737 Electric utilities; energy efficiency programs, on-bill tariff program. Provides that, for the purposes of the Virginia Electric Utility Regulation Act, energy efficiency programs include electrification, including measures that electrify space heating, water heating, cooling, drying, cooking, industrial processes, and other building and industrial end uses that would otherwise be served by onsite, nonelectric fuels, provided that the electrification measures reduce site energy consumption and that, to the maximum extent practical, seek to combine with federally authorized customer rebates for heat pump technology. The bill provides that electricity consumption increases that result from State Corporation Commission-approved electrification measures shall not be considered as a reduction in energy savings under the energy savings requirements and that utilities may apply verified total site energy reductions that are attributable to Commission-approved electrification measures to the energy savings requirements. The bill specifies that energy efficiency programs and energy efficiency measures do not include electrification of any process or activity primarily fueled by natural gas.



2019 APCo Programs

Table 11: 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 2023 gross verified savings were 1,459,126 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 usag.	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 2023 gross verified savings were 320,034 kWh.
ENER- GYSTAR* 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 12: 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 2023 gross verified savings were 31,578,044 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 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. In 2023, the Company filed to include rebates via the APCo Online Marketplace, which will provide another avenue for customers to receive discounted EE products. The Company expects to receive an Order from the Commission in July 2024.	Renewal of an expired program	Stakeholder Process	Approved	The program is currently providing instant discounts and rebates to customers throughout the service territory. The 2023 gross verified savings were 6,681,231 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. In 2023, the Company filed for modification to the EE Kits Program. The Company proposed the addition of a Smart Homes Kit, which requires a customer copay. The smart homes kit will include a smart thermostat and advanced power strips. The Company expects to receive an Order from the Commission in July 2024.	New program	Stakeholder Process	Approved	Customers are actively requesting kits as well as purchasing energy efficient products from the marketplace. The 2023 gross verified savings were 1,071,855 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 2023 gross verified savings were 2,694,520 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
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 gross verified savings were 19,028,531 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.	Renewal of an expired program	Stakeholder Process	Approved	The program is actively enrolling customers throughout the service territory. The 2023 gross verified savings were 90,101 kWh.
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 2023 gross verified savings were 2,024,128 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. The 2023 gross verified savings were 1,922,318 kWh.



2021 APCo Programs

Table 13: 2021 APCo Program Status

Date Petitioned: 11/30/2021 Date Approved: 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. The 2023 gross verified savings were 368,855 kWh.

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 occurred on November 30, 2023.

2023 APCo Programs

Table 14: 2023 APCo Program Status

Date Petitioned: 11/30/2023

Date Approved: 07/31/2024 (Expected)

EM&V Report Link: Case Details | SCC DocketSearch (virginia.gov)

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Multifamily In-Unit Program	The Multifamily Program conducts no-cost energy assessments by certified Building Performance Institute (BPI) Contractors for eligible multifamily properties. The program will provide energy assessments and in-unit direct install measures, and additional measures will be available for installation by trade allies.	New	Stakeholder Process	Pending	Pending
Residential School Kits Program	This program is delivered through a school-to-home implementation model where students receive energy efficiency-focused education in the classroom, then apply that learning at home with their families through the installation of kit products.	New	Stakeholder Process	Pending	Pending
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. For customers who are moderate income qualified, enhanced rebates will be included to provide even greater opportunity to participate.	Existing Program Enhancement	Stakeholder Process	Pending	Pending



Date Petitioned: 11/30/2023

Date Approved: 07/31/2024 (Expected)
EM&V Report Link: <u>Case Details | SCC DocketSearch (virginia.gov)</u>

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Residential Low-Income Single-Family Program	This program 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	Pending	Pending
Residential Low-Income Multifamily Program	This 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.	Renewal of an expired program	Stakeholder Process	Pending	Pending



2019 DEV Programs

Table 15: 2019 DEV Program Status

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:

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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	Approved	Enrolled 638 customers through 2023; 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	process Utility Vendor or RFP process	Approved	Enrolled 1,495 customers through 2023. 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 86,301 customers through 2023. 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 193 customers through 2023. 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.	New program	Stakeholder Process Vendor or RFP process	Approved	Enrolled 560 customers through 2023. Program is still available to customers.
Residential New Con- struction (EE)	This program encourages the use of energy efficient materials and practices in new home construction through a combination of incentives and education.	New program	Stakeholder Process Vendor or RFP process	Approved	Enrolled 6.503 customers through 2023. 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	New program	Stakeholder Process Vendor or RFP process	Approved	Enrolled 2,950 customers through 2023. 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:

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Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
	residences within a given structure.				
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 203 customers through 2023. 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	Enrolled 8 customers through 2023. Program is still available to customers.
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 1,845 customers through 2023. 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 Assem- bly as House Bill 2789	Approved	Enrolled 10, 715customers through 2023. As of January 1, 2024, these program measures are part of the recently approved DSM Phase 11 Residential Income and Age Qualifying Bundle, as approved by the SCC in CASE NO. PUR-2022-00210.
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 19,336 customers in the EE component through 2022, and 39,817 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.	New program	Stakeholder Process Vendor or RFP process	Approved	256,468 reports will be sent in 2023 . As stated in the Company's 2022 DSM Program filing in CASE NO. PUR-2022-00210. , this Program has closed as of December 31, 2023.



2020 DEV Programs

Table 16: 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:

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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 10,193 participants through 2023
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	Utility Vendor or RFP process	Approved	Currently open to customers. There were 62 participants through 2023.
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 430 participants through 2023.



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

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Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
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. There were 8 participants enrolled through 2023.
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	There were 9,933 participants through 2023. As of January 1, 2024, these program measures are part of the recently approved DSM Phase 11 Residential Income and Age Qualifying Bundle, as approved by the SCC in CASE NO. PUR-2022-00210
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 137 participants through 2023.
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 11 participants through 2023.



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:

 $\frac{https://cdn-dominionenergy-prd-001.azureedge.net/-/media/pdfs/virginia/save-energy/key-docs/emv-report.pdf?la=en\&rev=b00506c600b744bfb-fe08e004903d287\&hash=4B416A5F2F58973FAD7AC8D66F2BB443}{\text{constant}}$

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
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.
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 45 participants through 2023.
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 961 participants through 2023.



2021 DEV Programs

Table 17: 2021 DEV Program Status

Date Petitioned: 12/14/2021 Date Approved: 09/15/2022

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/7sxk01!.PDF

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Non-residential Energy Efficien- cy - 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	Utility Vendor or RFP process	Approved	Program is currently available to customers.
Non-Residential Energy Effi- ciency – 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 is currently available to customers.
Non-Residential Energy Efficien- cy – Hotel and Lodging Target- ed 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 is currently available to customers.
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	New program	Utility Vendor or RFP process	Approved	Program is currently available to customers.
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 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 pro- gram	Stakeholder Process Vendor or RFP process	Approved	The Income and Age Qualifying Home Energy Reports are currently active. As of January 1, 2024, these program measures are part of the recently approved DSM Phase 11 Residential and Non-Residential Income and Age Qualifying Bundle, as approved by the SCC in CASE NO. PUR-2022-00210.
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	Approved	Program implementation is being finalized.



Date Petitioned: 12/14/2021 Date Approved: 09/15/2022

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/7sxk01!.PDF

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Non-Residential Lighting and Controls	Extends and expands budget for lighting upgrades and controls at qualifying non-residential facilities.	Expansion to existing program	Stakeholder Process	Approved	Program is open to customers. There were 260 participants
Extension			Utility		through 2023.

2022 DEV Programs

Table 18: 2022 DEV Program Status

Date Petitioned: 12/13/2022

Date Approved: 08/4/2023 (Expected)

EM&V Report Link:.

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	Approved	Program is currently open to customers
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	Approved	Program is currently available to customers.
Residential EE Products Mar- ketplace	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	Approved	Program is currently open to customers.
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	Approved	Program is currently operating.
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	New program	Utility In conjunctionwith the Grid Modernization Phase II filing	Approved	Program is currently open to customers.



Date Petitioned: 12/13/2022

Date Approved: 08/4/2023 (Expected) EM&V Report Link:.

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
	telemarketing voicemail, as well as by utilizing the Company's dominionenergy.com website with banner announcements informing participants an event is in progress				
Residential Retrofit Bundle	The proposed program re-design incorporates key program measures from the Company's Phase VII Residential Home Energy Assessment ProgramA-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	Approved	Program is currently open to customers.
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	Approved	Program implementation is being finalized.
Non-residential Enhanced Pre- scriptive 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.	Building of an currant program	Utility Vendor or RFP process	Approved	Program is currently open to customers.
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	Approved	Program is currently open to customers.



2023 DEV Programs

Table 19: 2023 DEV Program Status

Date Petitioned: 12/11/2023

Date Approved: 09/15/2024 (Expected) EM&V Report Link: Programs pending approval.

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
DSM Phase VIII Non-residential Midstream EE Products Program Enhancements	The Non-residential Midstream EE Products Program consists of enrolling equipment distributors into the Program through an agreement to provide point-of-sales data in an agreed upon format each month. These monthly data sets will contain, at minimum, the data necessary to validate and quantify the eligible equipment that has been delivered for sale in the Company's service territory. In exchange for the data sets, the distributor will discount the rebate-eligible items sold to end customers. This Program aims to increase the availability and uptake of efficient equipment for the Company's non-residential customers.	Program Enhancement	Vendor recommendation	Pending	Pending
DSM Phase XII Non-residential New Construc- tion Program	The Non-residential New Construction Program would provide qualifying facility owners with incentives to install energy efficient measures in their new construction project. Program engineers will determine what potential energy efficiency upgrades are of interest to the owner and feasible within their budget. These measures coupled with basic facility design data will be analyzed to determine the optimized building design. This indepth analysis will be performed using building energy simulation models, which will allow for 'bundles' of measures to be tested for potential energy savings gains from interactive effects. The results will be presented to the facility owner to determine which measures(s) are to be installed. The proposed program design targets three main building-type categories –commercial buildings, industrial buildings, and data centers.	New program	Stakeholder Process	Pending	Pending
Phase XII Residential New Construction Program	The proposed Residential New Construction Program offering will provide incentives to home builders for the construction of new homes that are ENERGY STAR certified by directly recruiting existing networks of homebuilders and Home Energy Rating System (HERS) Raters to build and inspect ENERGY STAR Certified new homes. The re-designed Residential New Construction Program will expand its existing single path offering to encourage added builder participation through a flexible entry-level approach that appropriately incentivizes builders to invest in and promote deeper energy savings. Additionally, the DSM Phase XII proposed re-design supports builders in constructing best in class above-code homes by offering a second tier to building eligibility. These two tiers consist of ENERGY STAR Version 3.1 and ENERGY STAR NextGen Tier.	New program	Stakeholder Process	Pending	Pending



Date Petitioned: 12/11/2023

Date Approved: 09/15/2024 (Expected)

EM&V Report Link: Programs pending approval.

Program	Description	Program Type	Recommended Through	Determination by the SCC	Status
Phase XII Residential Smart Thermostat Purchase (EE)	This Program would provide an incentive to residential customers to purchase a qualifying smart thermostat through the Company's online marketplace platform and brick and mortar participating retailers. The Program is open to several thermostat manufacturers, makes, and models that meet or exceed the Energy Star requirements and have communicating technology. Rebates for the purchase of a smart thermostat are provided on a one-time basis.	New program	Stakeholder process	Pending	Pending
Phase XII Residential Smart Thermo- stat Demand Response (DR)	The Residential Smart Thermostat (DR) Program is a peak demand response program through which demand response is called by the Company during times of peak system demand throughout the year and thermostats of participating customers would be adjusted to achieve a specified amount of load reduction while maintaining reasonable customer comfort through a gradual increase in home temperature and allowing customers to opt-out of specific events if they choose to do so. Customers receive one-time enrollment incentive and an annual incentive for participating in the program.	New program	Stakeholder process	Pending	Pending

APPENDIX IV: DEV DSM RECOMMENDATIONS FEEDBACK

• Recommendation 12: Refer the issues regarding how the cost-effectiveness of DSM Programs is currently measured, including: (i) How the Inflation Reduction Act will reduce the cost of some DSM Programs; (ii) how the inclusion of non-energy benefits (e.g., the social cost of carbon) can better quantify the benefits for all programs and bundles; and (iii) how building codes impact the measurement of cost-effectiveness of DSM Programs to the Stakeholder Group and require a report from the Company on these issues in next year's DSM case.

Summary related to the Inflation Reduction Act: The stakeholders have provided several suggestions for collaboration between Dominion and State-administered IRA-funded activities. These include coordinating on joint consumer education, contractor training, streamlined application and paperwork processing, and data sharing. They also suggest providing resources for consumer awareness, exploring federal and state funding options, adopting industry best practices for data sharing, developing energy efficiency programs for low to moderate income communities, and involving the State in coordinating programs. These suggestions aim to enhance the cost-effectiveness of Dominion's energy conservation programs, improve consumer awareness, and access to funding sources, and maximize the utilization of available funds through collaboration and coordination with State-administered IRA-funded activities.

Stakeholders recommend that Dominion should collaborate with the State to allow customers to utilize Dominion programs to unlock IRA funds. This can be achieved by incorporating IRA benefits into Dominion program marketing materials. They also suggest working towards common goals with the State to leverage IRA funds and reduce the cost of designing and implementing programs. The IRA funds could be used to start a statewide Low-to-Moderate Income (LMI) energy efficiency program, similar to Maryland's EMPOWER program. Stakeholders also recommend developing a coordinated plan for marketing, outreach, engagement, intake, and customer journey support, including a customer web portal. They suggest facilitating data exchange, particularly past and ongoing customer energy consumption data, in accordance with industry best practices for data security and customer privacy. They emphasize that all IRA funds should go towards reducing net program costs and increasing savings to customers, and Dominion should make it easier to process jobs by reducing the number of photos required.

Stakeholders generally perceive the impact of IRA funds on utilities, specifically Dominion Energy programs, as positive. They believe that these funds could expand the reach of current measures or enable new ones, particularly in supporting energy efficiency improvements.



The potential for IRA funds to lower costs to consumers is seen as a motivating factor for participation in Dominion Energy programs. Stakeholders also suggest that smooth integration of IRA programs with Dominion's own could boost participation. However, there are concerns that IRA rebates might outcompete Dominion incentives, potentially reducing participation. Therefore, stakeholders emphasize the need for effective outreach, marketing, and a positive customer experience, as well as collaboration between Dominion Energy and Virginia Energy to ensure coordinated promotion of both IRA and Dominion programs.

Stakeholders suggest that the availability of contractors could be a potential issue in the future, hence proactive planning is necessary. They believe that the IRA workforce development funds could aid in training more contractors in various fields to address current workforce shortages. However, the full impact of this may not be visible for a few years. The IRA funds are expected to increase market demand, thereby increasing the workload for contractors. The IRA programs in Virginia are anticipated to expand and improve the contractor network providing energy efficiency products and services. The rebates offered by the IRA are more generous than utility rebates, and the IRA policies require comprehensive energy audits, contractor training, and continuous improvement plans. This is expected to drive increased interest and uptake of the IRA home energy rebates, leading to an increase in hiring and training by energy efficiency contractors. The federal guidelines for the IRA's home energy rebates require Virginia to have a plan for ongoing provision of services once initial IRA funds are exhausted. This indicates that the statewide program will continue to promote and integrate all available utility rebates. The IRA funds could also be used to help offset the costs of training and certification for contractors. Lastly, stakeholders suggest that trade allies should have a coordinated way to participate in both Dominion and Virginia Energy programs to avoid feeling forced to choose one over the other. Continuity in the market is important to build and maintain contractors' interest, as some programs with short duration cycles have discouraged contractors in the past.

The responses suggest several implications of IRA funding for Dominion's program costs and performance. Firstly, it could lower program costs and costs to customers, making programs more affordable and accessible. This could lead to an increase in customer participation and improved program performance. However, the diversity of participants may alter expected per customer performance. Secondly, there could be potential competition with other rebate programs, particularly the Dominion HVAC Health and Safety program. To avoid this, it is recommended that Dominion actively engage with VA Energy and DHCD to design an integrated approach to delivering services. Thirdly, the interaction of IRA funding with Dominion programs will depend on how the incentives are designed. If Dominion offers a streamlined process for state programs to incorporate the participant value of Dominion rebates, it could reduce overhead costs and potentially increase their rebate values, leading to higher uptake and cost-effectiveness. Lastly, the Total Resource Cost (TRC) framing could be improved if federal funds are treated as exogenous to the utility service area. However, the SCC will need to rule on program attribution and the resulting allocation of savings to avoid double counting of savings among programs. In summary, IRA funding has the potential to lower program costs, improve program performance, and expand program availability. However, careful consideration and coordination with other rebate programs are necessary to avoid competition and ensure efficient use of funds.

Stakeholders are generally interested in the following information related to IRA funding impact:

- A clear plan and timetable for using the funds and implementing programs by the State. This helps stakeholders understand the direction and timeline of the funding impact.
- Accountability and reporting from Dominion, the utility company, about the potentially available sources of funds and steps taken to maximize customer access to these funds. This ensures transparency and accountability in the utilization of IRA funding.
- Information about IRA funding opportunities for non-residential customers. Stakeholders want to understand the specific funding opportunities and benefits that IRA funding can provide to this group.
- The plans and progress of Virginia utilities in adopting green button and orange button data sharing protocols. These protocols enable data sharing related to energy consumption and solar energy, and stakeholders believe their adoption will maximize benefits for all Virginians.

Summary related to non-energy benefits in cost-effectiveness testing: Stakeholders have varying recommendations regarding the addition of non-energy benefits to the four specific tests in Virginia law. Some stakeholders suggest including these benefits in the total resource cost test or any of the tests being used to evaluate Dominion's energy conservation programs. They argue that these tests currently reflect a cost of energy that is artificially low and do not consider factors such as subsidies received from fossil fuels, health impacts, and environmental damage. They propose that attaching a monetary value to non-energy benefits would more accurately reflect the benefits of these programs. However, there are also stakeholders who do not support the addition of any non-energy benefits to the tests unless the savings/costs of these benefits can be directly related to specific energy use and calculated with the same degree of certainty as energy-related benefits. They emphasize the importance of accurate calculations and potential error rates.



Stakeholders recommend several actions for Dominion Energy. These include accelerating the transition to a zero-carbon energy system, advocating for legislative mandates for clean energy, supporting the adoption of the National Standard Practice Manual (NSPM), advocating for portfolio-level cost/benefit analysis, and advocating for policy changes that improve sustainability and lessen negative impacts. They believe these actions will not only benefit the environment but also the company's long-term sustainability and reputation.

Stakeholders raise several points regarding the frequency of updating non-energy benefit inputs. They highlight the constantly changing variables and assumptions involved in calculating these benefits, making it difficult to determine a fixed update frequency. Some argue that these benefits are arbitrary and unpredictable, making it challenging to establish a specific update frequency. Others emphasize the importance of annual updates to align with changing best practices and regulatory impacts. They also suggest that formulas for quantifying these benefits should be regularly updated using current, peer-reviewed scientific data. Stakeholders also point out the increasing costs associated with non-energy benefits, such as health care expenses and CO2 emissions, arguing for regular tracking and updates. Some propose updating these inputs during each DSM program filing cycle and each Integrated Resource Planning cycle. However, there is no consensus on a specific update frequency, with some suggesting every 2-3 years, but acknowledging that this may not capture the dynamic nature of these benefits.

Stakeholders in discussions about the social cost of carbon raise several key points. They recognize the Intergovernmental Panel on Climate Change (IPCC) and the Interagency Working Group on the Social Cost of Greenhouse Gases (IWG) as authoritative sources for determining the social cost of carbon and emphasize the importance of staying current with their latest figures. There is a debate about the appropriate price to be used, with some arguing for the EPA's proposed midpoint cost of \$190/ton and others advocating for the current cost used by the US Government for long-term planning of \$51/ton. Stakeholders also highlight the importance of considering non-energy benefits when determining the social cost of carbon, emphasizing the irreversible dangers to health, safety, infrastructure, and welfare from climate change. They argue for factoring in the total social cost of carbon without excluding harms to people outside the immediate area. Some stakeholders express uncertainty about the appropriate value for the social cost of carbon and suggest relying on reputable organizations to provide a legitimate value.

Stakeholders recommend a comprehensive approach to quantifying non-energy benefits (NEBs). They suggest assigning value to NEBs, considering factors beyond carbon, incorporating an Energy Justice / Environmental Justice score, and ensuring NEBs are program and measure-dependent. They also mention several other NEBs that could be considered, such as national security, mitigation of harms from storms, fires, floods, health benefits, protection of private property and public infrastructure, natural resources, agriculture, and ocean acidification. They emphasize the need for consistent guidance and a detailed framework to ensure accurate quantification of NEBs.

Summary related to building codes: Stakeholders have varying recommendations for an alternative to the current building energy code for new building construction projects. Some suggest maintaining the existing code and incentivizing builders to exceed its requirements, particularly in terms of structural efficiency measures. Others recommend conducting detailed code-compliance studies to understand the actual as-built performance better. However, there is no clear consensus on a specific alternative. The data suggests the importance of maintaining the existing code while encouraging builders to exceed its requirements.

Stakeholders recommend several alternatives for the baseline in 'replace on burnout' equipment retrofit projects. These include considering the current market conditions for retrofit equipment, aligning with the federal minimum standards for the specific products being retrofitted, considering the functionality of the existing equipment, and setting the baseline at a level that is reasonable and achievable within the market. This suggests that the baseline should not necessarily aim for the highest-end or most expensive equipment, but rather should reflect a balance of factors including market conditions, regulatory standards, and practical considerations.

Stakeholders generally recommend using the efficiency of the equipment being replaced as the baseline in retrofit or early-retirement equipment/building projects. They propose prorating costs and savings based on the age of the replaced equipment. If the replaced equipment is still working and has not reached its rated life, no discounting of costs or savings would apply. However, if the equipment is older than its rated life, total installed costs could be discounted, and savings would need to be calculated based on the SEER baseline for a certain number of years and then based on the SEER 14 federal standard baseline for the remaining years. Stakeholders also advise against relying on forecasts and projections for baselines, as they have proven to be unreliable. They believe that using the efficiency of the replaced equipment as the baseline is appropriate and consistent with programs across the country.



• Recommendation 24: Refer the issue of dual-fuel customers to the Stakeholder Group and require a report from the Company on the issue in next year's DSM case.

Summary: Stakeholders made several suggestions to increase participation in Dominion Energy's programs. They proposed offering incentives for increased building structural efficiency and for customers choosing to use electric appliances. They also suggested expanding the programs to include dual-fuel customers that do not have utility natural gas service and expanding the IAQ program to allow for the replacement of traditional gas-fueled storage water heaters with heat pump water heaters. Other suggestions included implementing AMI meters for gas and electric, streamlining, and automating program processes, providing trade allies with metrics for continuous improvement, using participant and program energy data to incentivize trade allies, extending eligibility to residents of multi-family buildings, and reducing bureaucratic burdens for trade allies. These suggestions aim to make the programs more inclusive, increase energy efficiency, promote electrification, and reduce barriers for participation.

The stakeholders made several suggestions for Dominion Energy's programs that depend on both electric and non-electric fuel savings to be cost-effective. These include enabling legislation for a revenue stream, integration with existing programs, consideration of all fuel savings, shareholder incentives based on electricity savings, conversion of gas savings on an MMBTU basis, consistent pricing for different fuels, and joint marketing and administration of the measures. These suggestions aim to ensure adequate funding, effective coordination, alignment of incentives with specific goals, and fairness in evaluating the cost-effectiveness of measures.

Stakeholders recommended that Dominion Energy should collaborate with regulators, legislators, advocates, and industry experts to create an efficient system for calculating and attributing all costs and benefits. They emphasized the importance of energy conservation and suggested that gas utilities could implement efficiency programs that benefit electricity users. They also advised against seeking recovery of benefits from Virginia fuel companies, arguing that any partial subsidizing would likely be offset by increases in revenue. They proposed that measures could be tailored to replace older inefficient equipment with new equipment, regardless of the fuel source. The stakeholders believed that the aggregate effect of such energy savings would outweigh any reduction in savings benefits.

 Recommendation 25: Refer the issue of the Long-Term Plan and DSM Program consolidation to the Stakeholder Group and require a report from the Company on the issue in next year's DSM case.

Summary: Stakeholders have expressed concerns about the complexity of the current 37 programs in VA, which has led to reduced participation. They believe that consolidating these programs into bundled portfolios would simplify them, making them more understandable and accessible. This is particularly seen as beneficial on the low-to-moderate income side, where it would allow for a more comprehensive approach to energy reduction and reduce administrative efforts. However, stakeholders also emphasize the need for Dominion to market these consolidated programs proactively across all its customers in the Commonwealth. While there is support for the idea of consolidation, stakeholders acknowledge that the process is happening slowly.

The challenges identified by stakeholders in bundling programs in a DSM portfolio include aligning vendor contracts, inconsistent rebate amounts, participation issues, a stove piped structure, coordination of program management, and utility staff structure. To mitigate these challenges, stakeholders suggest careful planning and coordination, equalizing rebate amounts, addressing participation concerns before bundling, evaluating cost-effectiveness on a portfolio basis, and hiring a single program administrator for effective coordination. In cases where programs overlap across multiple owners, proper planning and coordination are necessary to structure the utility staff appropriately.

Stakeholders identified several benefits of bundling programs in a DSM portfolio. These include reduced overhead costs for trade allies due to better distribution of costs, more consistent messaging, and a clear path to participation for customers, better distribution of costs and inclusion of measures, flexibility with funding, reduction in startup and administrative costs, improved customer satisfaction, and greater program impacts. These benefits contribute to cost reduction, improved customer experience, streamlined operations, and increased program effectiveness.



• Recommendation 26: Refer the issue of leveraging the functionalities of [Advanced Metering Infrastructure], including geotargeting, in demand-response programs to the Stakeholder Group and require a report from the Company on the issue in next year's DSM case.

Summary: The stakeholders provided several suggestions for designing an AMI-based initiative. They suggested creating a best-in-class customer dashboard to allow customers to easily access and understand their energy usage data. They also recommended deploying behavioral energy efficiency programs at scale to encourage energy-saving behaviors. Making AMI energy data easily accessible and sharable was another suggestion, as this would enable energy auditors and DER aggregators to analyze the data and design programs for energy efficiency and peak shaving. Lastly, they proposed collaborating with Virginia non-profit organizations to leverage their expertise in enhancing the initiative. Overall, the stakeholders emphasized the importance of leveraging AMI data to inform decision-making, engage customers, and drive energy efficiency efforts.