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STATE CORPORATION COMMISSION

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COMMONWEALTH OF VIRGINIA, *ex rel.*

STATE CORPORATION COMMISSION **CASE NO. PUR-2024-00134**

***Ex Parte*: In the matter of establishing energy efficiency savings targets for Appalachian Power Company pursuant to Code § 56-596.2 B 3**

REPORT OF D. MATHIAS ROUSSY, JR., HEARING EXAMINER

November 19, 2024

The Code of Virginia ("Code") directs certain electric utilities, including Appalachian Power Company ("APCo" or "Company") to implement energy efficiency programs[1] for, and funded by, the Company's ratepayers.[2] The Code also directs the State Corporation Commission ("Commission") to establish energy efficiency savings targets for APCo.

This Commission proceeding is to establish energy efficiency savings targets for calendar years 2026, 2027, and 2028, for APCo's overall customer base. Whether APCo achieves these targets will determine whether the Company will be awarded a ratemaking bonus and whether the Commission has the authority to approve carbon-emitting generation resources that are economic.[3] APCo has reported energy efficiency savings of 1.51% and 2.41% for 2022 and 2023, respectively. For 2026 through 2028, APCo proposes savings targets of 1.60%, while case participants have recommended or presented savings targets as high as 3.77%, 4.66%, and 5.56%, using different methodologies. Based on the record, I recommend savings targets of 3.00%, 3.50%, and 4.00%. However, the Commission could weigh the evidence differently to establish targets higher or lower than recommended herein.

PROCEDURAL HISTORY

On January 5, 2024, the Commission entered an Order Establishing Proceeding ("Consolidated Procedural Order") that docketed this proceeding for the purpose of, among other things, establishing annual energy efficiency savings targets pursuant to Code § 56-596.2 for Virginia Electric and Power Company ("Dominion") and APCo for the period 2026 through 2028.[4] The Consolidated Procedural Order, among other things, directed APCo and Dominion to file proposed energy efficiency savings targets on or before March 12, 2024; directed APCo and Dominion to provide notice of their filings; provided opportunities for interested persons to request a hearing and/or submit comments; and directed the Commission's Staff ("Staff") to

[1] These programs are separate from similar programs that may be implemented by government agencies and funded by taxpayers.
[2] The Code allows some large energy users to opt out of paying for APCo's energy efficiency programs if such customers implement energy efficiency measures at their own expense.
[3] Achievement of these targets does not affect the Commission's authority to approve carbon-emitting generation needed for reliability.
[4] The consolidated proceeding was also initiated to establish targets pursuant to Code § 56-596.2:2, a statute that applies only to Dominion.

investigate the utilities' filings and to file a report summarizing the results of Staff's investigation.

On February 2, 2024, Dominion filed a Motion to Modify Procedural Schedule and For Expedited Consideration. On February 14, 2024, the Commission issued an Order Granting Motion that modified the procedural schedule. Among other modifications, the Order Granting Motion extended, to June 12, 2024, the date by which Dominion and APCo were to file proposed energy efficiency savings targets.

On February 28, 2024, APCo filed proof of notice, as directed by the Consolidated Procedural Order.

On June 12, 2024, Dominion filed its proposed energy efficiency savings targets report and APCo filed a separate petition ("Petition").

On July 2, 2024, Appalachian Voices filed a motion requesting a hearing in this matter and procedural modifications. On July 11, 2024, APCo filed a response. On July 19, 2024, Appalachian Voices filed a reply.

On July 26, 2024, the Commission issued an Order Granting Motion and Bifurcating Case ("Bifurcating Order") that maintained Case No. PUR-2023-00227 for the purpose of establishing energy efficiency savings targets for Dominion, but established Case No. PUR-2024-00134 to receive testimony and evidence regarding such targets for APCo.

Also on July 26, 2024, the Commission issued an Order Establishing Procedural Schedule in Case No. PUR-2024-00134 ("Bifurcated Procedural Order") that established a procedural schedule, including an evidentiary hearing to convene on November 4, 2024; directed further notice by APCo; offered opportunities for interested persons to intervene and participate in this case; and appointed a Hearing Examiner to conduct all further proceedings in this case on behalf of the Commission, including filing a report containing the Hearing Examiner's findings and recommendations.

On August 7, 2024, APCo filed proof of notice, as directed by the Bifurcated Procedural Order.[5]

On August 12, 2024, APCo filed a Motion for Protective Ruling. On August 14, 2024, a Hearing Examiner's Protective Ruling was issued.

Notices of participation were filed by Appalachian Voices; Sierra Club; Virginia Energy Efficiency Council ("VAEEC"); and the Office of the Attorney General, Division of Consumer Counsel ("Consumer Counsel").

On November 4, 2024, the public hearing was conducted, as scheduled, in the Commission's courtroom, for the receipt of evidence from the case participants and one public

[5] Proofs of notice, as required by the Consolidated Procedural Order and the Bifurcated Procedural Order, were collectively admitted as Exhibit 1.

witness. Viktoria De Las Casas, Esquire, and Andrew Flavin, Esquire, appeared on behalf of APCo. Cale Jaffe, Esquire, appeared on behalf of VAEEC. Nathaniel Benforado, Esquire, and Emma Clancy, Esquire, represented Appalachian Voices.[6] Evan Diamond Johns, Esquire, and Claire Horan, Esquire, represented Sierra Club.[7] Carew Bartley, Esquire, appeared on behalf of Consumer Counsel. Kiva Bland Pierce, Esquire, Mary Beth Adams, Esquire, and Mike Zielinski, Esquire, represented Staff.

PUBLIC COMMENTS

Fourteen public comments addressed APCo's Petition for energy efficiency. Of those comments, eight recommended the Commission require APCo to meet the Virginia Clean Economy Act ("VCEA")[8] targets and/or expressed a preference for energy efficiency over new fossil-fueled power plants. Edward Long, a Christiansburg resident, identified climate change as a priority. He favors a significant increase in utility funding for energy efficiency and wants initial limits on utilities so tight they are nearly intolerable. Patricia Jackson, a Roanoke resident, asserted that energy efficiency targets must be increased because such programs are vital for reducing waste, lowering costs, and supporting the environment. Ashley Bedore, of Riner, similarly wants increased, not decreased, targets. Rebecca Scheckler, a Draper resident, wants power companies to use more energy efficient methods. Mary Beth Bingham, of Dungannon, hopes the Commission will set targets that help support remediation in very inefficient homes in her community.

The Nature Conservancy ("Conservancy")[9] endorsed the savings targets proposed by Appalachian Voices. The Conservancy believes APCo's targets should be moving towards matching some of the highest savings of comparable utilities and indicated that the Company is already well on its way with a rapidly increasing incremental savings rate projected to achieve 1.3% in 2025. The Conservancy found it unclear why APCo's requested targets are so low. The Conservancy asserted that a bonus for exceeding a target should be earned, and not easily given.

SUMMARY OF THE RECORD

Public Witnesses

Savannah Wilson, a policy analyst at Clean Virginia, expressed concerns about APCo's proposed energy efficiency savings targets, which she views as unjustifiably low. She identified the statutory bonus awarded to utilities for achieving savings targets and paid for by ratepayers. If APCo's targets for 2026 through 2028 are not ambitious, she indicated that the result would be unfair to ratepayers. Citing Staff's testimony, she asserted that APCo has already demonstrated that it is likely capable of exceeding the 2.0% statutory target for 2025. If the Commission approves APCo's proposed 1.6% target for 2026 through 2028, she believes APCo customers

[6] On October 9, 2024, Appalachian Voices filed a Motion for Admission *Pro Hac Vice* of Emma Clancy. A Hearing Examiner's Ruling issued on October 17, 2024, granted this motion.
[7] On August 16, 2024, Sierra Club filed a Motion for Admission *Pro Hac Vice* of Dorothy E. Jaffe, which was granted by a Hearing Examiner's Ruling issued on August 22, 2024.
[8] 2020 Va. Acts chs. 1193, 1194.
[9] Lena Lewis submitted comments on behalf of the Conservancy.

will be forced to pay a performance incentive to APCo for achieving far below its potential and for decreasing its 2026 to 2028 savings significantly from what it is set to achieve by 2025.[10]

APCo – Petition

In its Petition, APCo proposed the Commission maintain, for 2026 through 2028, energy efficiency targets at 2.0% of the Company's 2019 average annual energy jurisdictional retail sales, which is equivalent to the nominal 2025 target established by Code § 56-596.2 B 1 d for APCo.[11] According to APCo, this proposal would allow the Company to maintain its current level of annual investment budgeted for its energy efficiency programs and would allow the Company to replace energy efficiency measures that have reached the end of their effective lives.[12]

APCo clarified that its proposed target was 2.0% of gross energy savings achieved and was contingent on the outcome of the 2023 DSM Case. If in the 2023 DSM Case the Commission directs savings to be reported on a net basis,[13] APCo's Petition proposed a 1.6% net savings target for 2026 through 2028. The Company represented that 1.6% net savings equates to 2.0% gross savings, assuming an 80% net-to-gross ratio.[14]

Referencing the standard in Code § 56-596.2 B 3 prior to July 1, 2024, which directed the Commission to "consider the feasibility of achieving energy efficiency goals and future energy efficiency savings through cost-effective programs and measures," APCo contended that its proposed targets satisfy these criteria for multiple reasons. First, the proposed targets rely on several cost-effective energy efficiency programs that will be implemented between 2025 and 2029, and that were pending in the 2023 DSM Case, at the time of the Petition. APCo reported that it is on track to achieve its 2025 savings amount of 2.0% with an annual budget of approximately $24 million.[15]

Second, APCo indicated that because the cost to implement additional energy efficiency programs is not linear, setting higher targets would impose significant additional costs on APCo's customers. To meet a 3.0% target, the Company indicated it would have to more than double its annual energy efficiency budget.[16]

Third, APCo highlighted limitations on its ability to implement cost-effective energy efficiency programs. These include the effect the federal Energy Independence and Security

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[10] Tr. at 10-15 (Wilson).
[11] Ex. 2 (Petition) at 2.
[12] *Id.*
[13] As discussed below, after APCo filed its Petition the *2023 DSM Order* determined the savings targets are for net, rather than gross, savings. *Petition of Appalachian Power Company, For approval to continue a rate adjustment clause, the EE-RAC, and for approval of new energy efficiency programs pursuant to §§ 56-585.1 A 5 c and 56-596.2 of the Code of Virginia*, Case No. PUR-2023-00169, Final Order (July 26, 2024) ("2023 DSM Case" or "*2023 DSM Order*", as applicable).
[14] Ex. 2 (Petition) at 3.
[15] *Id.* at 3-4.
[16] *Id.* at 4 and attached Appendix A.

Act[17] had on the number of cost-effective residential lighting offerings, which have historically provided significant electricity savings at low cost. Additionally, constant changes to minimum energy efficiency standards for appliances and equipment reduce cost-effective savings that APCo can achieve. APCo also indicated that it has implemented, or petitioned for Commission approval of, programs that address the majority of currently available low-cost and cost-effective electricity savings measures.[18]

APCo's Petition also pointed to the ongoing implementation and assessment of the federal Bipartisan Infrastructure Law[19] and the Inflation Reduction Act.[20] Until APCo can analyze how its programs interact with federally authorized programs that will be managed by the Virginia Department of Energy, APCo will be unable to ascertain the impacts of such programs on its ability to achieve cost-effective electricity savings.[21]

APCo identified the following witnesses to support its Petition:

David Diebel, Principal at ADM Associates, Inc.; **William K. Castle**, Director of Regulatory Services -VA/TN for APCo; and **Tammy C. Stafford**, Manager of Energy Efficiency and Consumer Programs for APCo.

Mr. Diebel sponsored the portions of the Petition related to evaluation, measurement, and verification ("EM&V") methods used by APCo to develop its proposed energy efficiency targets.[22] He confirmed individual program net-to-gross ratios reflected in the Company's most recent evaluation, measurement, and verification report ("2023 EM&V Report")[23] are higher than the 80% assumption incorporated by the Petition. He also identified an 82.7% net-to-gross ratio that he indicated was applicable to the total annual savings for 2022.[24]

Mr. Castle sponsored the portions of the Petition related to policy aspects of developing proposed energy efficiency targets.[25]

Ms. Stafford adopted and supported all portions of the Petition not sponsored by Messrs. Diebel and Castle.[26] She explained that the cost estimate to meet a 3.0% savings target presented in the Petition was based on cost estimates provided, at APCo's request, by two implementation contractors for additional or expanded programs in 2027 and 2028.[27]

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[17] Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (2007).
[18] Ex. 2 (Petition) at 4.
[19] Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021) ("Bipartisan Infrastructure Law").
[20] Inflation Reduction Act of 2022, Pub. L. No. 117-169, 136 Stat. 1818 (2022) ("Inflation Reduction Act").
[21] Ex. 2 (Petition) at 5.
[22] Ex. 3.
[23] The public version of APCo's 2023 EM&V Report (which includes a Commercial and Industrial Report in addition to a Residential Report) was admitted as Exhibit 6.
[24] Tr. at 54-55 (Diebel).
[25] Ex. 3.
[26] *Id.*
[27] Ex. 2 (Petition) at attached Appendix A; Tr. at 49 (Stafford). Based on APCo's plan to not seek additional program approval until March 2026, new or expanded programs could not be implemented until 2027. Tr. at 50 (Stafford).

Virginia Energy Efficiency Council

VAEEC offered the testimony of its Executive Director, **Chelsea Harnish**. Ms. Harnish asserted that the untapped potential for energy efficiency savings is significant and should be seen as achievable. She believes it can be inferred from low Advanced Council for an Energy-Efficient Economy ("ACEEE") scorecard rankings of APCo affiliates in Texas and Ohio that APCo has the ability to capture more savings.[28]

Ms. Harnish expects that if the Commission sets an ambitious savings target, APCo would take actions necessary to meet it. She has previously applauded APCo's efforts to do so in the past. Based on data from prior Commission proceedings, Ms. Harnish indicated that APCo has demonstrated it can achieve more than 2.0% net savings, year after year. Consequently, she recommended the Commission set new goals at levels higher than APCo's prior achievements, based on her expectation of continued performance improvement.[29] In support of her view that weakening the targets would hurt "Virginia's standing in … valuable, ACEEE assessments," she emphasized a legal opinion about the VCEA contained in an ACEEE report.[30]

Ms. Harnish testified that APCo should utilize market segmentation (*e.g.*, geotargeting) in its programs. She described market segmentation as an especially valuable and underutilized tool that can help with grid congestion. She believes this can be accomplished by better leveraging advanced metering infrastructure.[31]

Ms. Harnish expressed concern that "APCo's proposed targets would represent an unnecessary and unfortunate retrenchment" that she described as pulling back from statutory targets. She compared the 2025 statutory target of at least 2.0% to APCo's proposal of 1.6% (net savings) for the period 2026 to 2028. She also took issue with the 80% net-to-gross ratio assumed by APCo's proposed target, which she indicated is much lower than the ratios for many of APCo's existing programs.[32] From the Company's 2023 EM&V Report, she highlighted a 97% average ratio for all four of APCo's commercial and industrial programs and a 92% ratio across all APCo's residential programs.[33]

Ms. Harnish offered her support for including more benefits in the cost-benefit analysis for demand-side management programs.[34]

Ms. Harnish gave kudos to APCo for receiving an award from the U.S. Environmental Protection Agency for the Company's contributions "to energy efficiency and the transition to a clean energy economy." She believes the Company should continue to build on these efforts, but

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[28] Ex. 4 (Harnish) at 5-6. The 2023 ACEEE scorecard report was admitted as Exhibit 5. APCo was not included in the scorecard. Ex. 4 (Harnish) at 5-6.
[29] *Id.* at 6-7.
[30] *Id.* at 8 and Attachment CH-2.
[31] *Id.* at 8-10 and Attachment CH-3.
[32] *Id.* at 10-11.
[33] *Id.* at 11-12. *See* Ex. 6 at Commercial and Industrial Report, p. 5, and Residential Report, p. 8.
[34] Ex. 4 (Harnish) at 13-14.

that there are still several unexplored means by which Virginia utilities could meet more aggressive demand-side management targets.[35]

Appalachian Voices

Appalachian Voices offered the testimony of **Jim Grevatt**, Managing Consultant at Energy Futures Group. Mr. Grevatt's primary conclusions are as follows:[36]

(1) The Company proposes energy savings targets for 2026-2028 that utterly disregard precedent and reflect a complete reversal of the statutory trajectory set forth by the current savings targets. If adopted, these *de minimis* goals will deprive APCo customers of energy efficiency benefits and forego cost-effective solutions to reduce carbon emissions;
(2) APCo has proposed savings targets so low that it will require virtually no additional effort past 2025 to meet the new standard. The Company's forecast of the net total annual energy savings it will achieve from its existing (and approved) programs surpasses its proposed goals by a considerable margin. APCo need only achieve its current forecast through 2025 and it will coast to achievement of the minimal goals it proposes in each year of the 2026-2028 goals period. In fact, APCo's own forecast shows that it will exceed the goals it proposes even if it suspends all of its energy efficiency programs after 2025;
(3) APCo proposes goals that disregard the recent momentum it has established for customer participation in energy efficiency programs. Instead, its proposal reflects the cessation of funding and associated savings for several important energy efficiency programs after 2026. Specifically, in its most recent Petition for approval of new energy efficiency programs in [the 2023 DSM Case], APCo does not appear to have sought to extend budget approval beyond 2026 for energy efficiency kits, business energy solutions, efficient products, and small business direct install programs. In 2027, APCo forecasts that the amount of new net energy efficiency savings it will achieve will decrease to roughly one-tenth of its 2026 forecast savings; and
(4) APCo does not reference low-income programs in the Petition, despite the VCEA's requirement that 15% of program budget proposals be allocated to income and age qualifying programs.

Mr. Grevatt identified the 2018 legislative directive for $140 million of energy efficiency spending during the ten-year period ending July 1, 2028, with which APCo indicated it has already complied. He identified the 2020 VCEA's enactment of an award for achieving energy efficiency targets. In his opinion, "bonuses are not offered for actions that are easily hit without additional effort or changes to operations; a bonus is meant to encourage improved performance."[37] In Mr. Grevatt's opinion, APCo's proposal is a low standard that would effectively allow the Company to obtain the statutory bonus that will not incentivize any

[35] *Id.* at 14-15.
[36] Ex. 7 (Grevatt) at 4-5.
[37] *Id.* at 6-8 (referencing 2018 Va. Acts ch. 296 and 2020 Va. Acts chs. 1193, 1194).

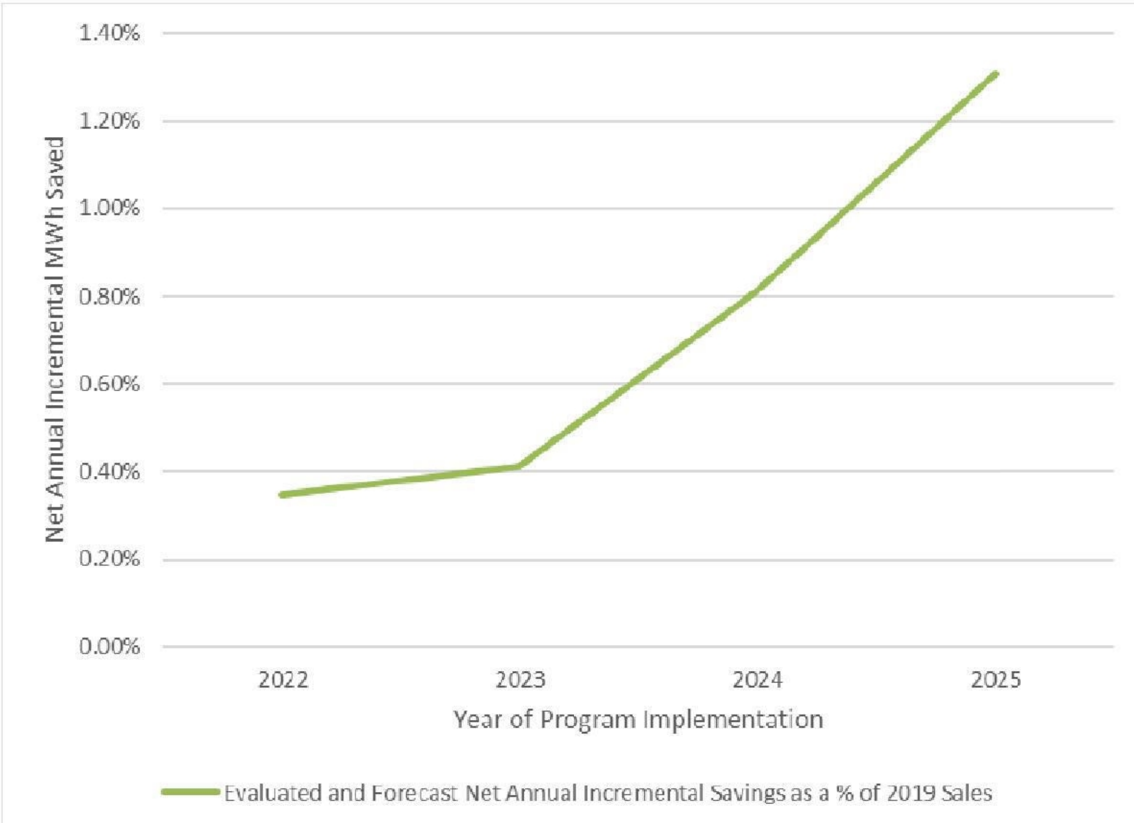
improvement in performance and will instead provide a windfall to shareholders.[38] He also identified a provision of Code § 56-585.1 A 5 c that precludes the Commission from approving the construction of new carbon-dioxide emitting electric generating facilities if APCo has not met its energy savings, which he believes is a strong policy incentive for APCo to maximize such savings.[39]

Mr. Grevatt urged the Commission to rely both on APCo's record of success and its forecast of achievable savings through 2026 based on programs the Commission has approved. He does not believe the Commission should "let APCo off the hook for continuing to achieve savings simply because APCo chose not to submit program extensions in its last petition."[40] He offered a dictionary definition of "feasible" as "capable of being done or carried out." Based on this definition, he asserted that "to be feasible does not mean that a thing should be easy – only that it can be done."[41]

Mr. Grevatt recognized that APCo exceeded its 2022 savings target by nearly three times.[42] He provided the following figure to illustrate APCo's actual net savings for 2022; the Company's forecast net total energy savings for 2023-2025 that the Company provided in discovery; and the statutory targets for these years.[43]

[38] Ex. 7 (Grevatt) at 25. Mr. Grevatt does not believe customers should be forced to reward behavior that does not benefit them by incentivizing new and ambitious energy efficiency efforts. *Id.*
[39] *Id.* at 7.
[40] *Id.* at 8.
[41] *Id.*
[42] *Id.* at 9.
[43] *Id.* at 9-11.

Based on Mr. Grevatt's analysis of data provided by APCo during discovery, he concluded that APCo is ramping up its program savings, increasing the amount of net annual savings it forecasts in each year during 2022-2025. He illustrated his incremental savings calculations with the figure below.[44]



Mr. Grevatt found these results commendable and urged the Commission to direct APCo to capitalize on this success to continue to achieve savings.[45]

Mr. Grevatt recommended that the Commission reject APCo's proposed targets. He recommended that the Commission instead approve the following targets that he asserted are appropriately ambitious and build upon APCo's momentum:[46]

2026	2027	2028
3.20%	3.65%	4.50%

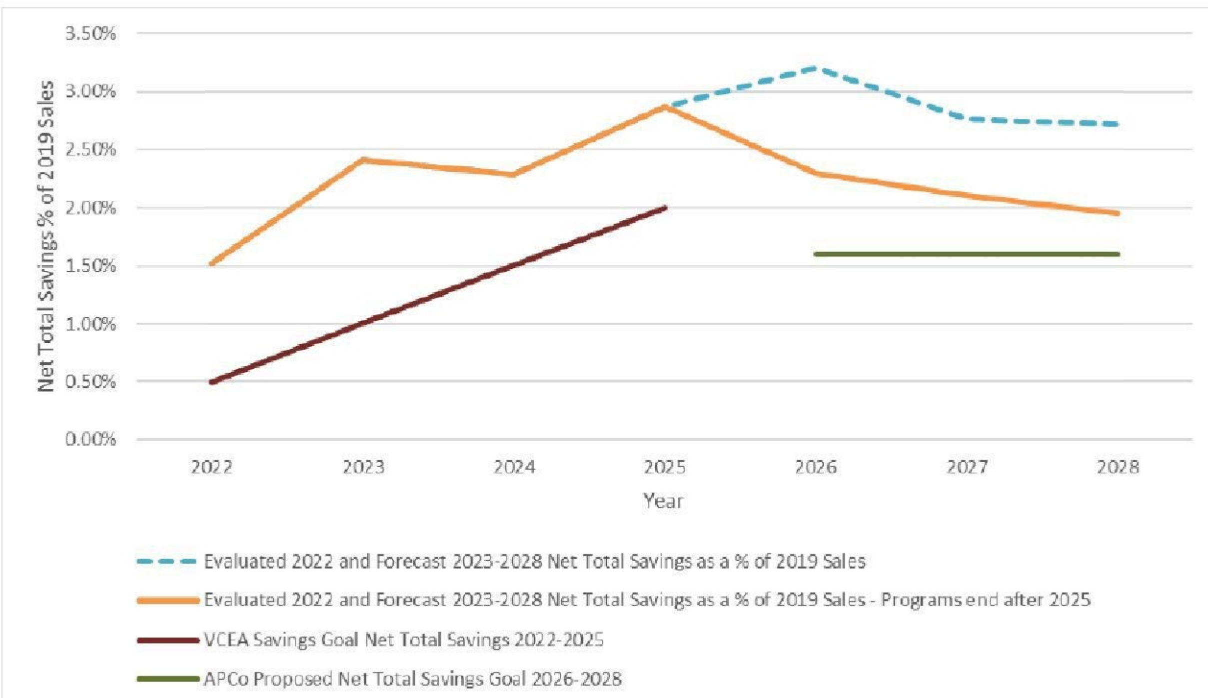
Mr. Grevatt used data from a spreadsheet provided by the Company in discovery to calculate his proposed targets.[47] For his 2026 proposed target, he used: (i) the Company's total

[44] *Id.* at 13-14.
[45] *Id.* at 14.
[46] *Id.* at 5, 30-31.
[47] Tr. at 93-96 (Grevatt). The electronic version of the spreadsheet was admitted as Exhibit 10.

amount of estimated and *ex post* cumulative persistent net savings, which he did not find unreasonable based on APCo's programs and savings based on the ramp-up that is occurring; and (ii) the level of opt-out savings assumed by APCo.[48] He then increased the net savings from his proposed 2026 target by 1.0% net annual savings, which he indicated is lower than the rate APCo projects it will achieve in 2024, 2025, and 2026.[49]

Because of APCo's success and its well-established programs, Mr. Grevatt found it reasonable for the Commission to expect APCo to continue to achieve net annual incremental savings at roughly the same rate it forecasts for 2025 and 2026. He indicated that his proposed targets would sustain approximately 1.0% net annual incremental savings for 2027-2029.[50]

Mr. Grevatt found it remarkable that APCo's proposed targets are considerably less than the savings he indicated the Company projects it will achieve based on its approved programs for 2026-2028.[51] He described APCo's proposed targets as meaningless because the Company is set to exceed them without any additional effort. He presented the following figure to illustrate his assertion.[52]



Mr. Grevatt attributed the decline in projected savings illustrated above to no annual incremental savings or budgets being forecast for the energy efficiency kits, business energy

[48] Tr. at 95 (Grevatt). *See also* Ex. 10, Cumulative Savings Net Tab. (433,965,070+28,289,000)/14,452,000,000 = 3.20%.
[49] Tr. at 95-96 (Grevatt).
[50] Ex. 7 (Grevatt) at 27-29. He also indicated the ACEEE scorecard is useful for purposes of considering what levels of savings are achievable. Tr. at 76-78 (Grevatt).
[51] Ex. 7 (Grevatt) at 15-16.
[52] *Id.* at 17-18.

solutions, efficient products, or small business direct install programs after the 2026 program year. As it stands, APCo has no programs to offer its non-residential customers beginning in 2027. He observed that the goals APCo proposes do not reflect the savings that could be expected to result from such programs if they were to be proposed and subsequently approved by the Commission.[53] He sponsored a discovery response from APCo showing, among other things, net projected energy savings, by program, for each year between 2025 and 2029. Zero savings are shown for energy efficiency kits, business energy solutions, efficient products, and small business direct install programs beginning in 2027.[54] He pointed out that the largest amount of savings shown in 2025 and 2026 is for the business energy solutions program, but zero savings are shown for that program beginning in 2027.[55]

According to Mr. Grevatt, absent Commission intervention, APCo appears poised to squander the opportunity to continue to implement successful programs and deliver benefits to its customers. He observed that APCo's projected new (or net annual incremental) savings would be reduced in 2027 to roughly one-tenth the amount forecasted for 2026 under the Company's plan.[56] He provided a graphic illustrating the lower forecasted incremental savings beginning in 2027, which he agreed shows a "cratering problem."[57]

In Mr. Grevatt's experience, when companies stop running energy efficiency programs and then try to resume them, it is disruptive and makes it much harder to achieve savings. He explained that when companies have ongoing program implementation, they build relationships with customers and market participants that support continued availability of savings.[58] He indicated it may be more expensive to restart programs and rebuild relationships after "the Company had programs and then pulled the rug out from under them."[59]

Mr. Grevatt described APCo's rebuttal testimony indicating that the Company plans to extend some or all of its programs as long as they remain cost-effective to be vague and unsupported.[60] As APCo will exceed its proposed goals simply with projected savings for programs already approved and implemented, should APCo extend some or all of its programs beyond 2026, the Company would exceed its proposed goals by an even greater margin, and be awarded a larger statutory bonus, according to Mr. Grevatt.[61]

Mr. Grevatt challenged the basis for APCo's assertion that its annual budget must increase by approximately $30 million to achieve a 2.40% goal, which is 0.80% larger than the Company's proposal. He described APCo's $30 million figure as an insufficient "back-of-the

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[53] *Id.* at 19.
[54] Ex. 9.
[55] Tr. at 69 (Grevatt).
[56] Ex. 7 (Grevatt) at 21-22.
[57] Tr. at 79 (Grevatt); Ex. 7 at 22.
[58] Tr. at 73, 79-81 (Grevatt).
[59] Tr. at 80 (Grevatt).
[60] Tr. at 70 (Grevatt).
[61] Tr. at 71 (Grevatt).

envelope number."[62] He found significant limitations with APCo's approach of using implementation contractors to produce this cost estimate, which he indicated has little, to no, value in determining the amount of savings APCo could reasonably be expected to achieve.[63] He also testified that if a portfolio of energy efficiency programs is cost-effective, then it displaces utility investments otherwise needed to meet customers' electricity needs.[64]

Mr. Grevatt reiterated that APCo's own forecast shows the Company will achieve more than 2.40% savings in each year from 2026-2028 – in spite of a significantly diminished portfolio and no additional costs above what have already been approved.[65] He could not square APCo's asserted annual budget of approximately $30 million in 2025 and $27 million annually in 2026 through 2028 with a Company discovery response showing annual budgets of roughly $25 million in 2025 and 2026 and around $17.5 million for each of the three following years.[66] Mr. Grevatt acknowledged that he did not provide any estimates of the additional cost it would take in order for APCo to meet his proposed savings targets.[67]

Mr. Grevatt described the statutory goals for 2022-2025 as high, yet realistically achievable for APCo. He pointed to statutory language that the goals for 2029-2031 "shall be the greatest level of energy savings that the Commission finds is feasible and cost-effective."[68] In his opinion, Virginia has an overall policy goal of maximizing energy efficiency savings.[69]

Mr. Grevatt found the fact that APCo's Petition to set savings targets is silent on the subject of low-income programs as inconsistent with the statutory directive for a 15% allocation of costs to programs designed for low-income, elderly, disabled individuals or veterans. If the Commission approves higher savings targets than proposed by the Company, he recommended the Commission also explicitly direct APCo to demonstrate that its income and age qualifying budget is sufficient to meet the 15% requirement in annual efficiency dockets.[70] He did not question budget figures presented in APCo's rebuttal testimony showing currently approved budgets for the Company's low-income programs exceeding 15% of the total programs' budget.[71]

Sierra Club

Sierra Club offered the testimony of **Roger D. Colton**, owner of Fisher Sheehan & Colton Public Finance and General Economics. Mr. Colton's testimony focused on only the residential and low-income sectors.[72]

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[62] Ex. 7 (Grevatt) at 22-24. Mr. Grevatt does not see why APCo would need to expend more than $55 million annually in 2026-2028 to achieve a quantity of net annual incremental savings comparable to the amount APCo forecasts it will achieve in 2025 at a budgeted cost of approximately $25 million. *Id.* at 24.
[63] Tr. at 64-66 (Grevatt). *See also* Ex. 8.
[64] Tr. at 83-84 (Grevatt).
[65] Ex. 7 (Grevatt) at 22-23; Tr. at 74 (Grevatt).
[66] Ex. 7 (Grevatt) at 23.
[67] Tr. at 92 (Grevatt).
[68] Ex. 7 (Grevatt) at 25 (citing Code § 56-596.2 B 4).
[69] Ex. 7 (Grevatt) at 30-31.
[70] *Id.* at 29-30.
[71] Tr. at 86-87 (Grevatt).
[72] Ex. 11 (Colton) at 3-4.

To Mr. Colton, APCo's filing does not comply with the Code or prior Commission orders. He recognized that the proposed net savings of 1.6% is less than the 2.0% 2025 statutory target and does not propose any new savings between 2026-2028. He pointed out APCo's concession that the Company has not specifically calculated the percentage of the total residential budget attributable by year to low-income spending for the three most recent years or for the next three years.[73] While he confirmed that APCo's low-income budgets exceed 15% of the total program budget, he argued that does not comply with the statute.[74]

Mr. Colton testified that APCo's proposal lacks an empirical basis and should be rejected.[75] He indicated that APCo's proposed savings targets are not based on any type of assessment of the potential for electricity savings, analysis of the availability of cost-effective electricity savings measures, or market analysis by APCo or its contractors.[76] Absent a market baseline or efficiency potential study, Mr. Colton asserted that it is not possible for APCo to establish that it has proposed reasonable targets or spending goals.[77]

Mr. Colton presented some basic conclusions about the potential for energy efficiency investments in APCo's service territory using publicly available information.[78] He concluded, among other things, that APCo systematically understates the savings that might be available through basic residential energy efficiency measures such as air sealing, insulation, and controllable thermostats. Failure to consider these measures substantially limits residential electric savings given the extent of electric heating in Virginia. He also believes that APCo could generate more extensive savings through a more extensive replacement of appliances, such as second refrigerators.[79] In support of this assertion, he sponsored a portion of the potential study presented by Dominion in Case No. PUR-2023-00227 estimating the technical and economic potential of certain measures, including second refrigerator recycling.[80] He acknowledged that he does not have any experience with energy efficiency refrigerator recycling programs in APCo's service territory and that he did not review APCo's EM&V results associated with an appliance recycling program identified in Company witness Stafford's rebuttal testimony.[81]

Mr. Colton provided federal survey data about the frequency of homes being drafty, percentages of households with "smart" thermostats, and the prevalence of households that have one or two refrigerators (and the age of such).[82] Based on this data, he believes there is

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[73] *Id.* at 6 and attached Exs. RDC-3 and RDC-4.
[74] *See, e.g.,* Tr. at 128-29 (Colton).
[75] Ex. 11 (Colton) at 10.
[76] *Id.* at 7-9 and attached Ex. RDC-5. In discovery, APCo stated that "[n]either the Company nor its vendors conducted a market baseline or energy efficiency potential study." *Id.* at attached Ex. RDC-5.
[77] *Id.* at 18-19; Tr. at 109 (Colton).
[78] Ex. 11 (Colton) at 10-11.
[79] *Id.* at 11. In APCo's service territory, electricity is the primary heating fuel. *Id.*
[80] Ex. 12; Tr. at 110-14 (Colton).
[81] Tr. at 131-32 (Colton).
[82] Ex. 11 (Colton) at 12-17.

significant electric savings potential arising from the pursuit of residential energy efficiency measures.[83]

Turning to low-income customers, Mr. Colton concluded that APCo is failing to serve the needs of this population through the Company's low-income electricity savings programs (low-income single family, low-income multi-family). Based on census data, he estimated that between 153,928 and 234,539 APCo customers meet the statutory definition of "low-income."[84] He indicated that APCo reports serving roughly 1,030 low-income customers each year through its low-income energy efficiency programs.[85] He indicated the budget increases for the Company's low-income programs are relatively small compared to other programs.[86] He introduced data reported on past weatherization assistance program funding, and he pointed to years that he testified show increased funding due to federal economic incentive spending. He offered this as evidence that when provided additional funding, Virginia community action agencies are capable of ramping up their capacity to deliver energy efficiency services.[87]

Mr. Colton attempted to identify communities of need within APCo's service territory. From a news article's lists of Virginia cities and towns with the most/worst poverty, Mr. Colton identified ten communities in which APCo provides electric service. American Community Survey data indicates, among other things, that approximately 22.5% of the households in these communities have income below the federal poverty level.[88] Mr. Colton performed an analysis of zip codes listed as having high poverty rates. He found that APCo serves 20 of the 50 zip codes listed as having the highest poverty rates in the Commonwealth. He concluded that these 20 zip codes exhibit characteristics that are associated with a need for, but an inability to invest in, energy efficiency measures. He testified that two-thirds of the homes in these zip codes use electricity as their primary heating fuel.[89]

Mr. Colton found several aspects of APCo's economic analysis problematic. He asserted that APCo's total resource cost ("TRC") analysis[90] uses the same "utility" discount rate and "customer" discount rate. He described use of either a utility or customer discount rate as inappropriate and recommended APCo be directed to redo its cost-effectiveness screening using interest rates on long-term (*e.g.*, ten-year) U.S. Treasury Bills. He also took issue with APCo using a single discount rate, rather than using a different discount rate for residential and low-income customers. He believes a discount rate lower than the "utility" or "customer" discount rate is appropriate because he views energy efficiency investment as less risky with regard to

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[83] *Id.* at 17. His conclusions about the potential for savings are not intended to document that APCo excludes these types of savings measures from their program. *Id.* at 18.
[84] *Id.* at 25.
[85] *Id.* at 19, 26.
[86] *Id.* at 20; Tr. at 106 (Colton).
[87] Ex. 13; Tr. at 116-18 (Colton).
[88] Ex. 11 (Colton) at 27-28.
[89] *Id.* at 29.
[90] APCo's TRC cost-benefit analysis includes program installation costs, incremental costs, program overhead costs, avoided energy cost benefits, and avoided capacity cost benefits. Ex. 6 (2023 EM&V Report) at Commercial & Industrial Report, p. 78.

planning, construction, and operation and he sees little risk that societal benefits will not arise given Virginia's cost recovery framework.[91]

Mr. Colton took issue with the inputs to APCo's TRC analysis being limited to avoided capacity and energy costs.[92] He believes failure to account for other program impacts in TRC analysis skews the results against energy efficiency investments.[93] He cited health impacts of energy efficiency savings as a key other program impact that APCo's analysis failed to consider.[94] He also cited participants' increased comfort, increased job creation, and a reduction in utility arrears and associated working capital.[95] He thinks it is asymmetric[96] and "indisputably in error" to give other program impacts an implicit value of $0 by excluding them from the cost-benefit analysis.[97]

Mr. Colton testified that his use of "other program impacts" is not synonymous with externalities. He indicated that reduced uncollectibles, working capital costs, credit and collection costs, and PIPP credits would not be considered externalities, for example.[98] He opined that the General Assembly has determined that certain other program impacts are aspects of the public interest.[99]

To account for other program impacts, Mr. Colton recommended APCo apply a 20% adder in its assessment of the economic potential of non-low-income measures. He based this recommendation in part on his review of data and conclusions from Colorado, Massachusetts, Connecticut, and Maryland.[100]

Mr. Colton asserted that low-income energy efficiency programs should be implemented not only as a resource efficiency measure, but also as an important tool in controlling other system-wide utility costs. He pointed to reduced arrears, reduced working capital, and reduced credit and collection expenses as utility avoided costs that should also be considered in assessing the cost-effectiveness of low-income energy efficiency investments.[101] He expressed concern about an inequitable scenario in which low-income ratepayers are left paying for programs from which they are disproportionately excluded from participation if other program impacts are not adequately incorporated into the TRC cost-benefit analysis.[102] To incorporate other program impacts, such as low-income avoided costs he described as unique, Mr. Colton recommended incorporating a 40% adder into TRC analysis.[103]

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[91] Ex. 11 (Colton) at 31-33.
[92] *Id.* at 33-34.
[93] *Id.* at 37, 43.
[94] *Id.* at 34-36.
[95] *Id.* at 36-37.
[96] *Id.* at 37.
[97] *Id.* at 39.
[98] Tr. at 121-22 (Colton). "PIPP" is the percentage of income payment program established pursuant to Code § 56-585.6.
[99] Tr. at 123 (Colton).
[100] Ex. 11 (Colton) at 40-43 and attached Ex. RDC-2. For low-income customers, Mr. Colton recommended a 40% adder. *Id.* at 54.
[101] *Id.* at 50-54.
[102] *Id.* at 53.
[103] *Id.* at 54.

Mr. Colton recommended that the Commission set energy efficiency targets for APCo's low-income customers at a level no less than 175% of APCo's proposed targets. This recommendation is based on Mr. Colton's views on other program impacts, discount rates, and what he believes are systematic understatements of cost-benefit impacts and the potential for savings from heating and cooling measures in housing units heating with electricity and through air-sealing and basic home insulation.[104] He believes APCo should be directed to increase its savings goals for low-income households with the aim of reaching 50% of eligible households spread equally over a ten-year period.[105]

Mr. Colton made the following recommendations:[106]

- The Commission should reject APCo's current filing and should direct APCo to file a new petition that not only meets the Company's statutory obligations, but is based on a reasonable study of technical, economic, and achievable market potential in the APCo service territory.
- As an alternative to [his] first recommendation, APCo's proposed non-low-income [energy efficiency] targets (net) should be set at no less than 175% of the targets proposed in the Company's filing. This increase does not include any savings from the low-income or other non-residential programs. Nor does it include changes in [the] targets associated with factors other than those [he] discuss[ed]....
- APCo should be directed to increase its savings and spending goals for low-income households. These goals should establish a goal of reaching 50% of eligible households spread equally over a ten-year period.
- That, as part of establishing low-income spending and savings goals, the Commission should require APCo to identify concentrated areas of need in its service territory and target its low-income programs to those areas.
- APCo should be directed to redo its cost-effectiveness screening using the interest rates on long-term (*e.g.*, ten-year) U.S. Treasury Bills as a low-risk discount rate for screening the cost-effectiveness of its energy efficiency programs using the TRC test.
- The Company should be directed to apply a 20% adder to energy efficiency investments in its assessment of the economic potential of non-low-income measures.
- The Company should incorporate [other program impacts] involving the unique low-income avoided costs through the use of an adder for low-income investments. An adder for low-income investments of 40% is most appropriate.

Staff

Staff offered the testimony of **Oliver C. Collier**, a PUR Analyst in the Commission's Division of Public Utility Regulation.

[104] *Id.* at 55-56.
[105] *Id.* at 56.
[106] *Id.* at 4-5.

Mr. Collier's testimony focused on net, rather than gross, savings. He recognized that, after APCo filed its Petition, the Commission's *2023 DSM Order* determined that the statutory savings target would be evaluated on a net basis.[107] He also recognized that the *2023 DSM Order* found, based on a 2022 EM&V Report, that APCo met the established target for calendar year 2022 (*i.e.*, 0.5% of 2019 retail sales) on a net basis. Mr. Collier reported that APCo's savings for 2022 equated to 1.51% of 2019 retail sales.[108] The Commission has not yet made a determination for 2023.[109]

Mr. Collier recognized that APCo's proposed 1.6% net savings target for 2026-2028, which assumes an 80% net-to-gross ratio, would be a reduction from the statutory 2.0% net savings target for 2025.[110] Mr. Collier found the Petition's analysis of APCo's proposed target to be limited.[111] Staff could not validate the budgetary analysis APCo attached to its Petition, and cited discovery responses in which the Company indicated the analysis was not based on a formal potential study or similar "bottom-up" analysis.[112]

Mr. Collier reviewed data provided in APCo's 2023 EM&V Report, which he indicated is the Company's most recent of such reports.[113] From such reports, Mr. Collier indicated that Staff can identify key metrics to help analyze the efficiency of energy efficiency programs and their overall contribution to the savings generated by APCo's energy efficiency portfolio.[114] However, he cautioned that such reports, on their own, might not indicate whether APCo is on track to meet its 2022 through 2025 savings targets because the reports do not include the persistent savings achieved by APCo's historic programs and measure installations.[115]

Through discovery, Staff obtained from APCo additional information that Staff used to try to ascertain whether APCo is currently meeting the statutory 2022 through 2025 savings targets. Mr. Collier indicated that an older vintage of such data appears to be the basis for the *2023 DSM Order*'s determination that APCo achieved the 2022 target.[116] Based on the updated version of this data provided by APCo in discovery, it appears to Staff that APCo is currently exceeding, and expects to continue to exceed, the 2022 through 2025 targets.[117] Mr. Collier presented the following table[118] to summarize the data provided by APCo with some additional data compiled by Staff.[119]

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[107] Ex. 14 (Collier) at 9-11.
[108] *Id.* at 10 (citing *2023 DSM Order* at 9).
[109] Ex. 14 (Collier) at 18, n.60.
[110] *Id.* at 11.
[111] *Id.* at 12.
[112] *Id.* at 14 and Attachment OCC-1 (APCo response to Staff discovery request no. 2-18). APCo described the Petition's budgetary analysis as a "top-down indicative savings projection" provided by implementation contractors "for planning purposes using publicly available information, comparison to other regional utilities." *Id.*
[113] *Id.* at 14-15. As noted above, APCo's 2023 EM&V Report includes a Residential Report in addition to a Commercial and Industrial Report.
[114] *Id.* at 15.
[115] *Id.* at 16.
[116] *Id.* at 16-17.
[117] *Id.* at 17.
[118] *Id.* at 18.
[119] *Id.* at 17, n.58.

Variable	2022	2023	2024	2025
2015-2023 Programs Cumulative Persistent Net Energy Savings (MWh)	190,747	219,655	183,883	182,703
Estimated Non-PUR-2023-00169 2024-2025 Programs Cumulative Persistent Energy Savings (MWh)	-	-	117,616	135,011
Estimated PUR-2023-00169 Program Cumulative Persistent Energy Savings (MWh)	-	-	-	68,201
Opt Out Customer Savings (MWh)	28,289	129,072	28,289	28,289
Estimated Total Annual Energy Savings (MWh)	219,036	348,728	329,788	414,205
Energy Savings Goal (MWh)	72,260	144,521	216,781	289,041
2019 Retail Sales (MWh)	14,452,000	14,452,000	14,452,000	14,452,000
Savings Goal (Percentage of 2019 Energy Retail Sales)	0.5%	1.0%	1.5%	2.0%
Percent Savings Based on 2019 Sales	**1.5156%**	**2.4130%**	**2.2820%**	**2.8661%**
Yearly Growth	1.5156%	0.8974%	-0.1311%	0.5841%
Average Yearly Growth	-	0.4502%	0.4502%	0.4502%
Percent Achievement toward APCo EERS Mandates	303.1%	241.3%	152.1%	143.3%

Mr. Collier indicated that the 2023 savings shown above – *i.e.,* the 348,728 MWh savings, or 2.4130% of 2019 retail sales – represents savings reported by APCo through discovery.[120]

Mr. Collier expressed Staff's concerns about significant forecasted changes in savings between calendar year 2022 and calendar year 2024. He pointed specifically to the use of actual opt-out customer reports submitted to the Commission and APCo for 2023, but the use of APCo projections of such opt-out customer savings for 2024. Given the multi-year lives of the type of energy efficiency investments made voluntarily by large general service ("LGS") customers, it does not appear reasonable to Staff to assume more than 100,000 MWh of savings from LGS opt-out customers will cease after one year.[121] Mr. Collier testified that if LGS opt-out customers' savings – which the *2023 DSM Order* counted towards the statutory target – are understated, it "may result in low savings targets that are easily achievable but may not stimulate additional program offerings to achieve even higher savings."[122]

According to Mr. Collier, APCo is not required to validate LGS opt-out customer savings. However, given the contribution of opt-out savings to APCo's total reported savings in 2022 (12.92%) and 2023 (37.01%), Mr. Collier suggested that the Company: (1) consider having conversations with APCo's largest LGS opt-out customers to determine their savings and

[120] *Id.* at 18. Mr. Collier testified that APCo's 2023 savings have not yet been evaluated in a Commission proceeding. *Id.* at 25.
[121] *Id.* at 20-21. According to Staff calculations, the 544 individual measures in APCo's commercial and industrial programs have an unweighted average useful life of approximately 12 years. *Id.* at 21.
[122] *Id.* at 22.

average measure life for upcoming calendar years; or (2) create a weighted average of measure lives of APCo's programs and measures as a proxy value that could be applied to the reported LGS-opt out customer measures. Mr. Collier asserted that these results could be used to estimate how long persistent savings may continue into the future.[123] Mr. Collier clarified that Staff is not advocating for the Company to verify and validate LGS customer savings, but rather for the Company to utilize information at its disposal to improve upon its short-term forecast of energy savings.[124]

Mr. Collier pointed out that for LGS customers to opt-out, 20 VAC 5-350-30 C requires such customers to provide Staff and APCo information on the specific measures and measure life expectancy implemented by those customers. He also pointed to language in Code § 56-585.1 A 5 c that states "the notice of nonparticipation by a [LGS] customer shall be for the duration of the service life of the customers' energy-efficiency measures."[125]

According to Mr. Collier, APCo provided no quantitative analysis of why its targets proposed for 2026 through 2028 are lower than its estimated savings by 2025. He acknowledged that the federal Energy Independence and Security Act will likely reduce potential energy efficiency savings available to APCo. But he expressed uncertainty as to the net effect (positive, neutral, or negative) the more recent federal Bipartisan Infrastructure Law and Inflation Reduction Act will have on APCo's ability to meet future savings targets.[126] Mr. Collier provided additional factors APCo identified in discovery, including equipment baselines, higher interest rates, and market transformation of energy efficient manufactured housing.[127]

Staff ultimately opposed APCo's proposal to decrease its targets to 1.6% of 2019 retail sales. Mr. Collier concluded from APCo's analysis of past, present, and future savings achievements between 2022 and 2025 that APCo is on track to not only meet its 2025 target, but exceed it by a range of 0.87% to 1.56%, depending on the magnitude and presence of APCo's LGS opt-out customers.[128]

Mr. Collier indicated that the Commission could find APCo's proposed target is "feasible."[129] However, if the Commission finds it appropriate to encourage growth greater than what APCo is currently achieving, Mr. Collier indicated adopting APCo's proposal would be counterproductive to driving energy efficiency savings in the Commonwealth.[130] He presented several Staff alternatives for the Commission's consideration, all of which he indicated could be considered feasible.[131]

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[123] *Id.* at 23.
[124] Tr. at 138 (Collier).
[125] Tr. at 139-40 (Collier).
[126] Ex. 14 (Collier) at 23-24.
[127] *Id.* at 24. APCo proactively closed its manufactured homes energy efficiency program in 2022 due to market transformation. *Id.*
[128] *Id.* at 25.
[129] *Id.* at 27. He cited a dictionary definition of "feasible" as meaning "capable of being done or carried out." *Id.* at 27, n.82.
[130] *Id.* at 26.
[131] *Id.* at 27-33.

Staff's primary alternatives, which are combinations of three different annual incremental savings amounts and two different energy savings starting points, are described and shown below.[132]

Scenario A1: 0.25% annual incremental savings, 2.0% energy savings starting point
Scenario A2: 0.25% annual incremental savings, 2.87% energy savings starting point
Scenario B1: 0.5% annual incremental savings, 2.0% energy savings starting point
Scenario B2: 0.5% annual incremental savings, 2.87% energy savings starting point
Scenario C1: 0.8974% annual incremental savings, 2.0% energy savings starting point
Scenario C2: 0.8974% annual incremental savings, 2.87% energy savings starting point

	Year	A1	B1	C1	A2	B2	C2
Starting Point	2025	2.00%	2.00%	2.00%	2.87%	2.87%	2.87%
Targets	2026	2.25%	2.50%	2.8974%	3.12%	3.37%	3.7674%
	2027	2.50%	3.00%	3.7948%	3.37%	3.87%	4.6648%
	2028	2.75%	3.50%	4.6922%	3.62%	4.37%	5.5622%

Mr. Collier indicated Scenario A1 posits a future in which APCo's concerns and uncertainties related to possible diminishing energy savings potential from federal legislation, in total, becomes a net negative influence on APCo's ability to achieve such savings.[133] He believes Scenario B1 could be considered "status quo" in that it would start from the 2025 statutory target and extend the 2022-2025 statutory increment to 2026-2028. This scenario envisions little to no effect from the items of future concern and uncertainty from federal legislation identified by APCo.[134] Mr. Collier testified that Scenario C1 incorporates APCo's prior actual achievements and acknowledges that the federal legislation might have a net positive impact on APCo's ability to achieve energy savings.[135]

In Mr. Collier's view, Scenario A2 attempts to balance APCo's projected savings achievements by the end of 2025 against a potential future in which the federal legislation diminishes APCo's savings potential.[136] Scenario B2 reflects APCo's projected achievements through 2025, increased by the statutory increment for 2022-2025.[137] Mr. Collier recognized that Scenario C2 offers the most ambitious targets – combining APCo's projected savings achievement by the end of 2025 with the Company's incremental increase achieved between 2022 and 2023.[138]

Mr. Collier also presented two additional sets of alternatives. The first set applied the 0.25%, 0.5%, and 0.8974% annual incremental savings amounts used in Staff's primary alternatives to APCo's proposed target of 1.60%. The second set applied these incremental increases to 2.435% (the midpoint between 2.00% and 2.87%).[139]

[132] *Id.* at 29, 31.
[133] *Id.* at 29.
[134] *Id.* at 30.
[135] *Id.* at 30-31.
[136] *Id.* at 32.
[137] *Id.*
[138] *Id.* at 33.
[139] *Id.* at 33 and Appendix A.

Mr. Collier did not ultimately recommend specific savings targets, identifying this as a question for the Commission to decide.[140]

APCo – Rebuttal

APCo offered the rebuttal testimonies of **Ms. Stafford** and **Mr. Diebel.**

Ms. Stafford disagreed with Sierra Club witness Colton's assertion that APCo's 1.6% proposed net savings falls short of the 2.0% statutory minimum for 2025. She pointed out that the purpose of this proceeding is to establish targets for 2026 through 2028. While she is unclear why Mr. Colton referenced 2025, she represented that APCo is on track to meet the statutory goal for 2025.[141]

Ms. Stafford also disagreed with Sierra Club witness Colton's assertion that APCo is not meeting the statutory requirement that at least 15% of proposed energy efficiency funding be allocated to benefit low-income, elderly, disabled or veteran customers. She provided the following table to show that APCo more than doubles the statutory requirement.[142]

Year	2021	2022	2023	2024	2025	2026
LISF & LIMF	$8,126,858	$8,126,858	$8,126,858	$8,126,858	$11,356,844	$11,369,512
Total Budget	$14,842,414	$21,770,216	$23,543,528	$23,681,121	$29,666,228	$27,504,812
% to Low Income	55%	37%	35%	34%	38%	41%

Ms. Stafford explained that APCo uses community housing partners to implement the Company's low-income programs. Because these partners also implement the State weatherization assistance program, they are able to blend a variety of funding sources, including funding for APCo's low-income programs, to serve customers more effectively. APCo also works with these partners to determine budgets for the Company's low-income programs that allow, to the extent reasonable, all available funding sources to be maximized. Ms. Stafford added that low-income customers can also participate in any of APCo's other residential energy efficiency programs, many of which are no or low cost.[143] She also explained that figures presented in Sierra Club witness Colton's testimony are not the currently approved budgets for APCo's low-income programs.[144]

Ms. Stafford clarified that APCo does not intend to cease offering existing energy efficiency programs at the end of 2026, as suggested by Appalachian Voices' witness Grevatt. APCo intends to extend some or all of its existing programs as long as they remain cost-effective and the Company continues to work with the stakeholder group to identify new cost-effective

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[140] *Id.* at 35.
[141] Ex. 16 (Stafford rebuttal) at 3.
[142] *Id.* at 3-4.
[143] *Id.* at 5-6.
[144] *Id.* at 9.

programs to propose.[145] Any such extensions would be part of a 2026 filing by APCo.[146] She recognized that if APCo seeks no such extensions or new programs in 2026, the Company projects its savings from existing programs would drop from roughly 68,000 MWh to 16,800 MWh.[147] Ms. Stafford agreed that if the requirements beginning in 2029 are for the greatest level of savings achievable, it would be easier for APCo to ramp up to that target instead of starting and stopping programs.[148] Part of the reason APCo is waiting until 2026 for its next program filing is so that it will have more program data, according to Ms. Stafford.[149] A March 2026 filing by APCo would ensure any approved extensions of existing programs could be implemented without disruption.[150]

Ms. Stafford cautioned that APCo's projected savings, such as those shown in Exhibit 9 and incorporated in the 2.87% projected figure used in some of Staff's scenarios, are based in part on targeted savings. These targeted savings assume APCo spends 100% of its budget and gets the maximum amount of savings. She explained that this does not always turn out to be the case. She contrasted the 36,000 MWh business energy solutions savings shown in 2023 with a 15,000 MWh amount she testified were achieved during that year.[151] She acknowledged that the portion of projected savings attributable to expired programs that continue to generate savings are not based on the same optimistic assumptions as projections for existing programs.[152]

Ms. Stafford took issue with Sierra Club witness Colton's suggestion that APCo's Petition should be rejected due to a lack of a market potential study. She indicated that APCo has never been required to perform such a study, the VCEA does not require such a study, and the Company questions the value of conducting such expensive studies. Instead, APCo works with implementation contractors and stakeholders to develop programs, allowing them to grow at a reasonable cost to customers.[153] She indicated that the Company leans more on these groups and evaluation contractors to develop programs because they are working with APCo-specific programs in Virginia.[154] She also noted that for goals beginning with 2029, by statute, such a study will be conducted by an independent expert retained by the Commission.[155] She testified that a market potential study in 2009 cost the Company $260,000 and it did not contain APCo- or Virginia-specific data.[156]

Ms. Stafford addressed the guidance APCo provided the two implementation contractors who provided the cost estimates appended to the Petition. The contractors were instructed to work up estimates for 1% gross savings. APCo told them that anything from 2027 and beyond would have to be a new program or an enhancement to an existing program. The contractors

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[145] *Id.* at 8; Tr. at 170-72 (Stafford).
[146] Tr. at 184-85 (Stafford).
[147] Tr. at 186 (Stafford).
[148] Tr. at 177-78 (Stafford).
[149] Tr. at 187-88 (Stafford).
[150] Tr. at 187-89 (Stafford).
[151] Tr. at 172-73 (Stafford). *Compare* Ex. 9 *with* Ex. 6 at Commercial and Industrial Report, p. 5.
[152] Tr. at 205-06 (Stafford).
[153] Ex. 16 (Stafford rebuttal) at 4.
[154] Tr. at 166-67 (Stafford).
[155] Ex. 16 (Stafford rebuttal) at 5.
[156] Tr. at 166 (Stafford).

were further instructed that they could look outside of recommendations made during the stakeholder process.[157]

Ms. Stafford explained why APCo does not offer incentives to customers for higher efficiency refrigerators. She testified that Energy Star refrigerators are not a cost-effective measure on a stand-alone basis. She indicated that refrigerator efficiency improvements over the baseline have gotten smaller and with greater cost. She added that APCo previously offered, but ultimately closed, an appliance recycling program that struggled with cost-effectiveness.[158]

Unless the Commission approves their use, Ms. Stafford did not support Sierra Club witness Colton's recommendation to add externalities to the TRC test. She explained that the Commission previously declined to include externalities in energy efficiency cost-effectiveness tests in a 2009 report to the General Assembly.[159] In response to the testimony of Mr. Colton and VAEEC witness Harnish, Ms. Stafford asserted that alternative cost-benefit recommendations are beyond the context of this proceeding. She added that APCo is participating in Case No. PUR-2024-00120 and the Company will comply with any order directing the use of a new cost-benefit test.[160]

Ms. Stafford indicated Staff witness Collier's suggestion that APCo work to obtain information from opt-out customers would require additional costs that could potentially be significant. She asserted that APCo is following the opt-out process and rules approved in the Commission's Opt-Out Rules[161] and opined that the Commission should modify such rules to clearly delineate APCo's and applicable customers' responsibilities in this regard.[162]

In Ms. Stafford's opinion, the more rigorous statutory requirement for setting targets beginning in 2029 makes it prudent to avoid setting overly aggressive, and potentially arbitrary, interim targets. While APCo does not recommend increasing the percentage savings target, if the Commission decides to adopt one of Staff witness Collier's options, APCo recommended Staff Scenario A1, which increases a 2.0% starting point by 0.25% annually.[163]

Ms. Stafford testified that the Company is always concerned about affordability. She indicated that the cost to achieve very high or higher savings levels could be substantially more than the statutory margin APCo could be awarded, which is capped by statute.[164]

Mr. Diebel highlighted the definition of "total annual energy savings" in Code § 56-576, which includes savings from measures implemented in prior years so long as they have not yet reached the end of their life. Due to the expiration of savings, APCo must not only generate new savings from current and future programs but must also compensate for the loss of expired savings to increase its total annual energy savings. He contrasted such total savings with the

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[157] Tr. at 168-69 (Stafford).
[158] Ex. 16 (Stafford rebuttal) at 5.
[159] *Id.* at 6.
[160] *Id.* at 7.
[161] 20 VAC 5-350-10 *et seq.*
[162] Ex. 16 (Stafford rebuttal) at 8.
[163] *Id.* at 9-10; Tr. at 209 (Stafford).
[164] Tr. at 191-92 (Stafford).

first-year savings in APCo's EM&V reporting, which are presented on an annual basis and do not account for ongoing savings from measures implemented in prior years.[165]

Mr. Diebel addressed Staff witness Collier's alternative scenarios for targets. He explained that the 0.8974% annual incremental increase used in Staff Scenarios C1 and C2 is APCo's reported total annual energy savings between calendar year 2022 and 2023, which includes a substantial contribution (78%) from LGS opt-out customers. He emphasized that opt-out savings are considered as both first-year and total annual energy savings, since opt-out savings are reported annually without further breakdown. Excluding the opt-out savings decreases APCo's 2022 to 2023 incremental increase from 0.8974% to 0.20%.[166]

Mr. Diebel's understanding is that annual letters are required for an LGS opt-out customer to maintain its status. Mr. Diebel clarified that the significant decrease, from 2023 to 2024, in opt-out savings shown in Staff witness Collier's testimony does not reflect that customers failed to file such an annual update. Rather, APCo does not yet have LGS opt-out savings data for 2024 data because those are not due until March 1, 2025.[167] APCo's position is that it is uncertain whether such filings will occur and, if so, what amounts of savings they will identify.[168]

In light of Staff witness Collier's concerns about the accuracy and persistence of LGS opt-out customer energy efficiency savings, Mr. Diebel testified that the Commission's Opt-Out Rules do not authorize APCo to verify the accuracy of savings reported by opt-out customers. According to Mr. Diebel, the Commission's opt-out rules make opt-out customers responsible for self-reporting savings and limit APCo's role to simply aggregating and reporting the customer-reported values. Validation of LGS opt-out customers' savings is not part of APCo's EM&V efforts.[169] Mr. Diebel asserted that APCo cannot assess the persistence of opt-out customers' savings over time because such customers are not subject to EM&V protocols and the annual certification process and variability in participation each year provides no consistent basis for accurate projections.[170] He acknowledged that simply aggregating customer-reported savings can result in variations that affect the overall trends in energy savings, but asserted that the causes of such fluctuations are "not within the purview of EM&V."[171]

In addition to opt-out customer savings, Mr. Diebel attributed recent increases in APCo's total energy savings to significant programmatic expansions that opened new channels for achieving energy savings. These included launching programs for behavioral home energy reports, custom commercial and industrial, and voltage optimization.[172]

Mr. Diebel contextualized the 2.87% starting point used for some of Staff's alternative scenarios. He indicated that this figure represents projected net savings APCo anticipates

[165] Ex. 15 (Diebel rebuttal) at 2-3.
[166] *Id.* at 4-5.
[167] Tr. at 161-62 (Diebel).
[168] Tr. at 162-63 (Diebel).
[169] Ex. 15 (Diebel rebuttal) at 6.
[170] *Id.* at 6-7.
[171] *Id.* at 7.
[172] *Id.*

achieving by 2025, which is based on program plans and anticipated results. He indicated that such projections reflect planning assumptions that go beyond the current EM&V verified savings levels.[173]

Mr. Diebel explained potential implications of the transition to a single cost-effectiveness test, as mandated by Enactment Clause 2 of Chapter 794 of the 2024 Virginia Acts of Assembly. While not yet clear how it will be aligned with current evaluation methods, he indicated this new approach will incorporate a broader range of benefits and costs. He recognized that changes in how cost-effectiveness is evaluated could change which energy efficiency programs are considered cost-effective.[174]

CODE

Code § 56-596.2, as amended effective July 1, 2024,[175] states in part as follows:

> A. Notwithstanding subsection G of § 56-580, or any other provision of law, each incumbent investor-owned electric utility shall develop proposed energy efficiency programs. 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 c of § 56-585.1. At least 15 percent of such proposed costs of energy efficiency programs shall be allocated to programs designed to benefit low-income, elderly, or disabled individuals or veterans.
>
> B. Notwithstanding any other provision of law, each investor-owned incumbent electric utility shall implement energy efficiency programs and measures to achieve the following total annual energy savings:
>
> 1. For [APCo]:
> a. In calendar year 2022, at least 0.5 percent of the average annual energy jurisdictional retail sales by that utility in 2019;
> b. In calendar year 2023, at least 1.0 percent of the average annual energy jurisdictional retail sales by that utility in 2019;
> c. In calendar year 2024, at least 1.5 percent of the average annual energy jurisdictional retail sales by that utility in 2019; and
> d. In calendar year 2025, at least 2.0 percent of the average annual energy jurisdictional retail sales by that utility in 2019;

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173 *Id.* at 8.
174 *Id.* at 9-10.
175 2024 Va. Acts chs. 794, 818. Code § 56-576 defines "[t]otal annual energy savings" as:

> (i) the total combined kilowatt-hour savings achieved by electric utility energy efficiency and demand response programs and measures installed in that program year, as well as savings still being achieved by measures and programs implemented in prior years, or (ii) savings attributable to newly installed combined heat and power facilities, including waste heat-to-power facilities, and any associated reduction in transmission line losses, provided that biomass is not a fuel and the total efficiency, including the use of thermal energy, for eligible combined heat and power facilitates must meet or exceed 65 percent and have a nameplate capacity rating of less than 25 megawatts.

> 3. For the time period 2026 through 2028, the Commission shall, after notice and hearing, establish new energy efficiency savings targets measured as a percentage of the average annual energy jurisdictional retail sales by that utility in 2019; and
>
> . . .

As shown above, Code § 56-596.2 B 3 states simply that "For the time period 2026 through 2028, the Commission shall, after notice and hearing, establish new energy efficiency savings targets measured as a percentage of the average annual energy jurisdictional retail sales by that utility in 2019[.]" Prior to 2024 legislative amendments, this provision stated in relevant part, as reflected in the Consolidated Procedural Order, that:

> For the time period 2026 through 2028, and for every successive three-year period thereafter, the Commission shall establish new energy efficiency savings targets. In advance of the effective date of such targets, the Commission shall, after notice and opportunity for hearing, initiate proceedings to establish such targets. As part of such proceeding, the Commission shall consider the feasibility of achieving energy efficiency goals and future energy efficiency savings through cost-effective programs and measures.[176]

Code § 56-585.1 A 5 c provides a rate adjustment clause exemption for LGS customers[177] who make their own energy efficiency investments and directs that savings from such customers be counted towards a utility's savings achieved pursuant to Code § 56-596.2. Some of the applicable provisions of Code § 56-585.1 A 5 c are as follows:

> Large general service customers shall be exempt from requirements that they participate in energy efficiency programs if the Commission finds that the large general service customer has, at the customer's own expense, implemented energy efficiency programs that have produced or will produce measured and verified results consistent with industry standards and other regulatory criteria stated in this section. The Commission shall, no later than June 30, 2021, adopt rules or regulations (a) establishing the process for large general service customers to apply for such an exemption, (b) establishing the administrative procedures by which eligible customers will notify the utility, and (c) defining the standard criteria that shall be satisfied by an applicant in order to notify the utility, including means of evaluation measurement and verification and confidentiality requirements. At a minimum, such rules and regulations shall require that each exempted large general service customer certify to the utility and Commission that its implemented energy efficiency programs have delivered measured and verified savings within the prior five years.... Savings from large general service customers shall be accounted for in utility reporting in the standards in § 56-596.2.

[176] 2021 Special Session I Va. Acts ch. 401.

[177] For purposes of its exemption, Code § 56-585.1 A 5 c defines "large general service customer" as "a customer that has a verifiable history of having used more than one megawatt of demand from a single site."

> The notice of nonparticipation by a large general service customer shall be for the duration of the service life of the customer's energy efficiency measures. The Commission may on its own motion initiate steps necessary to verify such nonparticipant's achievement of energy efficiency if the Commission has a body of evidence that the nonparticipant has knowingly misrepresented its energy efficiency achievement.

Code § 56-585.1 A 5 c also establishes the ratemaking significance of achieving Code § 56-596.2 targets:

> Beginning January 1, 2022, and thereafter, if the Commission determines that the utility meets in any year the annual energy efficiency standards set forth in § 56-596.2, in the following year, the Commission shall award a margin on energy efficiency program operating expenses in that year, to be recovered through a rate adjustment clause, which margin shall be equal to the general rate of return on common equity determined as described in subdivision 2. If the Commission does not approve energy efficiency programs that, in the aggregate, can achieve the annual energy efficiency standards, the Commission shall award a margin on energy efficiency operating expenses in that year for any programs the Commission has approved, to be recovered through a rate adjustment clause under this subdivision, which margin shall equal the general rate of return on common equity determined as described in subdivision 2. Any margin awarded pursuant to this subdivision shall be applied as part of the utility's next rate adjustment clause true-up proceeding. The Commission shall also award an additional 20 basis points for each additional incremental 0.1 percent in annual savings in any year achieved by the utility's energy efficiency programs approved by the Commission pursuant to this subdivision, beyond the annual requirements set forth in § 56-596.2, provided that the total performance incentive awarded in any year shall not exceed 10 percent of that utility's total energy efficiency program spending in that same year.
>
> The Commission shall annually monitor and report to the General Assembly the performance of all programs approved pursuant to this subdivision, including each utility's compliance with the total annual savings required by § 56-596.2, as well as the annual and lifecycle net and gross energy and capacity savings, related emissions reductions, and other quantifiable benefits of each program; total customer bill savings that the programs produce; utility spending on each program, including any associated administrative costs; and each utility's avoided costs and cost-effectiveness results.

Code § 56-585.1 A 5 c also establishes the significance of failing to achieve Code § 56-596.2 targets:

> Notwithstanding any other provision of law, unless the Commission finds in its discretion and after consideration of all in-state and regional transmission entity resources that there is a threat to the reliability or security of electric service to the

> utility's customers, the Commission shall not approve construction of any new utility-owned generating facilities that emit carbon dioxide as a by-product of combusting fuel to generate electricity unless the utility has already met the energy savings goals identified in § 56-596.2 and the Commission finds that supply-side resources are more cost-effective than demand-side or energy storage resources.[178]

Appalachian Voices and Sierra Club pointed to the Commonwealth Clean Energy Policy as a policy to maximize energy savings.[179] Code § 45.2-1706.1 A (5) of the Commonwealth Clean Energy Policy states in part as follows:

> The Commonwealth recognizes that effectively addressing climate change and enhancing resilience will advance the health, welfare, and safety of the residents of the Commonwealth. The Commonwealth further recognizes that addressing climate change requires reducing greenhouse gas emissions across the Commonwealth's economy sufficient to reach net-zero emission by 2045 in all sectors, including the electric power, transportation, industrial, agricultural, building, and infrastructure sectors. To achieve these objectives, it shall be the policy of the Commonwealth to:
>
> . . .
>
> Maximize energy efficiency programs as defined in § 56-576, to the extent determined to be in the public interest, that are the lowest-cost energy option to reduce greenhouse gas emissions, in order to produce electricity cost savings and to create jobs and economic opportunity from the energy efficiency sector....

178 *See also* Code § 56-585.1 A 6.

179 Tr. at 218 (Benforado), 227-28 (Johns).

ANALYSIS OF CODE § 56-596.2 TARGETS FOR 2026-2028

Applicable Law

On January 5, 2024, the Commission initiated consolidated Case No. PUR-2023-00227. On April 17, 2024, the Governor signed legislation that amended Code § 56-596.2, effective July 1, 2024. For ease of comparison, a "before and after" of the relevant statutory provisions is shown below.

Before July 1, 2024	On and After July 1, 2024
Code § 56-596.2 B 3: For the time period 2026 through 2028, and for every successive three-year period thereafter, the Commission shall establish new energy efficiency savings targets. In advance of the effective date of such targets, the Commission shall, after notice and opportunity for hearing, initiate proceedings to establish such targets. As part of such proceeding, the Commission shall consider the feasibility of achieving energy efficiency goals and future energy efficiency savings through cost-effective programs and measures.	Code § 56-596.2 B 3: For the time period 2026 through 2028, the Commission shall, after notice and hearing, establish new energy efficiency savings targets measured as a percentage of the average annual energy jurisdictional retail sales by that utility in 2019[.] Code § 56-596.2 B 4: For the time period 2029 through 2031, and for every successive three-year period thereafter, the Commission shall establish new energy efficiency savings targets measured as a percentage of the average annual energy jurisdictional retail sales by that utility in 2019, which shall be the greatest level of energy savings that the Commission finds is feasible and cost-effective pursuant to the Commission's cost-effectiveness test regulations.... As part of such proceeding, the Commission shall consider the feasibility of achieving energy efficiency goals and future energy efficiency savings through cost-effective programs and measures.

APCo asserted that the statute effective when the consolidated case was initiated – *i.e.*, the left column in the table above – is the law applicable to the case.[180] In support of its position, APCo cited the Supreme Court of Virginia's 2022 *Appalachian Power Company* opinion,[181] which relied in part on the Court's *Washington* opinion that the Commission has previously applied.[182] *Appalachian Power Company* quoted, among other things, the following statement from *Washington*: "when a statute is amended while an action is pending, the rights of the parties

[180] *See, e.g.*, Tr. at 20-21, 233-34 (Flavin). APCo's Petition was filed in the consolidated case, prior to bifurcation.
[181] *Appalachian Power Co. v. State Corp. Comm'n*, 301 Va. 257 (2022) ("*Appalachian Power Company*").
[182] *Washington v. Commonwealth*, 216 Va. 185 (1975) ("*Washington*"). I view *Washington* as an important precedent, especially given the more frequent legislative changes made recently to utility statutes governing Commission proceedings. *Washington* provides greater legal certainty to the Commission, regulated entities, other Commission case participants, and potentially also to the General Assembly as it crafts legislation.

are to be decided in accordance with the law in effect when the action was begun, unless the amended statute shows a clear intention to vary such rights."[183] APCo contended that the 2024 legislation contains no manifest and plain expression that its amendments should apply retroactively to filings prior to July 1, 2024.[184] However, VAEEC asserted that the applicable version of the statute is its current form – *i.e.*, Code § 56-596.2 B 3 as it appears in the right column of the table above. VAEEC views the 2024 legislation's use of specific calendar years "as clear an intention as the General Assembly could possibly provide." VAEEC pointed out that if the Commission does not apply the amended language in the instant case, then it will never apply for the 2026 through 2028 period.[185]

Applying *Washington* and similar precedent, the 2024 legislative amendment could express a clear intention for the Commission to apply its amended language when setting the targets for 2026-2028 in this case. By separating the provisions applicable to the 2026-2028 targets (Code § 56-596.2 B 3) from those applicable to future targets (Code § 56-596.2 B 4), the instant case represents the only opportunity to apply the amended language of Code § 56-596.2 B 3. In other words, the question presented in the instant case is not *when* the new language is implemented (the *Washington* issue the Commission typically confronts); the question is *whether* the new language of Code § 56-596.2 B 3 is ever implemented. Accordingly, application of *Washington* and related opinions in the manner suggested by APCo conflicts with the statutory rule of construction that words of a statute are presumed not to be meaningless.[186] By moving more prescriptive language to the statutory provisions governing post-2028 targets to be set in a future case, the plain language of the 2024 amendments could show a clear intent to ensure the Commission has broader discretion in the instant case.

Which version of the statute controls, however, does not materially affect my analysis of this case. That the current version of the statute does not expressly require the Commission to consider feasibility and cost-effectiveness does not mean the Commission cannot, or should not, consider such factors. In exercising its broad discretion, I agree with APCo[187] that the Commission should consider evidence on feasibility and cost-effectiveness when setting APCo's targets for 2026-2028.[188] Consequently, my analysis below would not differ, regardless of the version of Code § 56-596.2 B 3 the Commission decides to apply in this case.[189]

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[183] *Appalachian Power Co.*, 301 Va. at 295 (quoting *Washington*, 216 Va. at 193).
[184] Tr. at 21 (Flavin).
[185] Tr. at 31-32 (Jaffe).
[186] *See, e.g.*, *Bragg Hill Corp. v. City of Fredericksburg*, 297 Va. 566, 584 (2019) ("[W]e presume that every part of a statute has some effect, and [ ] will not consider any portion meaningless unless absolutely necessary.") (quoting *Logan v. City Council*, 275 Va. 483, 493 (2008)).
[187] Tr. at 235 (Flavin).
[188] Additionally, I do not view the requirement for the Commission to consider feasibility and cost-effectiveness (as previously required for setting all targets, but now required for setting targets after 2028) as establishing exclusive criteria for the Commission to consider.
[189] Appalachian Voices asserted that because a broad range of target numbers are feasible, the Commission's decision in the instant case should be informed by the statutory directives for the 2029-2031 targets to "the greatest level of energy savings that the Commission finds is feasible…." Tr. at 217-19 (Benforado). Similarly, VAEEC argued that it is vital for the Commission to look ahead to the 2029 target in setting the greatest level of savings that will be achievable. Tr. at 211 (Jaffe). APCo pointed out that the statutory language for setting targets for 2029-2031 also has a "cost-effectiveness hook." Tr. at 235 (Flavin). *See* Code § 56-596.2 B 4 ("which shall be the

Analysis

The table below shows APCo's proposed targets and the proposals/scenarios that are directly comparable to APCo's proposal.[190]

	APCo	Staff Scenario A1	Staff Scenario B1	Staff Scenario A2	Staff Scenario B2	Appalachian Voices	Staff Scenario C1	Staff Scenario C2
2026	1.60%	2.25%	2.50%	3.12%	3.37%	3.20%	2.8974%	3.7674%
2027	1.60%	2.50%	3.00%	3.37%	3.87%	3.65%	3.7948%	4.6648%
2028	1.60%	2.75%	3.50%	3.62%	4.37%	4.50%	4.6922%	5.5622%

In addition, while not directly comparable to the figures shown above, Sierra Club proposed increasing by at least 175% APCo's residential target amounts not attributable to income- and age-qualifying customers.[191] For low-income households, Sierra Club recommended establishing a goal of reaching 50% of eligible households spread equally over a ten-year period.[192]

APCo's 1.6% proposed target level is the net equivalent of a 2.0% gross savings target, assuming an 80% net-to-gross ratio. APCo's Petition proposed a 2.0% target contingent on the Commission's *2023 DSM Order* determining that the statutory targets are gross savings targets. Had the *2023 DSM Order* made such a determination (which it ultimately did not) APCo's proposed target was intended to continue the 2025 statutory savings target level, extending it through 2028. APCo's Petition also proposed that if the *2023 DSM Order* decided the statutory targets are net savings targets (which it did), the target level should be set at 1.6%.[193]

Staff Scenarios A1, B1, and C1 all use the 2.0% statutory 2025 target as their starting point. Staff Scenario B1 would continue, for 2026 through 2028, the 0.5% annual incremental statutory increase for 2022 through 2025. Staff Scenario A1 would simply use an annual increment (0.25%) that is half the statutory annual increment for 2022 through 2025. The 0.8974% annual increment used by Staff Scenario C1 represents the annual incremental increase, from 2022 to 2023, that APCo reported in discovery.[194]

Staff Scenarios A2, B2, and C2 all use APCo's projected 2.87% net energy savings in 2025 as their starting point.[195] The savings for existing programs that APCo incorporated into this projection include assumptions that the programs will achieve 100% of their targeted savings.[196] APCo's 2.87% projected amount for 2025 also includes continuing savings projected from expired programs and projected LGS opt-out savings that are significantly lower than the

greatest level of energy savings that the Commission finds is feasible and cost-effective pursuant to the Commission's cost-effectiveness test regulations.").

[190] *See, e.g.*, Ex. 2 (Petition) at 5; Ex. 14 (Collier) at 29, 31; Ex. 7 (Grevatt) at 27.

[191] *See, e.g.*, Ex. 11 (Colton) at 55. Mr. Colton indicated that any savings recommendations beyond the residential and low-income sectors would be in addition to his recommendations. *Id.* at 54-55.

[192] Ex. 11 (Colton) at 56.

[193] *See, e.g.*, Ex. 2 (Petition) at 2-3.

[194] Ex. 14 (Collier) at 27-28.

[195] *Id.* at 28.

[196] Tr. at 172-73 (Stafford).

2023 opt-out savings.[197] Staff Scenario B2 would continue, for 2026 through 2028, the 0.5% annual incremental statutory increase for 2022 through 2025. Staff Scenario A2 would simply use an annual increment (0.25%) that is half the statutory annual increment for 2022 through 2025. The 0.8974% annual increment used by Staff Scenario C2 represents the annual incremental increase, from 2022 to 2023, that APCo reported in discovery.[198]

For its 2026 proposed target, Appalachian Voices used: (i) the total amount of estimated and *ex post* cumulative persistent net savings in 2026 attributable to all the Company's energy efficiency programs, totaled from data provided by the Company in discovery; and (ii) the level of opt-out savings assumed by APCo.[199] For its 2027 and 2028 proposed targets, Appalachian Voices indicated it increased the net savings from its proposed 2026 target by 1.0% net annual savings.[200]

APCo has exceeded the statutory targets thus far, achieving 1.51% net savings for 2022. APCo represented that the Company is on track to meet the 2.0% statutory goal for 2025.[201] Staff concluded from APCo's analysis of past, present, and future savings achievements between 2022 and 2025 that APCo is on track to not only meet its 2025 target, but exceed it by a range of 0.87% to 1.56%, depending on the magnitude and presence of APCo's LGS opt-out customers.[202] Based on APCo's actual and forecasted savings, Appalachian Voices described APCo's proposed 1.6% target level as "meaningless, as the utility is set to exceed [it] without any additional effort."[203] Converting a 2.0% gross target (as proposed in the Petition) to a net target based on APCo's recent experience would also produce a net target higher than 1.6%.[204] Moreover, APCo's level of LGS opt-out savings alone in 2023 equates to nearly 0.9%.[205] Based on record evidence regarding APCo's actual and projected levels of achievement, I find APCo's proposed initial target level of 1.6% unreasonably low for 2026. In addition, the record does not support a finding that APCo's feasible energy savings – achievable through a combination of cost-effective programs, low-income programs not required to be cost-effective, and LGS customer opt-outs – have effectively already plateaued at a level slightly above APCo's actual 2022 savings.[206] Accordingly, my analysis does not focus on APCo's 1.6% target proposal.

Similarly, I find the record indicates that the 2.25% initial (2026) target level of Staff Scenario A1 is unreasonably low for APCo. Even assuming that a large amount of LGS opt out savings materialize for only one year (2023) – a significant assumption, the reasonableness of

[197] *See, e.g.*, Ex. 14 (Collier) at 18; Tr. at 205-06 (Stafford).
[198] Ex. 14 (Collier) at 27-28.
[199] Tr. at 94-95 (Grevatt). *See also* Ex. 10, Cumulative Savings Net Tab. (433,965,070+28,289,000)/14,452,000,000 = 3.20%.
[200] Tr. at 95-96 (Grevatt).
[201] Ex. 16 (Stafford rebuttal) at 3.
[202] Ex. 14 (Collier) at 25. *See also* Ex. 7 (Grevatt) at 11, 16.
[203] Ex. 7 (Grevatt) at 17.
[204] *See, e.g.*, Ex. 6 (2023 EM&V Report) at Commercial and Industrial Report, p. 5 (identifying a 97% portfolio-level net-to-gross ratio for APCo's commercial and industrial programs during program year 2023) at Residential Report, p. 8 (identifying a 92% average residential program net-to-gross ratio during program year 2023); Tr. at 54-55 (Diebel) (identifying a 82.7% net-to-gross ratio for APCo's total annual net savings in 2022).
[205] Ex. 14 (Collier) at 18. 129,072/14,452,000 = 0.893%.
[206] *See, e.g.*, Ex. 7 (Grevatt) at 13-14; Ex. 14 (Collier) at 18 (identifying APCo's actual net savings in 2022 as 1.5156%).

which Staff appropriately questioned[207] – APCo projects to achieve 2.8661% net savings in 2025.[208] That APCo's projected savings include optimistic assumptions about implementation of the Company's programs[209] does not lead me to conclude that a higher 2026 target is infeasible. A significant amount of APCo's projected savings in 2025 and beyond are continuing savings from measures that the Company has already implemented.[210] And while additional savings will require voluntary participation by customers, APCo's projected savings associated with measures for which implementation remains ongoing are for programs the Commission has already approved as in the public interest. Moreover, the record demonstrates that LGS opt-out savings, which require no investment or implementation by APCo, could push the Company much higher than its 2025 projection.

Consequently, my analysis focuses on the following recommendations.

	Staff Scenario B1	Staff Scenario A2	Staff Scenario B2	Appalachian Voices	Staff Scenario C1	Staff Scenario C2
2026	2.50%	3.12%	3.37%	3.20%	2.8974%	3.7674%
2027	3.00%	3.37%	3.87%	3.65%	3.7948%	4.6648%
2028	3.50%	3.62%	4.37%	4.50%	4.6922%	5.5622%

Based on the record, including the evidence identified above, I find that Staff Scenario B1 establishes a reasonable low-end of a range of feasible targets pursuant to Code § 56-596.2. And I find that Staff Scenario C2 is a reasonable high-end boundary for feasible targets pursuant to Code § 56-596.2. I recommend proposed targets of 3.00%, 3.50%, and 4.00%, which is near the midpoint between the low- and high-end of the range I find reasonable. These recommended targets are also similar to Staff Scenario A2, which Staff indicated attempts to balance APCo's projected savings achievements by the end of 2025 against a potential future in which federal legislation diminishes APCo's savings potential.[211] However, I recognize the Commission could weigh the evidence differently to approve targets that are higher or lower than my recommendation.

The targets recommended herein are based on my evaluation and weighing of evidence on the feasibility of achieving energy efficiency goals and future energy efficiency savings through cost-effective programs and measures. In doing so, I have given limited weight to the fact that APCo's Petition included incremental cost estimates from implementation contractors,[212] while other case participants offered targets without incremental cost estimates.[213] Cost is only part (albeit an important part) of evaluating the cost-effectiveness of a potential resource. Electric utility resources with incremental costs in the billions of dollars can be cost-effective. In the instant case, limited evidence has been offered on cost-effectiveness beyond the

[207] *See, e.g.*, Ex. 14 (Collier) at 18-23; Tr. at 161-63 (Diebel).
[208] Ex. 14 (Collier) at 18.
[209] Tr. at 172-73 (Stafford).
[210] Ex. 11.
[211] Ex. 14 (Collier) at 32.
[212] Ex. 2 (Petition) at Appendix A. Appalachian Voices described these as "back-of-the-envelope" calculations. *See, e.g.*, Tr. at 37 (Clancy); Ex. 7 (Grevatt) at 23-24.
[213] *See, e.g.*, Tr. at 91 (Grevatt); Tr. at 131 (Colton).

2023 EM&V Report. As discussed above, the energy efficiency goals recommended herein can largely be met through programs that the Commission has previously approved. In general, APCo's 2023 EM&V Report indicates that the Company's approved programs were cost-effective in 2023 except for low-income programs,[214] which need not be cost-effective.[215] The energy efficiency goals recommended herein can also largely be met through LGS opt-out customer savings that are achievable with no additional investment or implementation by APCo.

I have also considered the potential effects of the federal Inflation Reduction Act and Bipartisan Infrastructure Law, which Staff indicated remain substantially uncertain and APCo has not fully assessed.[216] I am also mindful of the Code § 56-585.1 A 5 c consequences that the General Assembly has attached to the achievement, or failure to achieve, the Code § 56-596.2 targets set in this case. Set the target too low, and the ratemaking bonus effectively becomes a ratepayer gift to the utility of up to 10 percent of total energy efficiency program spending in a year.[217] Set the target too high, the Commission may not, absent a reliability issue, consider approving a fossil fuel power plant – no matter how economic the plant may be for ratepayers. These statutory consequences offer further support, in my view, to setting targets near the midpoint of the low- and high-end of the range the record developed in this proceeding establishes as reasonable.

FINDINGS AND RECOMMENDATIONS

Based on the Code and the record developed in this case, I find that:

(1) For purposes of establishing APCo's energy savings targets pursuant to Code § 56-596.2 B 3, the record can support a range of feasible targets for 2026, 2027, and 2028.

(2) The energy savings targets proposed presented in Staff Scenario B1 (2.50%, 3.00%, and 3.50%) establish a reasonable low-end of feasible targets pursuant to Code § 56-596.2 B 3.

(3) The energy savings targets presented in Staff Scenario C2 (3.77%, 4.66%, and 5.56%) establish a reasonable high-end boundary for feasible targets pursuant to Code § 56-596.2 B 3.

(4) Pursuant to Code § 56-596.2 B 3, it would be reasonable to establish for APCo energy savings targets of 3.00%, 3.50%, and 4.00%, for 2026, 2027, and 2028, respectively. These target levels are near the midpoint between the low- and high-end of the range I find reasonable. However, the Commission could weigh the evidence differently to approve targets that are higher or lower than my recommendation.

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214 *See, e.g.*, Ex. 6 (2023 EM&V Report) at Commercial and Industrial Report, pp. 78-79, and at Residential Report, pp. 149-50. As reported, most programs failed the ratepayer impact measurement test. *Id.* However, the significance of that test in Virginia was limited by legislation. 2018 Va. Acts ch. 296.

215 *See, e.g.*, Code § 56-576 (definition of "In the public interest").

216 *See, e.g.*, Ex. 2 (Petition) at 5; Ex. 14 (Collier) at 24.

217 In Consumer Counsel's opinion, "the Commission's task in this case is to find a balance between targets which are feasible but challenging." Tr. at 42 (Bartley).

Accordingly, **I RECOMMEND THAT** the Commission enter an order that:

(1) ***ADOPTS*** the findings and recommendations in this Report; and

(2) ***ESTABLISHES*** for APCo, pursuant to Code § 56-596.2, energy savings targets of 3.00% for 2026; 3.50% for 2027; and 4.00% for 2028.

COMMENTS

Staff and parties are advised that, pursuant to Rule 5 VAC 5-20-120 C of the Commission's Rules of Practice and Procedure ("Rules of Practice") and Code § 12.1-31, any comments on this Report must be filed on or before December 6, 2024. To promote administrative efficiency, the parties are encouraged to file electronically in accordance with 5 VAC 5-20-140 of the Rules of Practice. If not filed electronically, an original and fifteen (15) copies must be submitted in writing to the Clerk of the Commission, c/o Document Control Center, P.O. Box 2118, Richmond, Virginia 23218. Any party filing such comments shall attach a certificate to the foot of such document certifying that copies have been sent by electronic mail to all counsel of record and any such party not represented by counsel.

Respectfully submitted,

D. Mathias Roussy, Jr.
Chief Hearing Examiner

Document Control Center is requested to send a copy of the above Report to all persons on the official Service List in this matter. The Service List is available from the Clerk of the State Corporation Commission, c/o Document Control Center, 1300 East Main Street, Tyler Building, First Floor, Richmond, VA 23219.