COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

PETITION OF

VIRGINIA ELECTRIC AND POWER COMPANY **CASE NO. PUR-2020-00169**

For approval of a rate adjustment clause,
designated Rider RGGI, under
§ 56-585.1 A 5 e of the Code of Virginia

<u>REPORT OF D. MATHIAS ROUSSY, JR., HEARING EXAMINER</u>

June 2, 2021

This case involves Dominion Energy Virginia's proposed rate adjustment clause to begin recovering the costs of CO_2 allowances. The 2020 General Assembly Session enacted legislation that allowed Virginia to join RGGI (pronounced like the name Reggie) and authorized the Virginia DEQ to regulate CO_2 emissions from electric generation facilities in Virginia. RGGI is a multi-state collaboration to cap and reduce CO_2 emissions from electric generation. DEQ regulation, in combination with RGGI membership, requires regulated Virginia generation facilities to obtain and retire CO_2 emission allowances for every ton of CO_2 emitted beginning in 2021. The 2020 General Assembly Session also enacted legislation that deemed the costs of CO_2 allowances purchased by Dominion "environmental compliance project costs" recoverable under Code § 56-585.1 A 5 e, and specifically added a reference to CO_2 allowance costs to this rate adjustment clause statute.

Through Rider RGGI, Dominion seeks to recover Dominion's projected costs of CO_2 allowances through July 2022. Code § 56-585.1 A 5 e allows projected cost recovery and Dominion's recommended $167.8 million revenue requirement is based largely on forecasts and projected actions, operations, and expenditures.

Dominion's Petition was not presented with analysis indicating its short-term RGGI compliance is part of a least-cost strategy that integrates all legal requirements, including new mandatory RPS requirements, that could affect CO_2 emissions. The Commission has previously directed Dominion to conduct and present such analysis in future IRP and RPS plan proceedings. The instant case offers the Commission the opportunity to provide guidance on whether such analysis should also be presented in Rider RGGI proceedings.

Based on the record, I recommend approval of the proposed revenue requirement, subject to true-up in a subsequent Rider RGGI proceeding. I do not view approval of a *projected* cost revenue requirement in the instant case as foreclosing the Commission's authority to review, in future Rider RGGI proceedings, the reasonableness or prudence of *actual* expenditures once they have been incurred. Approximately 3% of the projected revenue requirement is for financing costs of purchased allowances that appear to constitute "costs of allowances purchased" recoverable under Code § 56-585.1 A 5 e. However, should the Commission conclude otherwise on this disputed issue, base rate recovery should be provided for such costs. I also recommend that Dominion provide sufficient support for any cost recovery associated with an allowance bank in any future proceeding in which Dominion seeks to recover such costs.

PROCEDURAL BACKGROUND

On November 9, 2020, Virginia Electric and Power Company d/b/a Dominion Energy Virginia ("Dominion" or "Company") filed with the State Corporation Commission ("Commission") a petition ("Petition") for approval of a rate adjustment clause, designated Rider RGGI, pursuant to § 56-585.1 A 5 e of the Code of Virginia ("Code"). Through its Petition, Dominion seeks to recover projected and actual costs related to the purchase of allowances through the Regional Greenhouse Gas Initiative ("RGGI") market-based trading program for carbon dioxide ("CO_2") emissions and the secondary allowance market. On December 4, 2020, Dominion filed an *errata* and a supplemental filing schedule.[1]

On December 11, 2020, the Commission issued an Order for Notice and Hearing ("Procedural Order") that, among other things, directed the Company to provide notice of its Petition; established a procedural schedule, including public evidentiary hearings to convene on April 27 and 28, 2021; directed the Commission's Staff ("Staff") to investigate the Petition and file testimony and exhibits containing Staff's findings and recommendations; and provided opportunities for interested persons to intervene and participate in this proceeding. The Procedural Order also explained that further details on the April 28, 2021 hearing, to be convened for the purpose of receiving evidence from the Company, any other parties, and Staff, would be provided by subsequent Commission Order or Hearing Examiner's Ruling.

On March 11, 2021, the Commission entered an Order appointing a Hearing Examiner to conduct all further proceedings on behalf of the Commission. On March 24, 2021, a Hearing Examiner's Ruling directed that the April 28, 2021 hearing would be convened virtually due to the ongoing COVID-19 emergency.

No public comments were filed in this proceeding.

Notices of participation were filed by the Virginia Committee for Fair Utility Rates ("Committee"); Appalachian Voices; the Office of the Attorney General, Division of Consumer Counsel ("Consumer Counsel"); and the Board of Supervisors of Culpeper County ("Culpeper County").

On April 27, 2021, a hearing was convened to receive public witness testimony telephonically, as scheduled. One member of the public signed up to testify, but did not answer his phone to provide testimony.

On April 28, 2021, a hearing to receive the testimony and evidence of the parties and Staff was convened, as scheduled, using Microsoft Teams.[2] Joseph K. Reid, III, Esquire, Elaine S. Ryan, Esquire, Sarah R. Bennett, Esquire, Daniel Bumpus, Esquire, and David J. DePippo, Esquire, appeared on behalf of Dominion. William C. Cleveland, Esquire, and Nathaniel H.

[1] Dominion's supplemental filing included Filing Schedule 46D. The Petition requested a waiver from the requirements to file Filing Schedules 45 and aspects of Filing Schedule 46. An Order issued on November 23, 2020, granted the Petition's request for Filing Schedule 45, but denied the request for Filing Schedule 46.
[2] Proof of notice was admitted as Exhibit ("Ex.") 1 in this proceeding.

Benforado, Esquire, appeared on behalf of Appalachian Voices. S. Perry Coburn, Esquire, appeared on behalf of the Committee. C. Mitch Burton, Jr., Esquire, and John E. Farmer, Jr., Esquire, appeared on behalf of Consumer Counsel. Arlen K. Bolstad, Esquire, and Frederick D. Ochsenhirt, Esquire, appeared on behalf of Staff.[3]

On May 19, 2021, Dominion, Appalachian Voices, Staff, Consumer Counsel, and the Committee filed post-hearing briefs.

SUMMARY OF THE RECORD

Dominion – Direct

In support of its Petition, Dominion offered the direct testimonies of **George E. Hitch**, Senior Market Originator for the Company;[4] **Shane T. Compton**, Manager of Integrated Strategic Planning; **John C. Ingram**, Director – Regulatory Accounting; and **Paul B. Haynes**, Director – Regulation.

As described by **Mr. Hitch**, RGGI is the first mandatory market-based program in the United States to reduce greenhouse gas emissions. RGGI is a multi-state collaboration to cap and reduce CO_2 emissions from the power sector.[5] Mr. Hitch provided some of the legal background leading to Virginia's membership in RGGI. This history included a 2019 rule of the Virginia Department of Environmental Quality ("DEQ") that established a state CO_2 regulation program linked to RGGI, followed by budget language prohibiting DEQ from continuing to work on that rule. Then in 2020, the General Assembly passed legislation that authorized Virginia to become a full RGGI participant and DEQ revised its rule to clarify that Virginia would join RGGI in 2021.[6]

DEQ's CO_2 rule will cap Virginia CO_2 emissions at 27.1 million tons for calendar year 2021, with this initial cap decreasing by approximately 3% annually to achieve a 30% emissions reduction from 2020 levels to a level of 19.6 million tons by 2030. Emission sources subject to the rule are required to obtain and surrender one CO_2 emission allowance for every ton of CO_2 emitted during a control period by participating in the RGGI allowance auction program.[7]

As explained by Mr. Hitch, regulated emission sources owned by the Company must acquire CO_2 allowances equal to their CO_2 emissions over each three-year RGGI control period. RGGI's current control period spans 2021 through 2023. RGGI also has interim control period requirements for regulated sources to hold a minimum of 50% of their allowances by the end of

[3] Culpeper County did not participate in the hearing.

[4] Mr. Hitch adopted the pre-filed direct testimony of C. Eric McMillan on behalf of the Company. Consequently, this Report refers to Mr. McMillan's pre-filed testimony as that of its sponsoring witness, Mr. Hitch.

[5] Ex. 4 (Hitch direct) at 2. Mr. Hitch identified the following as RGGI states: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, Vermont, and New Jersey. After Virginia's membership in 2021, Mr. Hitch expects Pennsylvania to join RGGI in 2022. *Id.* at 2.

[6] *Id.* at 3.

[7] *Id.* References to a "ton" in this summary and elsewhere in this Report are to a short ton (*i.e.*, 2,000 pounds), not a metric ton. *Id.*

each of the first two calendar years of the control period (*e.g.*, 2021 and 2022). To demonstrate compliance, each regulated source has a compliance account for allowances.[8] Mr. Hitch testified that CO_2 allowances never expire.[9]

Mr. Hitch further explained that regulated emission sources obtain CO_2 allowances by purchasing them through quarterly RGGI auctions or through secondary markets. Allowances are not subject to any banking limitations and they are tracked and recorded in the RGGI CO_2 Allowance Tracking System ("COATS"). RGGI has an independent market monitor that monitors and reports on the auctions and secondary market activity.[10]

For the RGGI quarterly auctions, each member State uses an online platform to offer allowances in accordance with its own statutory and/or regulatory authority. Auction bidders must provide sufficient collateral to cover all bidding activity. Bids are ordered from the highest dollar value to the lowest and then allowances are allocated to the bids in descending dollar value until all the allowances have been allocated. The marginal bid – *i.e.*, the lowest bid to receive allowances – becomes the auction clearing price that all winning bidders pay for every CO_2 allowance allocated to them.[11] Mr. Hitch provided charts illustrating RGGI auction volumes and prices since 2015.[12]

According to Mr. Hitch, the secondary market allows market participants to buy and sell allowances outside of the RGGI auctions, facilitates prices discovery in between the auctions, and provides tools to manage price risk and volatility. Physical allowances and financial products are traded in the secondary market.[13]

In its Petition, Dominion estimated that it would initially require approximately 19 million CO_2 allowances annually to cover CO_2 emissions from its Virginia generation fleet during the 2021-2023 control period. Based on this annual estimate, Dominion would need to hold at least 9.5 million allowances by December 31, 2021, and 19 million allowances by December 31, 2022.[14]

Although the Company may adjust its compliance strategy in the future, Mr. Hitch testified that the Company intends to follow a programmatic approach to its RGGI obligations by trying to acquire 25% of the forecasted annual allowance requirement in each of the quarterly auctions and, if unsuccessful, using the secondary market.[15] While he described this compliance

---

[8] *Id.* at 4.
[9] Tr. at 53 (Hitch).
[10] Ex. 4 (Hitch direct) at 4-5. Market monitor reports for RGGI auctions and the secondary market were admitted into the record. *See* Ex. 2 (Petition) at Filing Sched. 46A, Statement 2; Exs. 6 (DEV-PE-6), 7 (DEV-PE-7).
[11] Ex. 4 (Hitch direct) at 5.
[12] *Id.* at 7.
[13] *Id.* at 5. A physical allowance trade occurs when a buyer and seller agree to specific commercial terms and then register the transfer of allowance ownership in RGGI COATS. Financial products include contracts where the buyer and seller agree to exchange funds and/or allowances at some future date under specific conditions. The most commonly traded financial products are forward contracts and future contracts. *Id.* at 6.
[14] *Id.* at 8.
[15] *Id.*

strategy as "not based on any price outlook,"[16] he testified that the Company believes its strategy will ultimately provide the least-cost result.[17]

Dominion also plans to maintain a bank of allowances equal to approximately 10% to 20% of the annual requirement.[18] This equals 1.9 million to 3.8 million allowances based on the estimated 19 million annual allowances provided in the Petition.[19] Mr. Hitch clarified that the Company would not plan to maintain a bank at this level, but would instead try to build an allowance bank to this level at the end of the current control period (*i.e.*, December 31, 2023).[20]

To calculate the revenue requirement proposed in the Petition, Dominion assumed a weighted average price of $6.84 per allowance based on the actual clearing price in RGGI Auction 49, actual secondary market transactions, and a forward price curve.[21] Mr. Hitch sponsored an exhibit summarizing the actual CO_2 allowances purchased by the Company at the time of the hearing as follows.[22]

Dominion Energy Virginia RGGI Allowance Purchases as of April 22, 2021

Date	Volume	Price ($/short ton)	Market	Total Inventory
9/2/2020	750,000	$6.82	Auction 49	750,000
9/28/2020	250,000	$6.73	Secondary	1,000,000
12/2/2020	300,000	$7.41	Auction 50	1,300,000
3/3/2021	4,075,000	$7.60	Auction 51	5,375,000

Mr. Hitch co-sponsored Filing Schedule 46A, Statements 1 and 2, with Mr. Compton.[23]

Mr. Compton testified in support of the forecast of CO_2 emissions from the Company's Virginia generation facilities. Dominion used PLEXOS modeling software to simulate economic dispatch of the Company's generation units to meet projected load requirements, then pulled the projected emissions for the Company's Virginia units that emit CO_2.[24] When the Petition was filed, Mr. Compton provided the emissions results from a PLEXOS modeling run conducted in October 2020.[25] At the hearing, Mr. Compton provided updated emissions results from a PLEXOS modeling run conducted in March 2021.[26] He sponsored an exhibit that showed the monthly emissions results of both modeling runs, along with the forecasted allowance prices assumed in the modeling, as follows.[27]

[16] *Id.*
[17] Tr. at 54 (Hitch).
[18] Ex. 4 (Hitch direct) at 8.
[19] Tr. at 53 (Hitch).
[20] *Id.*
[21] Ex. 4 (Hitch direct) at 9.
[22] Ex. 5 (DEV-PE-1).
[23] Ex. 4 (Hitch direct) at 2.
[24] Ex. 8 (Compton direct) at 2.
[25] *Id.* at Attached Sched. 1. *See also* Ex. 9 (DEV-PE-2).
[26] Ex. 11 (DEV-PE-5).
[27] Ex. 10 (DEV-PE-3).

CO_2 Emissions Volume and Price Forecast

	Oct. 2020 PLEXOS Outlook (as filed)			Mar. 2021 PLEXOS Outlook	
	Tons CO_2	Allowance Price		Tons CO_2	Allowance Price
Jan-21	1,337,487	$6.91			
Feb-21	1,388,272	$6.91			
Mar-21	1,447,889	$6.91			
Apr-21	1,148,777	$6.91	Apr-21	1,210,135	$8.34
May-21	1,415,430	$6.91	May-21	1,353,619	$8.34
Jun-21	1,632,852	$6.91	Jun-21	1,435,491	$8.34
Jul-21	2,093,198	$6.91	Jul-21	2,057,486	$8.34
Aug-21	2,151,129	$6.91	Aug-21	2,148,123	$8.34
Sep-21	1,519,562	$6.91	Sep-21	1,625,451	$8.34
Oct-21	873,141	$6.91	Oct-21	946,225	$8.34
Nov-21	1,235,813	$6.91	Nov-21	1,258,549	$8.34
Dec-21	1,618,607	$6.91	Dec-21	1,619,461	$8.34
Jan-22	1,625,533	$6.69	Jan-22	1,449,187	$8.33
Feb-22	1,674,251	$6.69	Feb-22	1,653,576	$8.33
Mar-22	1,651,361	$6.69	Mar-22	1,697,800	$8.33
Apr-22	1,440,970	$6.69	Apr-22	1,446,773	$8.33
May-22	1,253,849	$6.69	May-22	1,269,036	$8.33
Jun-22	1,650,957	$6.69	Jun-22	1,578,038	$8.33
Jul-22	2,288,023	$6.69	Jul-22	2,174,187	$8.33
Aug-22	2,317,061	$6.69	Aug-22	2,238,197	$8.33
Sep-22	1,699,243	$6.69	Sep-22	1,695,294	$8.33
Oct-22	942,157	$6.69	Oct-22	871,059	$8.33
Nov-22	1,669,331	$6.69	Nov-22	1,637,418	$8.33
Dec-22	1,858,761	$6.69	Dec-22	1,782,946	$8.33

Mr. Compton explained that RGGI will affect dispatch. All else being equal, adding the cost of allowances to CO_2-emitting generation units that are subject to RGGI will likely result in those units dispatching less. To account for this in the PLEXOS modeling, a forecasted cost of CO_2 allowances was added to the Virginia units that are subject to RGGI. As CO_2-emitting units dispatch less, PLEXOS replaces the lost generation with market purchases.[28]

Mr. Compton explained that the 19 million annual figure identified by Company witness Hitch is an average for the current three-year control period. For the three years that are averaged, the estimated emissions are 17.8 million tons for 2021, approximately 20 million tons

[28] Ex. 8 (Compton direct) at 2-3.

in 2022, and approximately 19 million tons in 2023.[29] Allowances purchased to cover these quantities of emissions would not include any allowances obtained for an allowance bank.[30]

Mr. Ingram described how the Petition's $167.37 million Rider RGGI revenue requirement was developed for an August 1, 2021 through July 31, 2022 rate year, and sponsored supporting calculations for this revenue requirement.[31] He sponsored Filing Schedule 46B, Statements 1 and 2. He co-sponsored Filing Schedule 46D, Statements 1 and 2, with Mr. Compton.[32]

For accounting purposes, Mr. Ingram explained that Dominion will track purchased RGGI CO_2 allowances in the aggregate as an intangible asset. As CO_2 emissions are produced each month, this intangible asset will be amortized based on the then-present weighted-average cost per allowance. Based on the timing of allowance auctions and purchase dates, Dominion expects to carry an intangible asset representing aggregated purchased, but unamortized, allowances.[33] In a given month, this allowance inventory balance could be either positive or negative.[34]

Mr. Ingram explained that using a weighted average cost for the monthly allowances consumed and removed from the allowance inventory is a customary approach that Dominion also uses for fuel inventory.[35] He indicated that it is standard accounting policy for assigning value to fungible items, like CO_2 allowances.[36]

Mr. Ingram testified that the proposed Rider RGGI revenue requirement includes a Projected Cost Recovery Factor, but not an Actual True-Up Factor amount. An Actual True-Up Factor would be included in the next Rider RGGI filing to true-up projected costs and Rider RGGI recoveries to actual amounts.[37] The Projected Cost Recovery Factor revenue requirement consists of projected amortization expense for CO_2 allowances and projected financing costs on the unamortized purchased CO_2 allowance balances during the rate year.[38] The Projected Cost Recovery Factor also includes the amortization of deferred costs, including financing costs, incurred prior to August 1, 2021 (the beginning of the rate year).[39] Mr. Ingram indicated that the proposed treatment of deferred operating costs and rate base items is consistent with other Company rate adjustment clauses under Code §§ 56-585.1 A 5 and A 6.[40]

---

[29] Tr. at 62-63 (Compton).
[30] Tr. at 63 (Compton).
[31] Ex. 12 (Ingram direct) at 5 (corrected), Attached Corrected Sched. 1.
[32] Ex. 3 (December 4, 2020 supplemental filing) at 1.
[33] Ex. 12 (Ingram direct) at 2. *See also* Ex. 2 (Petition) at Filing Sched. 46B, Statement 2, p. 1.
[34] Tr. at 73, 79, 249 (Ingram).
[35] Tr. at 84, 97 (Ingram).
[36] Tr. at 84-85 (Ingram) ("[T]his is all just kind of a blob of allowances at the end...there isn't a specific allowance when you buy and you say, well, this is the one I'm going to retire at the end of the control period....The[re] [are] not vintages or anything like that....So it's more of a pool.").
[37] Ex. 12 (Ingram direct) at 2-3.
[38] *Id.* at 4.
[39] *Id.* at 3-4.
[40] *Id.* at 4.

Dominion calculated the financing cost portion of the RGGI revenue requirement by multiplying the thirteen-month average rate base as of July 31, 2022, by a cost of capital.[41] Dominion's cost of capital calculations incorporated: (a) the 9.2% rate of return on common equity ("ROE") approved in Case No. PUR-2019-00050; and (b) Dominion's December 31, 2019 year-end capital structure and cost of capital with certain adjustments, consistent with Commission Orders in Case Nos. PUE-2009-00019 and PUR-2020-00003.[42] Mr. Ingram explained that the Rider RGGI rate base is comprised of month-end unamortized purchased CO_2 allowance balances, cash working capital, and unrecovered deferred costs.[43]

Mr. Ingram testified that the Company will only request Rider RGGI recovery for costs and expenses directly associated with the purchase and amortization of CO_2 allowances. Any indirect costs, such as broker fees or Dominion Energy Services, Inc., costs will be recovered in the Company's base rates.[44]

Mr. Haynes sponsored the Company's proposed Virginia jurisdiction and class allocations. He developed a 79.925% jurisdictional factor using forecasted energy usage for the rate year.[45] Based on Mr. Haynes' understanding of the Company's need to acquire CO_2 allowances equal to CO_2 emissions from the Company's regulated Virginia sources, the Company proposed an energy allocation.[46] Mr. Haynes developed a uniform per kilowatt-hour Rider RGGI charge by dividing the Company's proposed revenue requirement supported by Mr. Ingram by estimated Virginia jurisdictional kilowatt-hour sales during the rate year.[47] As proposed, all Virginia jurisdictional customers would pay 0.2388 cents per kilowatt hour.[48] Mr. Haynes sponsored Filing Schedule 46D, Statement 3.[49]

Consumer Counsel

Consumer Counsel offered the testimony of **Ralph C. Smith**, C.P.A., a senior regulatory consultant in Larkin & Associates, PLLC. To Mr. Smith, Dominion's recovery of RGGI costs appears more similar to fuel and purchased power cost recovery than to investment in new generation facilities or other utility infrastructure.[50] He testified that rate base investment in fuel inventory and environmental emission allowances is addressed in base rate revenue requirement, rather than through fuel factor recovery.[51] He described fuel factor recovery and recovery under Code § 56-585.1 A 5 as similar.[52] He recommended that no carrying costs be allowed for Rider

[41] *Id.*
[42] *Id.* at 2-4 and Attached Corrected Sched. 1, p. 12.
[43] *Id.* and Attached Corrected Sched. 1, pp. 3-5.
[44] *Id.* at 5.
[45] Ex. 14 (Haynes direct) at 3 (corrected), Attached Corrected Sched. 1.
[46] *Id.* at 2.
[47] *Id.* at Attached Corrected Sched. 2.
[48] *Id.* at Attached Sched. 3.
[49] Ex. 3 (December 4, 2020 supplemental filing).
[50] Ex. 17 (Smith) at 9.
[51] *Id.*
[52] *Id.* at 10.

RGGI because the Company is seeking approval for timely and current recovery of the costs. He asserted that Rider RGGI should recover only the direct cost of CO_2 allowances.[53]

Mr. Smith does not see a policy reason for including carrying costs in Rider RGGI and he testified that:

> I think you want to set the incentives properly and don't create a situation where rate payers are getting charged rate increases and the companies are getting their profits increased for these rate base items when there is a triennial review proceeding that is perfectly suited for dealing with these types of items.[54]

Mr. Smith explained that if Dominion buys RGGI allowances in advance of their consumption, "that would tend to create ... an emission allowance inventory situation."[55] He indicated that for Dominion there is precedent for addressing NOx and SO_2 allowance inventories in biennial review proceedings.[56] He did not investigate how such costs have been treated in rate adjustment clauses approved under Code § 56-585.1 A 5 e for Appalachian Power Company ("APCo").[57]

Mr. Smith explained the concept of an inventory, using fuel inventory as an example.[58] He acknowledged there could be carrying costs associated with an allowance inventory, but maintained that any such costs should be considered in Dominion's triennial review.[59]

Citing New Jersey's prior exit from RGGI, Mr. Smith indicated that while Virginia is now in RGGI, "[t]hat doesn't mean that Virginia is going to be in the RGGI program forever...."[60] He indicated that "a major pullout or change in policy could render the value of [RGGI] allowances much less."[61]

Appalachian Voices

Appalachian Voices offered the testimony of **Karl R. Rábago**, principal of Rábago Energy LLC. Mr. Rábago recommended the Commission reject Dominion's Rider RGGI Petition as it relates to the Company's proposed RGGI allowance strategy – "both as to the quantity of allowances and mode of procurement."[62] He recommended that the Commission review the actual costs incurred by Dominion to procure necessary allowances "in light of the Company's [integrated resource planning ("IRP")] and [renewable portfolio standard ("RPS")]

---

[53] *Id.*
[54] Tr. at 155 (Smith).
[55] Tr. at 137 (Smith).
[56] Tr. at 136-37 (Smith).
[57] Tr. at 155-56 (Smith).
[58] Tr. at 145-48 (Smith).
[59] Tr. at 150-51 (Smith).
[60] Tr. at 151 (Smith).
[61] Tr. at 151-52 (Smith).
[62] Ex. 15 (Rábago) at 4.

planning efforts" and that such costs "be estimated and projected based on reasonable assumptions and inputs regarding the operation of generating units and generation operations affected by" DEQ's CO_2 rule.[63]

He described "the optimal RGGI compliance approach" as one that takes into account IRP and RPS information results, including generation development and energy procurement, plant retirement timing, plant upgrades, increased energy efficiency programs, support for small and distributed generation development, and many other factors."[64] In his view, cost-effective compliance is inextricably related to both the IRP and RPS obligations Dominion faces under Virginia law.[65] He believes RGGI allowance strategy should start from the results of an approved and sufficient IRP and a least-cost Virginia Clean Economy Act ("VCEA") compliance plan, including a plan for least-cost RPS compliance.[66]

It does not appear to Mr. Rábago that Dominion's allowance strategy is integrated with reasonable IRP and RPS compliance planning efforts. In this regard, he testified that the Company's filing does not indicate that Dominion updated its modeling assumptions and planning since it submitted its 2020 IRP – which the Commission determined was not reasonable and prudent. He also indicated that because Dominion did not develop a robust analysis of, or propose a plan for, least-cost compliance with the RPS, the amount of allowances required under RGGI could change once such analysis is conducted.[67] He testified that the Company did not evaluate multiple RGGI allowance price scenarios or evaluate multiple scenarios for procurement strategies in developing its RGGI allowances strategy. He further indicated that the Company did not: (1) offer any historical or probabilistic analysis to determine whether a surplus is appropriate and, if so, at what procurement level and price; (2) evaluate the role that plant retirements and heat rate improvements could play in reducing RGGI allowance costs; or (3) evaluate the role that increased energy efficiency, distributed generation, and other distributed energy resources could play in reducing RGGI allowance costs. He described the Company's plan as one "to rapidly purchase huge amounts of allowances and then carry a significant surplus of allowances, on which the Company proposes to earn a return on equity."[68]

Mr. Rábago advocated for a long-term strategy for CO_2. He indicated that while the Company's compliance approach "would ensure compliance with the RGGI requirements, it does not ensure least-cost compliance."[69] He emphasized that the "dollars that are being proposed to be spent for recovery through the RGGI rider are huge, in the billions of dollars" through 2045.[70]

He testified that RGGI participation is "supposed to and will send short-term and long-term price signals to the Company." He recognized that Dominion "is likely to be the largest

[63] *Id.*
[64] *Id.* at 5.
[65] *Id.* at 7.
[66] *Id.*
[67] *Id.* at 12.
[68] *Id.* at 12-13.
[69] Tr. at 102 (Rábago).
[70] Tr. at 104 (Rábago).

single buyer of allowances in the RGGI market" until other States join.[71] However, "a simple divide-by-4" strategy for allowance purchases from the auction "isn't necessarily the best thing" in his view.[72]

Mr. Rábago indicated that heat rate improvements or plant retirements can generate operating cost savings and avoid allowance costs. He also indicated that distributed energy resource incentives should be part of Dominion's RGGI compliance strategy.[73]

While Mr. Rábago endorsed the wisdom of developing an allowance banking strategy as a hedge against market volatility and unexpected increases in demand for energy, he testified that the banking quantity should be based on probabilistic analysis tied to historical trends and modeling forecasts. He indicated that the Company's proposed 10 to 20 percent surplus does not appear to be based on any such analysis.[74]

However, he recommended that the Commission grant deferred accounting treatment, subject to a later prudence review of costs incurred. He testified that this approach would not prejudice the Company "since its first full compliance with RGGI allowance requirements will not occur until December 31, 2023, and deferred accounting can be used to recover costs of prudent spending on allowance procurements."[75]

He asserted that the Commission should approve the recovery of prudently incurred financing costs related to advance procurement of allowances where that generates the lowest portfolio cost. He believes "[i]n many ways, the same cost-minimization strategies used in fuels procurement should translate to RGGI allowance strategy, with the added consideration that RGGI compliance obligations should also be integrated into dispatch considerations."[76] However, he clarified that he was not advocating for Dominion to withhold from offering into the energy market generation that had cleared the capacity market.[77]

He described a true-up mechanism, such as an annual reconciliation of actual versus projected costs, as an ideal point to integrate a performance-based revenue mechanism to encourage cost-effective management and careful forecasting of allowance costs. In this regard, he recommended the Company develop "shared savings" or "shared cost" ratemaking mechanisms.[78]

Mr. Rábago contended that Dominion's proposed accounting method for allowance costs is not reasonable for two reasons. Dominion's proposed method "adds costs that customers must bear" and "provides the Company with a perverse incentive to over-procure allowances beyond

---

[71] Tr. at 103-04 (Rábago).
[72] Tr. at 106 (Rábago).
[73] Ex. 15 (Rábago) at 9.
[74] *Id.* at 8.
[75] *Id.* at 5.
[76] *Id.* at 10.
[77] Tr. at 127-28 (Rábago).
[78] Ex. 15 (Rábago) at 10, 14-15.

what is necessary, as a means of increasing Company earnings."[79] He believes the correlation between fuel combustion and allowances, the need to procure and retire allowances, and the statutory limit of cost recovery to necessary costs, "all countenance to expensing treatment."[80]

He found the Company's proposed energy allocation of RGGI allowance costs to be reasonable.[81]

Staff

Staff presented the results of its investigation through the testimonies of **Patrick W. Carr**, Deputy Director with the Commission's Division of Utility Accounting and Finance; and **Earnest J. White, Jr.**, Technical Advisor in the Commission's Division of Public Utility Regulation.

Mr. Carr recommended a Rider RGGI revenue requirement of $167.76 million that incorporated a mathematical correction to the Company's calculation.[82] He described the Company's RGGI allowance cost accounting as follows:

> The Company records purchased RGGI allowances at their cost as an asset on its balance sheet. At any given time, this asset represents the cost of allowances it has purchased, but not yet expensed and recovered from customers. When allowances are used for compliance, the Company credits (*i.e.*, reduces) the asset and debits an expense account. This expense account represents the cost of allowances used for compliance during any given period.[83]

Mr. Carr summarized Staff's recommended revenue requirement with the table below.[84]

<u>Summary of Rider RGGI Costs</u>
(figures in millions)

Pre-rate-year allowance costs	Rate year allowance costs	Return on allowance inventory	Return on cash working capital	Return on deferred costs	Total revenue requirement
$59.3	$103.5	$1.1	$1.4	$2.5	$167.8

[79] *Id.* at 14. *See also* Tr. at 109 (Rábago) (referencing the capital expenditure incentive known as the Averch-Johnson effect).
[80] Ex. 15 (Rábago) at 14.
[81] *Id.* at 11.
[82] Ex. 18 (Carr) at 2-3.
[83] *Id.* (italics added).
[84] *Id.* at 4. He explained that the pre-rate year allowance costs are for January through July 2021. *Id.* at 3.

According to Mr. Carr, all the costs summarized above are appropriately recoverable through Rider RGGI.[85] However, he indicated the Commission may consider – if the law permits it[86] – including CO_2 allowance inventory in triennial review rate base, which would give Dominion an opportunity to recover the associated financing costs through base rates rather than dollar-for-dollar recovery through Rider RGGI.[87]

Mr. Carr explained that APCo previously requested and received cost recovery for a NO_X and SO_2 allowance inventory, but has not requested recovery of financing costs for deferred costs and cash working capital, under Code § 56-585.1 A 5 e. Dominion has requested and received approval under Code § 56-585.1 A 5 e for financing costs for deferred costs and cash working capital.[88] He testified that, to his knowledge, Dominion's Code § 56-585.1 A 5 and A 6 rate adjustment clauses all include cash working capital and an over- or under-recovery balance in rate base.[89] He distinguished these statutory subdivisions from Code § 56-585.1 A 4, which provides for recovery based on federal tariff charges.[90] Dominion has never requested rate adjustment clause treatment of allowance inventories, which have always been in Dominion's base rates.[91]

Mr. Carr was asked about Staff testimony from Case No. PUE-2010-00055 (a Code § 56-585.1 A 6 proceeding for the Bear Garden facility) that recommended excluding financing costs on deferred costs. Mr. Carr explained that the Commission began allowing adjustment clause recovery of such costs ten years ago.[92]

Mr. Carr did not take issue with the $2.95 billion long-term Rider RGGI revenue requirement calculation presented by Dominion in this proceeding,[93] which his testimony showed as follows:[94]

Total Rider Required Revenues
Virginia Jurisdiction Only

	Va. Jurisdiction
2021	$98,559,559
2022	$107,321,940
2023	$85,990,113
2024	$89,254,539
2025	$90,451,469
2026	$133,805,288

[85] *Id.* at 4.
[86] Tr. at 166 (Carr).
[87] Ex. 18 (Carr) at 4.
[88] Tr. at 160-61 (Carr).
[89] Tr. at 161 (Carr).
[90] *Id.*
[91] Tr. at 162 (Carr).
[92] Tr. at 187-90 (Carr); Ex. 21 (OAG-PE-1). Staff testimony from a proceeding under Case No. PUE-2007-00069, a case under Code § 56-582 B (vi), was also made part of the record. Ex. 22 (OAG-PE-7).
[93] Ex. 18 (Carr) at 5.
[94] *Id.* at Appx., p. 12.

2027	$122,703,819
2028	$115,597,042
2029	$110,487,886
2030	$110,819,465
2031	$106,433,329
2032	$105,147,430
2033	$117,679,373
2034	$110,689,980
2035	$103,854,130
2036	$111,622,617
2037	$124,038,965
2038	$126,093,191
2039	$149,266,890
2040	$145,212,992
2041	$141,283,832
2042	$135,017,887
2043	$142,659,176
2044	$135,913,661
2045	$126,062,226
Total	$2,945,966,799

Based on discovery from Dominion, Mr. Carr understood that the above figures do not include any financing costs. While the Company provided a $27 million estimate of financing cost on cash working capital for Rider RGGI, cumulative through 2045, the Company did not provide an estimate of financing costs on allowance inventory or deferred balances.[95]

Mr. Carr acknowledged that his analysis did not address what a reasonable number of CO_2 allowances might be.[96]

Mr. White testified that Staff does not oppose Dominion's proposals to calculate Rider RGGI rates using energy-based jurisdictional and class allocations.[97] He reported that the proposed Rider RGGI charge would result in a monthly bill increase of $2.39 for a residential customer using 1,000 kilowatt hours.[98] Putting this increase in further context, Mr. White showed the bill impacts on such a residential customer from twelve other proposed rate adjustment clause filings that he indicated were either recently approved or pending.[99]

Mr. White acknowledged that Staff had not analyzed whether 19 million annual CO_2 allowances is "the right number of allowances."[100] He testified that while "the Company should pursue an efficient strategy[,] [t]here can be many ways to get at what is least cost."[101]

---

[95] Tr. at 184-85 (Carr); Ex. 20 (OAG-PE-18 and OAG-PE-19).
[96] Tr. at 171 (Carr).
[97] Ex. 24 (White) at 7.
[98] *Id.* at 5.
[99] *Id.* at 6-7.
[100] Tr. at 197 (White).
[101] Tr. at 203 (White).

Dominion – Rebuttal

On rebuttal, Dominion offered the testimonies of Messrs. Hitch, Compton, and Ingram.

Mr. Hitch asserted that Appalachian Voices' witness Rábago misunderstands the scope of this proceeding, which Mr. Hitch emphasized should be focused on the next one to two years, unlike the IRP, which is a long-term planning document.[102] However, Mr. Hitch acknowledged that the Commission will ultimately decide the scope of the instant proceeding.[103]

While Mr. Hitch indicated that resource decisions made through the IRP process will factor into a long-term strategy for CO_2 emissions, he testified such decisions "have virtually no effect on short-term CO_2 emissions or, correspondingly, on short-term RGGI allowance requirements."[104] As explained by Mr. Hitch, the actual number of allowances Dominion must obtain to comply with RGGI will be determined by the actual CO_2 emissions from the Company's generation units, which, in turn, will be determined by regional PJM Interconnection, LLC ("PJM") dispatch. PJM dispatches generation units economically based on offer prices that include projected RGGI allowance purchases, among other costs. If a generation unit subject to RGGI clears the PJM energy market, the unit is required to run. If the unit runs, it will emit CO_2 and the Company must acquire allowances associated with such operations.[105] He testified that Dominion decides its energy market offer prices, subject to PJM's business rules.[106]

Mr. Hitch testified that Dominion's CO_2-regulated sources have cleared the PJM capacity market, requiring them to offer into the energy market and to run if dispatched by PJM. He testified further that Dominion puts the cost of RGGI allowances into the daily offer price of every unit that is a RGGI source.[107] He testified that Dominion's units are committed to the capacity market through May 2022. He understands that the Company may no longer be participating in the PJM capacity market as of June 1, 2022.[108] He indicated if Dominion decides to put its regulated sources in a fixed resource requirement plan, instead of PJM's capacity market, he believes they would have the same obligations to offer into PJM's energy market.[109] He was uncertain of whether Dominion considered new power plant retirements as part of a RGGI compliance strategy, but acknowledged it might have been a lower cost compliance strategy.[110] He testified that Dominion's regulated sources cleared the PJM capacity market prior to the enactment of legislation for Virginia to join RGGI.[111]

---

[102] Ex. 25 (Hitch rebuttal) at 2-3.
[103] Tr. at 224 (Hitch).
[104] Ex. 25 (Hitch rebuttal) at 3.
[105] *Id.*
[106] Tr. at 227-28 (Hitch).
[107] Tr. at 219, 235 (Hitch).
[108] Tr. at 225 (Hitch).
[109] Tr. at 226 (Hitch).
[110] Tr. at 230-31 (Hitch).
[111] Tr. at 236 (Hitch).

Mr. Hitch pushed back on Appalachian Voices' witness Rábago's description of the Company's plan as one in which Dominion would "rapidly purchase huge amounts of allowances and then carry a significant surplus of allowances." Mr. Hitch characterized Dominion's plan to acquire approximately 25% of forecasted allowance requirements in each quarterly RGGI auction, and then use the secondary market for any deficiencies, as a plan to acquire allowances for the current year to cover CO_2 emissions as they are occurring. He testified further that Dominion tracks its forecasted CO_2 emissions against actual volumes on a monthly basis, then refines its intra-year forecast to reflect the most up-to-date forward market conditions.[112] To illustrate his position, Mr. Hitch provided a table showing, among other things, that: (1) Dominion's actual CO_2 emissions for January through March 2021 were higher than forecasted; and (2) Dominion had a negative net allowance position in January and February 2021, prior to the March 2021 RGGI auction.[113]

Mr. Hitch also testified that the size of Dominion's compliance requirement factors into its strategy. Based on Dominion's forecasts, the Company's requirement is approximately 20% of the annual allowances sold through the RGGI auctions.[114] He contrasted the liquidity and volume of allowance transactions in the RGGI auctions with the secondary market, and concluded that the Company's compliance obligation is simply too large to meet through the secondary market alone.[115] Another consideration he emphasized is that RGGI rules limit a bidder to 25% of the volume offered in each auction. Because the Company's requirement is approximately 20% of the auction allowances sold, the Company may not be able to "catch up" through the auction in certain circumstances, thus increasing the likelihood that more expensive allowances would have to be purchased through the "less liquid, more volatile secondary market." He asserted that "it is not prudent for the Company to fall behind because this will expose customers to unnecessary price and compliance risk."[116]

Mr. Hitch addressed Mr. Rábago's suggestion that the Company should optimize costs from allowance auctions and secondary market purchases. Mr. Hitch indicated that even if Dominion times the market correctly from a price perspective, Dominion cannot acquire enough allowances at that price to meet the compliance obligations of its 47 regulated sources that require 20% of the RGGI auction allowances annually.[117]

Mr. Hitch described Dominion's compliance strategy as "an all of the above approach ... centered on the RGGI auctions."[118] He testified that this is the most prudent compliance in the short term because of the liquidity and depth of allowances offered in the auctions compared to the secondary market.[119]

[112] Ex. 25 (Hitch rebuttal) at 4.
[113] *Id.* at 5 (revised).
[114] *Id.* at 5-6.
[115] *Id.* at 6-7.
[116] *Id.* at 7.
[117] *Id.* at 8.
[118] *Id.* at 9.
[119] *Id.* at 8.

He disagreed with Mr. Rábago's description of Dominion's CO_2 allowance procurement strategy as "dividing by four." Mr. Hitch testified that, in addition to auction procurements, Dominion has already executed multiple secondary market purchases and is currently negotiating a multi-year, multi-million allowance purchase on the secondary market.[120]

Mr. Hitch clarified and defended the Company's plan for a bank of 10% to 20% of the annual requirement at the end of each three-year control period.[121] He testified that the bank is not an "over[-]procurement."[122] In support of his position, he indicated, among other things, that (1) the penalty for RGGI non-compliance is steep – requiring three allowances, instead of one, for every ton of excess emissions; (2) the Company has observed significant deviations between actual and forecasted emissions, including two consecutive months in 2019 when actual emissions exceeded forecasted emissions by 1,271,000 tons, and January and February 2021 when actual emissions exceeded forecasted emissions by 835,000 tons; and (3) the potential for under-procurement in the final auction of a control period due to a clearing price significantly above the market.[123]

Mr. Hitch explained the "containment reserve" prices found in DEQ's rule. He testified that these establish "hard ceilings and floors" for RGGI auction prices.[124] Both containment reserve prices increase by 7% each year.[125]

Mr. Compton asserted that long-term planning is not relevant to the instant proceeding,[126] which he asserted should not be turned into another long-term planning proceeding.[127] He explained that the modeling his team used to forecast CO_2 emission through 2022 modeled the Company's existing fleet and all publicly announced retirements and new generation development that the Commission has approved or is pending. This includes the retirement of Possum Point 5 in 2020; the addition of the new Sadler Solar Facility approved in Case No. PUR-2019-00105; and the addition of several Company-owned solar projects and solar power purchase agreements ("PPAs") pending approval in Case No. PUR-2020-00134 that are expected to be online by December 2022. The modeling also included a generic 20 MW block of small-scale solar PPAs in January 2022, which Mr. Compton indicated aligns with Dominion's RPS Development Plan.[128]

---

[120] Tr. at 220 (Hitch).
[121] Ex. 25 (Hitch rebuttal) at 10.
[122] Tr. at 213 (Hitch).
[123] Ex. 25 (Hitch rebuttal) at 10. Mr. Hitch provided the corrected January and February 2021 figure shown above on his corrected page five. While a January and February 2021 figure on page ten of his testimony was not corrected, he acknowledged it should track the relevant figure he corrected on page five. Tr. at 211 (Hitch).
[124] Tr. at 213-15 (Hitch).
[125] Tr. at 215 (Hitch).
[126] Ex. 26 (Compton rebuttal) at 4. While Mr. Compton recognized that longer-term modeling was used to calculate the projected long-term Rider RGGI revenue requirement, as directed by the Commission's November 23, 2020 Order, he indicated this simply provides a data point for the Commission and interested parties. Rider RGGI would be updated annually using forecasting that focuses on Dominion's existing fleet plus known changes in the short-term. *Id.* at 4.
[127] *Id.* at 2.
[128] *Id.* at 3. The Company's modeling also incorporated 2023 retirements of Chesterfield Units 5 and 6 and Yorktown Unit 3. Tr. at 64-65, 67 (Compton).

Mr. Compton confirmed Mr. Hitch's belief that generation units in fixed resource requirement plans, like those that have cleared PJM's capacity market, would have an obligation to offer into the energy market.[129] If a generation unit clears the capacity market, but then retires, Mr. Compton understands that the Company must find replacement capacity.[130] He testified that as part of this proceeding Dominion did not evaluate whether it might be lower cost for the Company to retire Virginia City Hybrid Energy Center early, taking into account the cost of replacement capacity and avoided emissions allowance procurement costs.[131] He indicated such analysis would occur as part of the IRP process.[132]

Mr. Ingram concurred with Staff witness Carr's correction and the resulting $167.76 million recommended revenue requirement.[133] Mr. Ingram offered testimony in support of the Company's proposed financing costs on rate base items, which he indicated is consistent with Code § 56-585.1 A 5 e and Rider E – a Company rate adjustment clause approved under Code § 56-585.1 A 5 e.[134] While Consumer Counsel witness Smith recommended that CO_2 allowance rate base be treated similar to fuel inventory for ratemaking, Mr. Ingram explained the fuel factor is governed by a specific definitional framework that limits cost recovery to fuel-related expenses, without any rate base or financing costs on fuel inventories. Code § 56-585.1 A 5 e has no such framework.[135]

Mr. Ingram indicated that Appalachian Voices' witness Rábago recommended accounting treatment is similar to the Company's, except for classification – Mr. Rábago uses "inventory" while Dominion uses "intangible asset." Mr. Ingram indicated the Company's proposal to expense allowances using a weighted average cost is equally acceptable to Mr. Rábago's proposal to expense allowances using first-in, first-out accounting. Mr. Ingram sees no compelling reason to adopt a different accounting policy nor would he expect a notable difference in annual expense over time, given the relatively high turnover of allowances during the year.[136] Mr. Ingram also testified that, from the Company's standpoint, financing costs for a tangible investment are no different than for an intangible investment like an allowance – "[t]he Company has parted with cash" and "hasn't recovered it."[137]

Mr. Ingram considered parts of Mr. Rábago's testimony to be internally inconsistent. Mr. Ingram believes Mr. Rábago recommended that the Company expense and recover the cost of allowances when purchased rather than when emissions occur and allowances are consumed. Mr. Ingram recommended such an approach not be approved, as it deviates from commonly accepted accounting methods and would accelerate cost recovery from customers.[138]

---

[129] Tr. at 238 (Compton).
[130] Tr. at 240 (Compton).
[131] Tr. at 241-42 (Compton).
[132] Tr. at 242 (Compton).
[133] Ex. 27 (Ingram rebuttal) at 2.
[134] *Id.* at 2-3.
[135] *Id.* at 4-5.
[136] *Id.* at 6.
[137] Tr. at 250-51 (Ingram).
[138] Ex. 27 (Ingram rebuttal) at 7.

Mr. Ingram found Mr. Rábago's recommendation for performance-based or incentive compensation for Rider RGGI to be unsupported and contrary to Code § 56-585.1 A 5 e.[139]

CODE

Dominion proposed Rider RGGI pursuant to Code § 56-585.1 A 5 e, which states in relevant part as follows:

> 5. A utility may at any time, after the expiration or termination of capped rates, but not more than once in any 12-month period, petition the Commission for approval of one or more rate adjustment clauses for the timely and current recovery from customers of the following costs:
>
> ....
>
> e. Projected and actual costs of projects that the Commission finds to be necessary ... to comply with state or federal environmental laws or regulations applicable to generation facilities used to serve the utility's native load obligations, including the costs of allowances purchased through a market-based trading program for [CO_2] emissions. The Commission shall approve such a petition if it finds that such costs are necessary to comply with such environmental laws or regulations;

In 2020, the General Assembly added the language in Code § 56-585.1 A 5 e that specifically includes "the costs of allowances purchased through a market-based trading program for [CO_2] emissions."[140] Also in 2020, the General Assembly enacted the Clean Energy and Community Flood Preparedness Act, which, among other things: authorized the Commonwealth to become a full member of RGGI; authorized DEQ to implement "an auction program to sell [CO_2] allowances into a market-based trading program consistent with the RGGI program"; and established how the proceeds from CO_2 allowance auctions would be used by the Commonwealth.[141] This legislation included an Enactment Clause stating as follows:

---

[139] *Id.* at 7 and Rebuttal Sched. 1.

[140] 2020 Va. Acts chs. 1193, 1194.

[141] The Clean Energy and Community Flood Preparedness Act, Code § 10.1-1329 *et seq.*, was enacted as part of identical chapters 1219 and 1280 of the 2020 Virginia Acts of Assembly and includes Code § 10.1-1330 C, which provides as follows:

> To the extent permitted by Article X, Section 7 of the Constitution of Virginia, the state treasury shall (i) hold the proceeds recovered from the allowance auction in an interest-bearing account with all interest directed to the account to carry out the purposes of this article and (ii) use the proceeds without further appropriation for the following purposes:
> 1. Forty-five percent of the revenue shall be credited to the account established pursuant to the Fund for the purpose of assisting localities and their residents affected by recurrent flooding, sea level rise, and flooding from severe weather events.
> 2. Fifty percent of the revenue shall be credited to an account administered by [the Department of Housing and Community Development ("DHCD")] to support low-income energy efficiency programs, including programs for eligible housing developments. DHCD shall review and approve funding

> That the costs of allowances purchased through a market-based trading program consistent with the provisions of [the Clean Energy and Community Flood Preparedness Act] as added by this act are deemed to constitute environmental compliance project costs that may be recovered by a Phase I Utility or Phase II Utility, as defined in [Code § 56-585.1 A 1], pursuant to [Code § 56-585.1 A 5 e].[142]

For cost recovery proposed under Code § 56-585.1 A 5 e, the Commission has explained that "the analysis does not end with a finding that the projects are necessary to comply with environmental regulations....[The applicant utility] must also establish that it was reasonable and prudent to decide - at the time of the decision - to incur such costs...."[143] Code § 56-585.1 D provides in part as follows:

> D. The Commission may determine, during any proceeding authorized or required by [Code § 56-585.1], the reasonableness or prudence of any cost incurred or projected to be incurred, by a utility in connection with the subject of the proceeding. A determination of the Commission regarding the reasonableness or prudence of any such cost shall be consistent with the Commission's authority to determine the reasonableness or prudence of costs in proceedings pursuant to the provisions of Chapter 10 (§ 56-232 et seq.).

The Commission authority recognized by Code § 56-585.1 D was unaffected by the 2020 legislation.[144] Code § 56-585.1 D – which applies to "any proceeding authorized or required by" Code § 56-585.1 – remains applicable to Code § 56-585.1 A 5 e. Additionally, while "costs of allowances" were "deemed" eligible for rate adjustment clause recovery,[145] all such costs were not deemed to be reasonable or prudently incurred.

---

proposals for such energy efficiency programs, and [the Department of Mines, Minerals, and Energy ("DMME")] shall provide technical assistance upon request. Any sums remaining within the account administered by DHCD, including interest thereon, at the end of each fiscal year shall not revert to the general fund but shall remain in such account to support low-income energy efficiency programs.
3. Three percent of the revenue shall be used to (i) cover reasonable administrative expenses of the Department in the administration of the revenue allocation, carbon dioxide emissions cap and trade program, and auction and (ii) carry out statewide climate change planning and mitigation activities.
4. Two percent of the revenue shall be used by DHCD, in partnership with DMME, to administer and implement low-income energy efficiency programs pursuant to subdivision 2.

[142] 2020 Va. Acts chs. 1219, 1280, Enactment Clause 2. Dominion is the referenced Phase II Utility.

[143] *Petition of Virginia Electric and Power Company, For approval of a rate adjustment clause, designated Rider E, for the recovery of costs incurred to comply with state and federal environmental regulations pursuant to § 56-585.1 A 5 e of the Code of Virginia*, Case No. PUR-2018-00195, 2019 S.C.C. Ann. Rep. 333, 337, Order on Reconsideration (Nov. 14, 2019).

[144] *See, e.g.*, Dominion's Brief at 5 (indicating, among other things, that the 2020 legislation "does not alter the Commission's standard of review" and does not "sp[eak] to the Commission's standard of review for petitions to recover costs under [Code § 56-585.1 A 5 e]").

[145] 2020 Va. Acts chs. 1219, 1280, Enactment Clause 2.

ANALYSIS

Dominion filed its Petition pursuant to Code § 56-585.1 A 5 e. As shown above, this statute provides rate adjustment clause recovery for "[p]rojected and actual costs of projects that the Commission finds to be necessary ... to comply with state ... environmental laws or regulations applicable to generation facilities used to serve [Dominion's] native load obligations, including the costs of allowances purchased through a market-based trading program for [CO_2] emissions." The General Assembly has also "deemed" the costs of such "purchased" allowances "to constitute environmental compliance project costs that may be recovered by [APCo or Dominion] pursuant to [Code § 56-585.1 A 5 e]."[146]

Without question, Virginia law and DEQ regulation require Dominion to purchase a CO_2 allowance for every ton of CO_2 emitted after January 1, 2021, by the Company's generation sources that are subject to this regulation.[147] The record demonstrates that the required CO_2 allowances are obtained through multi-state auctions conducted by RGGI or in the secondary market where RGGI auction allowances are resold.[148] RGGI therefore is "a market-based trading program for [CO_2] emissions," as referenced in Code § 56-585.1 A 5 e.[149]

While Code § 56-585.1 A 5 e allows Dominion to recover qualifying projected and actual costs, the Commission has implemented adjustment clause recovery of *projected* costs with true-up mechanisms that subsequently reconcile projected costs with actual costs. In the instant proceeding, Dominion's proposed revenue requirement is based largely on forecasts and projected actions, operations, and expenditures that would be subject to true-up in a subsequent Rider RGGI proceeding.[150] As proposed by Dominion, the projected Rider RGGI revenue requirement depends on: (1) the prices of CO_2 allowances required for every ton of CO_2 emitted by regulated sources, from January 1, 2021, through July 31, 2022; (2) the quantity of CO_2 allowances obtained and consumed during that period, or potentially banked for a future period;[151] and (3) timing considerations that cause Dominion to finance the costs of allowances between the time allowances are purchased and consumed. These three aspects of the projected cost revenue requirement are discussed in Sections 1, 2, and 3 of the analysis below. Section 4 discusses the Commission's authority to evaluate the reasonableness and prudence of RGGI allowance costs in future Rider RGGI cases – after such costs have been incurred and proposed for reconciliation as actual costs. Section 5 provides my recommended Rider RGGI revenue requirement, cost allocation, and rate design.

---

[146] *Id.*

[147] *See, e.g.*, Ex. 2 (Petition) at 3 (referencing 2020 Va. Acts chs. 1219, 1280; 9 VAC 5-140-6010 *et seq.*).

[148] *See, e.g.*, Ex. 4 (Hitch direct) at 4-6.

[149] Because the amount of allowances auctioned is limited, RGGI is considered a "cap-and-trade" program. *See, e.g.*, Ex. 15 (Rábago) at 5. From 2021 to 2030, the cap on allowances auctioned for Virginia will decrease by approximately 3% each year. Ex. 4 (Hitch direct) at 3; 9 VAC 5-140-6190.

[150] *See, e.g.*, Ex. 2 (Petition) at 5 (explaining that the proposed revenue requirement consists of only a Projected Cost Recovery Factor, and that future Rider RGGI filings will also include an Actual Cost True-Up Factor).

[151] In this context, consuming an allowance is not the same as retiring an allowance. For compliance, allowances are not retired until after a three-year RGGI control period ends. For accounting and ratemaking purposes, Dominion would consume allowances to cover regulated emissions each month. *See, e.g.*, Tr. at 82-83 (Ingram).

1. Allowance Price Projections

Dominion has purchased some CO_2 allowances at known prices, but the Company will need to purchase many more allowances for compliance.[152] The exact prices of such additional purchases in the future cannot be known at this time, but DEQ's CO_2 regulations effectively establish a price range by prescribing annual clearing price floors and ceilings for auctioned allowances.[153] For 2021 and 2022, which the rate year spans, the auction price floors are $6.00 and $6.42 per allowance, respectively, and the price ceilings are $13.00 and $13.91, respectively.[154] The auction floor prices, which escalate each year, also influence current secondary market prices, according to the independent market monitor for RGGI.[155]

To calculate the revenue requirement projection in the Petition, Dominion assumed a weighted average price of $6.84 per allowance based on the actual clearing price in one RGGI auction held in 2020, actual secondary market transactions, and forward pricing.[156] Updated pricing information provided by Dominion – including updated price estimates[157] and the actual $7.41 and $7.60 prices from the two RGGI auctions conducted after the Petition was filed[158] – indicate the Petition's $6.84 price could be too low. However, prices will undoubtedly continue to fluctuate, and any price differentials (higher or lower) can be trued-up when forecasted prices are reconciled with actual prices in future Rider RGGI proceedings. Accordingly, the Company's estimated allowance prices appear reasonable for purposes of establishing a projected cost revenue requirement in the instant proceeding.

I also find the Company's proposed use of weighted averages to calculate the projected and actual cost of allowance consumption to be reasonable. This approach, which is consistent with customary accounting,[159] will reasonably incorporate the actual prices of CO_2 allowance purchases by Dominion.

2. Quantity of Projected Allowances

Allowances for Projected Emissions Through the End of the Rate Year

---

[152] *See, e.g.*, Ex. 25 (Hitch rebuttal), at 5 (corrected). For Mr. Hitch's Revised Rebuttal Table 1, (i) the actual allowance purchases shown in "Inventory" as of April 2021 are also shown in Exhibit 5; and (ii) the "Forecast Short Tons CO_2" for April 2021 – December 2021 are also shown in Exhibits 10 and 11.
[153] Tr. at 213-15 (Hitch). Nor are the exact quantities of the additional purchases required for compliance known at this time, as discussed in Section 2 below.
[154] *See* 9 VAC 5-140-6020(C) (defined terms for "CO_2 cost containment reserve trigger price" and "CO_2 emissions containment reserve trigger price"); 9 VAC 5-140-6210(C),(D).
[155] Ex. 7 (DEV-PE-7) at 3 ("Current price levels in the secondary market are influenced by the Emission Containment Reserve ..., which will be introduced with a $6.00 trigger price in the auctions held in 2021. The trigger price will then rise 7 percent each year through 2030.").
[156] Ex. 4 (Hitch direct) at 9. The assumed $6.84 price is a weighted average for all allowances the Company's Petition estimated Dominion would purchase through July 2022. Ex. 2 (Petition) at Filing Sched. 46A, Statement 1, p. 2 ($218,807,500 / 32,000,000 = $6.84).
[157] Ex. 10 (DEV-PE-3).
[158] Ex. 5 (DEV-PE-1).
[159] Tr. at 84, 97 (Ingram).

Pursuant to DEQ regulation, Dominion's CO_2 compliance is measured over three-year control periods, together with annual interim compliance requirements.[160] Over the first three-year RGGI control period (2021 – 2023), Dominion's Petition forecasted that the Company will initially require 19 million CO_2 allowances, on average,[161] each year to cover CO_2 emissions from its regulated units.[162] From January 1, 2021, through the end of the rate year (July 31, 2022), the Petition assumes cumulative CO_2 emissions of approximately 29.4 million tons.[163] This figure is an estimate based on economic dispatch modeling performed by Dominion in October 2020.[164] When updated with March 2021 modeling[165] and actual emissions for the first three months of 2021,[166] Dominion's estimate of CO_2 emissions through the end of the rate year increased to 30.1 million tons.[167] The record showed that while actual allowance prices have increased above the prices assumed in Dominion's October 2020 modeling forecast, actual emissions at Dominion's regulated units during the first three months of 2021 were above Dominion's forecast.[168]

Appalachian Voices argued that Dominion has not established that it needs the amount of allowances the Company projects.[169] Appalachian Voices' witness Rábago could not conclude that Dominion's allowance estimate and procurement strategy are reasonable and prudent because of his concern that Dominion could be over-projecting its allowance needs.[170] Mr. Rábago further asserted that Dominion should have modeled additional RGGI price assumptions as sensitivity analyses.[171] As discussed above, the record showed that Dominion's actual emissions figures for the first three months of 2021 were higher, not lower, than the Petition's forecasted emissions.[172] Dominion has spent approximately $40 million ($32 million Virginia jurisdictional)[173] to purchase allowances that essentially cover the Company's actual regulated emissions for only the first three months of 2021.[174]

---

[160] The interim requirements require a regulated emitter to obtain by the end of each calendar year at least 50% of its compliance obligation incurred as of that date. Ex. 4 (Hitch direct) at 4; 9 VAC 5-140-6020 (definitions of "Excess interim emissions" and "Interim control period").
[161] Tr. at 62 (Compton).
[162] Ex. 8 (Compton direct) at 2; Ex. 9 (DEV-PE-2).
[163] *See, e.g.*, Ex. 8 (Compton direct) at Attached Sched. 1; Ex. 2 (Petition) at Filing Sched. 46A, Statement 1, p. 2 (total for amortization of allowances).
[164] Ex. 8 (Compton direct) at 2-3, Attached Sched. 1; Ex. 9.
[165] Ex. 10 (DEV-PE-3).
[166] Ex. 25 (Hitch rebuttal) at 5 (revised).
[167] Actual emissions were approximately 1.0 million tons higher than estimated for the first three months of 2021. *Compare* Ex. 25 (Hitch rebuttal) at 5 (revised) *with* Ex. 8 (Compton direct) at Attached Sched. 1. Estimated emissions for the remaining months through the end of the rate year, once updated, decreased by approximately 0.4 million tons. Ex. 10 (DEV-PE-3).
[168] Ex. 25 (Hitch rebuttal) at 5 (revised); Ex. 5 (DEV-PE-1).
[169] Appalachian Voices' Brief at 7.
[170] Ex. 15 (Rábago) at 3.
[171] *Id.* at 12.
[172] *Compare* Ex. 8 (Compton direct) at Attached Sched. 1 *with* Ex. 25 (Hitch rebuttal) at 5 (revised).
[173] Ex. 5. (750,000*$6.82) +(250,000*$6.73)+(300,000*$7.41)+(4,075,000*$7.60)=$39,990,500. $39,990,500*.79925= $31,962,407. The Virginia jurisdictional figure (.79925) is provided in Exhibit 14 (Haynes direct), at Attached Corrected Sched. 1.
[174] Ex. 25 (Hitch rebuttal) at 5 (revised), Revised Rebuttal Table 1 (showing a "net position" of only 224,000 allowances at the end of March 2021).

I also note that, while the proposed Rider RGGI revenue requirement is a function of allowance quantities *and* prices, lower emissions would not necessarily support a lower revenue requirement. Dominion's updated modeling illustrates this point. The overall updates – which incorporate three months of actual emissions, additional actual prices, and updated allowance price and emissions forecasts – estimated $248 million ($199 million Virginia jurisdictional) in allowance procurements through July 2022.[175] This estimate is approximately 20% higher than the Petition's $202 million estimate ($161 million Virginia jurisdictional).[176] The results of the updated modeling run show higher costs attributable to forecasted emissions in April 2021-July 2022 even though forecasted emissions decreased during these months.[177] This illustrates that, mathematically, additional costs from higher forecasted RGGI prices can exceed allowance savings associated with lower forecasted emissions.

Like allowance price differentials discussed above, adjustment clause recovery allows any quantity differentials (higher or lower) to be trued-up when forecasted quantities are reconciled with actual quantities in future Rider RGGI proceedings. Additionally, as discussed in Section 4 below, the prudence of RGGI allowance purchases – which Appalachian Voices witness Rábago questioned – can be considered in future Rider RGGI proceedings. Accordingly, the Company's estimated allowance quantities appear reasonable for purposes of setting a projected cost revenue requirement in the instant proceeding.

Dominion's Plan for an Allowance Bank After the Rate Year

In its Petition, Dominion identified its plan to obtain a quantity of allowances that would be 10% to 20% above the Company's projected annual compliance obligation.[178] According to Dominion, the purpose of this planned "bank" is "to protect customers from forecast uncertainty, price volatility, and noncompliance penalties."[179] The Company provided examples of monthly emissions that significantly deviated from forecasts.[180] The penalty for non-compliance is that Dominion must purchase three allowances for each ton of emitted CO_2 not covered by an allowance at the end of a control period.[181]

[175] Ex. 13 (DEV-PE-4); Ex. 14 (Haynes direct) at Attached Corrected Sched. 1. $248,390,500*0.79925=$198,526,107.

[176] Ex. 2 (Petition) at Filing Sched. 46A, Statement 1, p. 2; Ex. 14 (Haynes direct) at Attached Corrected Sched. 1. $201,710,089*0.79925=$161,216,788.

[177] Dominion's March 2021 PLEXOS modeling assumed allowance prices of $8.34 or $8.33, compared to the $6.91 and $6.69 prices used in the Company's October 2020 PLEXOS modeling. Ex. 10 (DEV-PE-3). For the forecasted months through the end of the rate year (April 2021 through July 2022), forecasted CO_2 emissions in the March 2021 PLEXOS modeling run were approximately 0.4 million tons lower than in the October 2020 PLEXOS run, as noted above. *Id.* However, the updated modeling costs attributable to emissions forecasted for April 2021 through July 2021 increased. *Compare* Ex. 13 (DEV-PE-4) ($245,884,844 - $10,599,115 - $13,903,838 - $13,605,381 = $207,776,510) *with* Ex. 2 (Petition) at Filing Sched. 46A, Statement 1, p. 2 ($201,710,089 - $9,166,802 - $9,514,870 - $10,018,745 = $173,009,672).

[178] *See, e.g.*, Ex. 4 (Hitch direct) at 8.

[179] Ex. 25 (Hitch rebuttal) at 10.

[180] *Id.* at 5 (revised), 10; Tr. at 211 (Hitch) (acknowledging the 1,083,000 ton exceedance figure for January and February 2021 would be lower, based on corrected page 5 figures). Dominion indicated these deviations were weather-driven. Ex. 25 (Hitch rebuttal) at 10.

[181] Ex. 25 (Hitch rebuttal) at 10; 9 VAC 5-140-6260 D.

Appalachian Voices' witness Rábago acknowledged it is "wise for the Company to develop a banking strategy and to consider the procurement of an appropriate amount of excess allowances as a hedge against market volatility and unexpected increases in demand for energy."[182] However, he found the 10% to 20% level for such a bank to be arbitrary and unsupported by any economic analysis.[183] The Company indicated that the 10% to 20% levels were based on the Company's observations of historic deviations from forecasted emissions.[184] Company witness Hitch indicated that he "eyeballed" prior deviations, and did not write anything down or conduct a statistical analysis, to arrive at the 10% to 20% planned bank level.[185]

At the hearing, Dominion clarified that it plans to build an allowance bank at the end of a control period (*e.g.*, the end of 2023).[186] As clarified, Dominion would carry any such "extra" allowances only "for a matter of months."[187]

That any bank would be built *after* the rate year is consistent with Dominion's updated March 2021 modeling results in my view. Of Dominion's updated estimate of $248 million in allowance purchases through the end of the rate year, Dominion estimated only $2.5 million (1%) would not be "spoken for" by the end of the rate year.[188] This amount does not appear to represent excess allowances; rather, it appears to reflect the lumpy nature of purchasing CO_2 allowances through auctions conducted quarterly.[189] The updated forecast shows cumulative emissions exceeding purchased allowances by the time each quarterly auction will be held.[190] Since Dominion does not plan to implement any allowance bank during the rate year, I recommend the Commission evaluate any "banked" allowances in future Rider RGGI proceedings. However, should the Commission decide to address Dominion's plan to bank allowances, my analysis is provided below.

Dominion should comply with DEQ's regulation. In this regard, achieving compliance also means avoiding a significant penalty for non-compliance that is akin to a regulatory "treble damage" penalty.[191] The likelihood of perfectly matching allowance purchases with actual emissions appears small, as it depends on many factors beyond Dominion's control, including weather and regional dispatch by PJM. Given the difficulty of predicting these influential factors, and the significant penalty associated with non-compliance, it appears reasonable for Dominion not to strictly limit allowance procurements to cover only emissions forecasted

[182] Ex. 15 (Rábago) at 8.
[183] *Id.* at 15. *See also* Tr. at 108-09 (Rábago).
[184] Tr. at 222 (Hitch).
[185] *Id.*
[186] Tr. at 53 (Hitch).
[187] Tr. at 216 (Hitch).
[188] Ex. 13 (DEV-PE-4); Tr. at 95-96 (Ingram). Both of these estimates are total Company figures. Tr. at 247-48 (Ingram).
[189] Tr. at 78-79 (Ingram); Ex. 13 (DEV-PE-4).
[190] Ex. 13 (DEV-PE-4).
[191] Dominion has indicated the bank would protect customers from noncompliance penalties. Ex. 25 (Hitch rebuttal) at 10. The penalty is significant and should be avoided in my view, regardless of whether it would be borne by ratepayers or Dominion.

through the end of a control period. Appalachian Voices' witness Rábago appeared to acknowledge the wisdom of some level of banking.[192]

Because CO_2 allowances do not expire, Dominion can use any "banked" allowances in a subsequent control period. As clarified by Dominion, it appears ratepayers would pay financing costs on the temporary "excess" of allowances effectively from when they are purchased at the end of one control period to when they are used in the next control period.[193] As such, a short-lived allowance bank generally appears to be a reasonable risk mitigation measure with comparatively limited ratepayer impact. I agree with Dominion witness Hitch that "the cost of noncompliance, those penalties are … high relative to the carrying cost of 2 to 4 million extra allowances for a matter of months."[194]

However, the reasonableness or prudence of the quantities of allowances obtained in the future – for a bank or otherwise – will likely depend on the specific circumstances at that time. Dominion should have the flexibility to manage the risk of non-compliance and price volatility, but should also be prepared to justify the costs it incurs to do so. In this regard, I agree in part with Appalachian Voices' concerns about the support offered for the planned bank level in the instant case.[195] For example, while Dominion highlighted the need to cover deviations from the final two months of a control period, it was unclear whether its analysis of deviations focused on that time of year or a comparable period.[196] Additionally, the emissions deviations examples provided by Dominion exceeded the current high end of the Company's planned bank (*i.e.*, 3.8 million allowances).[197] For example, the deviations for January and February 2021, as cited by Dominion, totaled only 0.8 million tons.[198] In my opinion, Dominion should provide sufficient support for any banked allowances in future proceedings when any such banked amounts are at issue.

3. Projected Financing Costs

Dominion did not propose to recover all the costs of allowances the Company projected that it would obtain through the end of the rate year. That amount would be approximately \$175 million, as estimated in the Petition, or \$199 million, if based on updated estimates.[199]

Instead, Dominion proposed a \$168 million revenue requirement, as corrected by Staff, to recover the projected costs of allowances: (1) from projected allowances that would be both

---

[192] Ex. 15 (Rábago) at 8.

[193] There could also be a cost associated with purchase price risk. While allowances purchased for the bank rather than during a subsequent control period could be more expensive, they could also be less expensive. *See, e.g.,* Ex. 4 (Hitch direct) at 7 (showing historic auction prices fluctuating between price increases and decreases).

[194] Tr. at 216 (Hitch). Whether financing costs for allowances (banked or otherwise) would be recoverable either through Rider RGGI or base rates is discussed in Section 3 of this analysis below.

[195] *See, e.g.,* Tr. at 109 (Rábago) ("I believe they do have knowledge and expertise, but I don't see the record of it.").

[196] Ex. 25 (Hitch rebuttal) at 5 (revised), 10.

[197] *Id.*; Tr. at 211 (Hitch) (acknowledging the 1.1 million ton exceedance figure for January and February 2021 on page 10 of his rebuttal testimony should be lower, to track corrections to page five of his rebuttal testimony).

[198] Ex. 25 (Hitch rebuttal) at 5 (revised).

[199] Ex. 2 (Petition) at Filing Sched. 46A, Statement 1, p. 2. \$218,807,500*0.79925=\$174,881,894. Ex. 13 (Revised DEV-PE-4). \$248,390,500*0.79925 =\$198,526,107.

obtained *and* consumed by the end of the rate year; and (2) from financing projected allowances that would be purchased but not yet consumed. Dominion proposed to recover the financing costs for purchased allowances through a proposed return on a rate base that consists of: (a) allowance inventory, which is the positive or negative balance of purchased allowances minus required allowances; (b) cash working capital; and (c) deferred costs. The return on these three rate base items totals $5 million in financing costs, or 3% of the proposed $168 million revenue requirement request.[200]

The proposed recovery of financing costs through Code § 56-585.1 A 5 e is disputed by Consumer Counsel and the Committee.

The record establishes that the "sticker price" of purchased CO_2 allowances is not the only cost the Company incurs from purchasing such allowances. For example, Dominion finances the costs of allowances between the time allowances are purchased and consumed.[201] Dominion's and Staff's accounting witnesses recognized there are such financing costs[202] and Consumer Counsel's accounting witness acknowledged there could be financing costs.[203] Staff witness Carr testified that financing costs on allowance inventory "are costs of complying with RGGI."[204] While counsel for the Committee characterized RGGI costs as operating expenses, the record does not support a finding that the disputed financing costs are operating expenses.[205] To the contrary, the record demonstrates that financing costs are incurred from the Company's purchase of CO_2 allowances and that they are calculated as a return on the applicable rate base components. The subject costs are the financing costs of allowances purchased by Dominion.

Consequently, I view the inclusion or exclusion of financing costs in Rider RGGI as a legal, and not a factual, issue. In this regard, the parties and Staff offered competing interpretations of Code § 56-585.1 A 5 e.

Dominion argued that financing costs to comply with RGGI are within the costs that the Company is entitled to recover under Code § 56-585.1 A 5 e.[206] Dominion argued further that no language in Code § 56-585.1 A 5 e prohibits the recovery of financing costs.[207] Dominion recognized Commission precedent permitting the recovery of financing costs under Code § 56-585.1 A 5 e.[208] On this point, Dominion elaborated that "the General Assembly presumably was aware of the Commission's precedent when it amended the language of [Code § 56-585.1 A 5 e] in 2020 to include recovery for RGGI allowance purchases. The General Assembly could

[200] Ex. 18 (Carr) at 3-4.
[201] *See, e.g.*, Tr. at 170 (Carr); Tr. at 248-49 (Ingram).
[202] *See, e.g.*, Ex. 18 (Carr) at 4; Tr. at 250-51 (Ingram).
[203] *See, e.g.*, Tr. at 150, 154 (Smith).
[204] Ex. 18 (Carr) at 4.
[205] Committee's Brief at 4. Indeed, the Committee's argument highlighted the 97% of the proposed revenue requirement from the costs of allowances that Dominion forecasts will be purchased and consumed by the end of the rate year, and not the 3% of the revenue requirement that are projected financing costs. *Id.*
[206] *See, e.g.*, Dominion's Brief at 8-9.
[207] *See, e.g.*, *id.* at 8.
[208] *See, e.g.*, *id.* at 9-10.

have prohibited the recovery of financing costs for allowance purchases or directed their recovery in another mechanism, but it did not do so."[209]

Staff asserted that the Commission has discretion[210] to decide whether to approve financing costs under Code § 56-585.1 A 5 e and that the statute "neither expressly forbids, nor explicitly requires, that the costs recovered through a rate adjustment clause related to RGGI participation include the financing costs associated with such participation."[211]

The Committee indicated it is not aware of any authority to support Staff's argument that the inclusion of financing costs in Code § 56-585.1 A 5 e is a discretionary matter.[212] The Committee pointed out that Code § 56-585.1 A 5 e does not include the terms "carrying cost" or "financing cost" and argued that the statute does not suggest that "any costs associated with, or even resulting from, an underlying compliance cost were intended to be recovered through a rider such as Rider RGGI."[213]

Consumer Counsel argued that the Commission should exercise discretion to exclude financing costs, and pointed to the Commission's rejection of carrying costs in Case Nos. PUE-2007-00069 and PUE-2009-00018 as support for Commission discretion in the instant case.[214] Consumer Counsel also identified language in Code § 56-585.1 A 6 that provides for a rate of return and life-cycle costs and language in Code § 56-585.1 A 5 c that provides for a margin on operating expenses.[215] Consumer Counsel argued further that Code § 56-585.1 A 5 e provides for "timely and current" recovery, which is defined as the 12-month rate adjustment clause process, and does not describe a right to monthly recovery of any type of cost.[216] Consumer Counsel argued that the 2020 legislation recognized a distinction "between typical iron-in-the ground utility projects requiring capital investment, and the costs associated with purchasing intangible assets such as [CO_2] allowances."[217] Consumer Counsel indicated customers need protection from a financial incentive associated with Rider RGGI inventory balances.[218]

Based on my evaluation of the Code, precedent, and the arguments on this issue, I agree with the Committee that the legal issue of whether allowance financing costs should be approved for recovery in this case does not appear to implicate Commission discretion. In my view, the issue turns on whether the subject costs fall within the costs recoverable under Code § 56-585.1

[209] *Id.* at 11.
[210] As support for this proposition, Staff alludes to Commission rejection of financing costs in cases conducted under Code § 56-585.1 A 4 and A 6 more than a decade ago, which Consumer Counsel cited. *See* Consumer Counsel's Brief at 5-6. My analysis herein has focused on Code § 56-585.1 A 5 e, more recent proceedings thereunder, and Supreme Court of Virginia precedent interpreting Code § 56-585.1 A 5 e. I agree with the Committee's analytical focus on Code § 56-585.1 A 5 e, rather than other statutes. Committee's Brief at 3.
[211] Staff's Brief at 2.
[212] Committee's Brief at 3.
[213] *Id.*
[214] Consumer Counsel's Brief at 5-7.
[215] *Id.* at 4-6.
[216] *Id.* at 7.
[217] *Id.* at 10.
[218] *Id.* at 11.

A 5 e. If the Commission concludes that the financing costs of allowances purchased are the "costs of allowances purchased" or the "costs of projects ... to comply with state or federal environmental laws or regulations," then such costs are recoverable under the statute. Discretion under Code § 56-585.1 A 5 e should not be exercised in a manner that would prevent the recovery of actual environmental compliance costs recoverable thereunder.[219]

On whole, I found Dominion's arguments more persuasive on this issue. During the decade in which Code § 56-585.1 A 5 e has been implemented, the statute has provided rate adjustment clause recovery of environmental compliance expenses and a return on environmental compliance rate base items.[220] For adjustment clause recovery under this statute, environmental compliance rate base items have included, among other things, environmental allowance inventory, cash working capital, and deferred balances.[221] These and other costs have been considered the "cost of [compliance] projects" upon a finding that they were necessary to comply with environmental laws or regulations, unless the applicant utility failed to demonstrate (1) the actual level of compliance costs,[222] or (2) the prudence or reasonableness of costs.[223]

In 2020, the General Assembly specifically included the "costs of allowances purchased" within recoverable "costs of [compliance] projects" that have traditionally included expense and a return on rate base, which has included financing costs for allowance inventory, cash working capital, and deferred costs. As stated by the Committee, "'costs of allowances' are one type or category of compliance costs that the General Assembly intended [Code § 56-585.1 A 5 e] to cover."[224] I do not read the language added in 2020 as a limitation on the Commission's ratemaking treatment of recoverable compliance costs as either expense or rate base items, as appropriate. As recognized by Dominion, a straightforward way of accomplishing such a limitation seemingly would have been to include a prohibition in the 2020 amendment or to direct recovery through a different mechanism.[225] For example, the General Assembly could have included the adopted language in Code § 56-249.6, which (unlike Code § 56-585.1 A 5 e) has been implemented without a rate base or related return component.

---

[219] *Appalachian Power Company v. State Corporation Commission*, 284 Va. 695, 707-08 (2012) ("*Appalachian*").
[220] *See, e.g., Petition of Appalachian Power Company, For approval of a rate adjustment clause, E-RAC, to recover costs incurred in complying with state and federal environmental laws and regulations, pursuant to Va. Code § 56-585.1 A 5 e*, Case No. PUE-2011-00035, 2011 S.C.C. Ann. Rep. 474, 476, Order Approving Rate Adjustment Clause (Nov. 30, 2011); *Petition of Appalachian Power Company, For approval of a rate adjustment clause, E-RAC, to recover costs incurred in complying with state and federal environmental laws and regulations, pursuant to Va. Code § 56-585.1 A 5 e*, Case No. PUE-2013-00010, 2013 S.C.C. Ann. Rep. 359, 361, Final Order (Nov. 25, 2013). The specific pages cited for these orders identify a cost of capital and/or capital structure approved for purposes of setting the applicable environmental compliance adjustment clause.
[221] Tr. at 160-61 (Carr); Tr. at 97-98 (Ingram).
[222] *Appalachian*, 284 Va. at 708-710.
[223] *Petition of Virginia Electric and Power Company, For approval of a rate adjustment clause, designated Rider E, for the recovery of costs incurred to comply with state and federal environmental regulations pursuant to § 56-585.1 A 5 e of the Code of Virginia*, Case No. PUR-2018-00195, 2019 S.C.C. Ann. Rep. 328, 330-31, Final Order (Aug. 5, 2019) ("*Rider E Final Order*").
[224] Committee's Brief at 3.
[225] Dominion's Brief at 11.

Based in part on precedent implementing Code § 56-585.1 A 5 e, I am unpersuaded by arguments that the absence of words like "financing costs", "cost of capital", "margin on operating expenses", "life-cycle costs", "associated with" or "resulting from" in the statute indicate that recovery of "costs of allowances purchased" must be limited to the "sticker price" of allowances.[226] Since such words do not appear anywhere in Code § 56-585.1 A 5 e, these arguments suggest a sweeping conclusion that all costs recoverable under this statute must be limited to the "sticker prices" paid by Dominion. The statute has never been implemented in this manner.

In sum, I consider the financing costs of allowances purchased to be "costs of allowances purchased" or the "costs of projects ... to comply with state or federal environmental laws or regulations" recoverable under Code § 56-585.1 A 5 e. However, I acknowledge that the 2020 legislation has not yet been applied and therefore the Commission could interpret this legislation in a different manner than I have. If the Commission adopts Consumer Counsel's or the Committee's interpretation, approximately $4.95 million should be removed from the Rider RGGI revenue requirement. Because the record establishes that the subject costs are, as a factual matter, financing costs that the Company has incurred and will continue to incur, they should nonetheless be reflected in Dominion's cost-of-service retail rates. If not recovered through Rider RGGI, Consumer Counsel recommends such costs would be incorporated in the Company's base rates. This appears appropriate if the Commission decides that such costs are, as a legal matter, ineligible for recovery under Code § 56-585.1 A 5 e.

4. Reasonableness and Prudence of Costs Incurred

Auction vs. Secondary Market

Appalachian Voices' witness Rábago questioned whether Dominion should obtain more allowances in the secondary market. However, Dominion plans to access the secondary market opportunistically, if necessary, to supplement auction purchases. Indeed, Dominion has already made secondary market purchases and remains active in the secondary market.[227] Given the high volume of allowances Dominion – which became the largest compliance entity in RGGI when Virginia joined[228] – will require, it appears reasonable for Dominion to actively participate in the auction process where all allowances originate. Mr. Rábago acknowledged that, as the biggest buyer in RGGI, Dominion should be in the auctions because the secondary market "is not going to be adequate to supply [the Company's] needs."[229]

Modeling for Compliance vs. Least-Cost Compliance Analysis

To estimate its allowance requirements and inform compliance procurements, the Company plans to: (1) use PLEXOS modeling to simulate generation dispatch and CO_2 emissions, then (2) track actual CO_2 emissions of regulated sources. Appalachian Voices'

---

[226] Consumer Counsel's Brief at 4-6; Committee's Brief at 3.
[227] *See, e.g.*, Ex. 5 (DEV-PE-1); Tr. at 220 (Hitch).
[228] Tr. at 55 (Hitch).
[229] Tr. at 105-06 (Rábago).

witness Rábago indicated that the optimal RGGI compliance approach should take into account "generation development and energy procurement, plant retirement timing, plant upgrades, increased energy efficiency programs, [and] support for small and distributed generation development."[230] Based on my review of the record, Dominion's approach generally appears to be a reasonable means for estimating the quantities of emissions from, and allowances required for, the Company's regulated generation sources. To the extent the matters identified by Mr. Rábago affect the dispatch and emissions of regulated sources, that impact will be reflected in the actual emissions and associated compliance obligation that Dominion will continually track. If in the future the Company's emissions turn lower (or higher) than estimated, Dominion can – and should – incorporate that information into future allowance procurement decisions that can be evaluated in subsequent Rider RGGI cases. Additionally, the record indicates that Dominion's PLEXOS modeling did incorporate announced plant retirements (*i.e.*, Possum Point 5 in 2020; Yorktown Unit 3 and Chesterfield Units 5 and 6 in 2023) and several proposed solar generation facilities and PPAs.[231]

Appalachian Voices witness' Rábago also recommended that Dominion "internaliz[e] a RGGI price into the moment-to-moment decisions that the plant makes about resources that it offers … and the price that it bids."[232] The record indicates this already occurs. The Company's CO_2 regulated generation units are dispatched by PJM based on economic dispatch.[233] The current commitment of these resources to PJM's capacity market requires them to offer into PJM's wholesale energy market until at least June 2022.[234] The Company testified that it incorporates RGGI allowance costs into these energy offers and also into the PLEXOS modeling used to estimate allowance needs.[235]

While I view Dominion's RGGI compliance approach, in general, as a reasonable way to manage operational facilities in the short-term, Appalachian Voices' witness Rábago correctly recognized that Dominion's Petition was not presented with analysis indicating such short-term compliance is part of a least-cost strategy that integrates the requirements of RGGI and other legal requirements, including new mandatory RPS requirements that could affect CO_2 emissions.[236] Appalachian Voices asserted the Company has failed to consider, among other things, whether accelerating the retirement of CO_2-emitting generation is potentially a least-cost RGGI compliance approach for the Company.[237] Appalachian Voices offered that "[i]t may be cheaper, for example, for an uneconomic unit to simply retire earlier rather than continue already

---

230 Ex. 15 (Rábago) at 5.

231 Ex. 26 (Compton rebuttal) at 3; Tr. at 64-65, 67 (Compton); Ex. 9 (DEV-PE-2); Ex. 11 (DEV-PE-5). The solar generation facilities and PPAs were proposed in Case No. PUR-2020-000134. The Commission recently approved Dominion's petition in that case. *Commonwealth of Virginia, ex rel., State Corporation Commission, Ex Parte: Establishing 2020 RPS Proceeding for Virginia Electric and Power Company*, Case No. PUR-2020-00134, Doc. Con. Cen. No. 210440236, Final Order (Apr. 30, 2021).

232 Tr. at 126 (Rábago).

233 Ex. 25 (Hitch rebuttal) at 3.

234 Tr. at 218-19, 225, 235-36 (Hitch); Tr. at 126-27 (Rábago).

235 Ex. 25 (Hitch rebuttal) at 3; Tr. at 219 (Hitch).

236 *See, e.g.*, Ex. 15 (Rábago) at 12 ("[T]he Company did not develop a robust analysis of or propose a plan for least-cost compliance with the RPS….").

237 Appalachian Voices' Brief at 8-12.

uneconomic operations with additional allowance costs."[238] On this point, Appalachian Voices witness Rábago highlighted the significance of Rider RGGI costs estimated by the Company as "huge, in the billions of dollars" through 2045.[239]

Appalachian Voices asserted this issue is within the scope of this proceeding and recommended rejection of the Petition.[240] Dominion argued this issue is beyond the scope of the instant proceeding and should instead be considered in a future IRP proceeding.[241]

Appalachian Voices and Consumer Counsel correctly recognized that the Commission recently directed Dominion to present least-cost compliance analysis as part of future IRP updates *and* RPS plan proceedings.[242] More specifically, the Commission has directed Dominion to file "a least cost VCEA plan that meets (i) applicable [CO_2] regulations and (ii) the mandatory RPS Program requirements of the VCEA."[243] Such analysis presumably will include retirement analysis, as Dominion regularly conducts generation retirement analysis that is evaluated in IRP proceedings and the Company has previously retired generation for environmental compliance.[244] Consequently, it appears the Commission has already directed Dominion to conduct and present the type of analysis recommended by Appalachian Voices. Referencing this prior decision, Appalachian Voices argued that "the Commission is requiring the Company to perform least-cost planning for its renewable portfolio in the docket in which the Company is seeking cost recovery for its renewable portfolio. The same should be required here."[245] I see the same parallel as Appalachian Voices. The instant proceeding offers the Commission the opportunity to provide guidance on whether such analysis should likewise be presented in Rider RGGI proceedings.

5. Recommended Rider RGGI Revenue Requirement and Rates

The final issue I considered is what, if any, effect the lack of more comprehensive least-cost analysis at this time should have on the instant proceeding and the revenue requirement or rates requested herein. Appalachian Voices recommended that Dominion's Petition be rejected, but that deferred accounting treatment be authorized, subject to a later prudence review of

---

[238] *Id.* at 9 (emphasis omitted).
[239] Tr. at 104 (Rábago).
[240] Appalachian Voices' Brief at 15-19.
[241] *See, e.g.*, Ex. 26 (Compton rebuttal) at 4; Dominion's Brief at 6.
[242] *See, e.g.*, Consumer Counsel's Brief at 11; Appalachian Voices' Brief at 17.
[243] *Commonwealth of Virginia, ex rel., State Corporation Commission, Ex Parte: Establishing 2020 RPS Proceeding for Virginia Electric and Power Company*, Case No. PUR-2020-00134, Doc. Con. Cen. No. 210440236, Final Order at 6 (Apr. 30, 2021); *Commonwealth of Virginia, ex rel. State Corporation Commission, In re: Virginia Electric and Power Company's Integrated Resource Plan filing pursuant to Va. Code § 56-597 et seq.*, Case No. PUR-2020-00035, Doc. Con. Cen. No. 210210007, Final Order at 13-14 (Feb. 1, 2021).
[244] *See, e.g., Application of Virginia Electric and Power Company d/b/a Dominion Virginia Power, For approval and certification of electric facilities: Surry-Skiffes Creek 500 kV Transmission Line, Skiffes Creek-Whealton 230 kV Transmission Line, and Skiffes Creek 500 kV-230 kV-115 kV Switching Station*, Case No. PUE-2021-00029, 2013 S.C.C. Ann. Rep. 240, 248, Order (Nov. 26, 2013); *Rider E Final Order*, 2019 S.C.C. Ann. Rep. at 328, 330-31 (identifying retrofitting or retiring operational units as two options for complying with an environmental regulation).
[245] Appalachian Voices' Brief at 17.

incurred costs. Appalachian Voices asserted that Dominion would not be prejudiced by such action.[246]

This question implicates reasonableness and prudence in my view. Notably, the Commission has evaluated the reasonableness and prudence of proposed environmental compliance costs "at the time such cost was incurred."[247] As discussed above, Dominion has not incurred most of the compliance obligations (*i.e.*, emissions) or costs at issue in this proceeding.[248] Nor has Dominion taken most of the associated actions for the rate year or its first three-year (2021-2023) compliance period. Two and a half years remain for the compliance period. During this period, Dominion will be participating in twelve allowance auctions – only one of which has occurred so far – and the secondary allowance market. Accordingly, I do not view approval of a projected cost revenue requirement in the instant case, based largely on need and prices forecasted at the outset of a three-year compliance period, as foreclosing the Commission's authority to review in future Rider RGGI proceedings the reasonableness or prudence of expenditures once they have actually been incurred and are known.

As Dominion's RGGI allowance costs will be ongoing, continuing to simply defer such compliance costs without any recovery would result in a larger deferral balance with a larger potential ratepayer impact in the future. The record indicates that the costs of RGGI allowances for Dominion – which became the largest compliance entity upon Virginia joining RGGI[249] – could grow to significant levels if cost recovery is deferred. Additionally, overall updated modeling results presented during this proceeding forecast allowance procurements through July 2022,[250] that are approximately 20% higher cost than the Petition's initial estimate.[251]

For these reasons, I recommend approval of the $167.76 million projected Rider RGGI revenue requirement, as corrected by Staff,[252] subject to an actual cost true-up in future Rider RGGI proceedings that can include an evaluation of the reasonableness and prudence of actual allowance costs incurred by Dominion.

I further recommend that the cost allocation and rate design for Rider RGGI be on an energy basis, as proposed. An energy allocation and rate design are reasonable because the allowance obligation and costs are attributable to energy production.[253]

---

[246] *Id.* at 18.
[247] *Rider E Final Order*, 2019 S.C.C. Ann. Rep. at 330-31.
[248] For the costs Dominion indicated it has already incurred, the record leaves little, if any, doubt in my mind that reasonable and prudent RGGI compliance will require spending at least $40 million on CO_2 allowances.
[249] Tr. at 55 (Hitch).
[250] Ex. 13 (DEV-PE-4); Ex. 14 (Haynes direct) at Attached Corrected Sched. 1. $245,884,844*0.79250=$194,863,739.
[251] Ex. 2 (Petition) at Filing Sched. 46A, Statement 1, p. 2; Ex. 14 (Haynes direct) at Attached Corrected Sched. 1. $201,710,089*0.79250=$159,855,246.
[252] As recognized by Staff witness Carr, this recommended amount is higher than $167.37 million amount included in the Company's corrected Petition, but lower than the $168.26 million amount noticed by Dominion. Ex. 18 (Carr) at 2.
[253] Ex. 14 (Haynes direct) at 2-3; Ex. 15 (Rábago) at 11; Ex. 24 (White) at 7-8.

FINDINGS AND RECOMMENDATIONS

Based on the record developed in this proceeding, and for the reasons set forth above, I find that:

(1) By the close of the record, Dominion had spent approximately $40 million ($32 million Virginia jurisdictional) to purchase CO_2 allowances that effectively cover the Company's regulated emissions for the first three months of 2021.

(2) Dominion will need to purchase many more CO_2 allowances through the end of the rate year (July 31, 2022), although the exact prices or quantities of such additional purchases cannot be known at this time.

(3) Record evidence, including actual CO_2 allowance prices in 2021, indicates the $6.84 allowance price used to calculate the proposed Rider RGGI revenue requirement could be too low. However, CO_2 allowance prices fluctuate and any price differentials (higher or lower) can be trued-up in future Rider RGGI proceedings.

(4) Dominion's proposed use of weighted averages to calculate the cost of allowance consumption reasonably incorporates the actual prices of CO_2 allowance purchases by Dominion.

(5) Like CO_2 allowance price differentials discussed above, adjustment clause recovery allows any quantity differentials (higher or lower) to be trued-up in future Rider RGGI proceedings.

(6) Dominion will not incur any costs through the end of the rate year to build a CO_2 allowance bank. An allowance bank, if implemented temporarily at the end of a control period, generally appears to be a reasonable measure to ensure CO_2 compliance and avoid significant penalties for non-compliance. However, Dominion should provide sufficient support for any cost recovery associated with an allowance bank in any future proceeding in which it seeks to recover such costs.

(7) Dominion will incur financing costs associated with a CO_2 allowance inventory, cash working capital, and deferred balances.

(8) The Commission has previously authorized adjustment clause recovery under Code § 56-585.1 A 5 e for financing costs associated with an emissions allowance inventory, cash working capital, and deferred balances.

(9) Legislation enacted in 2020 does not appear to limit RGGI compliance costs to only the "sticker price" of allowances, but the Commission has not previously interpreted this legislation. Should the Commission interpret this legislation to include such a limitation, approximately $4.95 million (3%) of the proposed $167.76 million revenue requirement request should be recoverable through base rates, rather than Rider RGGI.

(10) It is reasonable for Dominion to obtain CO_2 allowances from both the RGGI auctions and the secondary market.

(11) While Dominion's RGGI compliance approach generally appears to be a reasonable way to manage operational facilities in the short-term, Dominion's Petition was not presented with analysis indicating such short-term compliance is part of a least-cost strategy that integrates the requirements of RGGI and other legal requirements, including new mandatory RPS requirements that could affect CO_2 emissions. The Commission recently directed Dominion to conduct and present this type of analysis in separate proceedings and the instant proceeding offers the Commission the opportunity to provide guidance on whether such analysis should also be presented in Rider RGGI proceedings.

(12) The Commission can approve a projected cost Rider RGGI revenue requirement in the instant case, based largely on projected need and prices forecasted at the outset of a three-year compliance period, without foreclosing the Commission's authority to review, in future Rider RGGI proceedings, the reasonableness or prudence of expenditures once they have actually been incurred and are known.

(13) If RGGI compliance cost recovery is not approved until a future Rider RGGI proceeding, Dominion's ongoing CO_2 allowance costs would accumulate and could result in a significant deferral balance with a larger ratepayer impact.

(14) The energy allocation and rate design for Rider RGGI are reasonable.

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

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

(2) ***APPROVES*** an initial Rider RGGI rate designed to recover $167.76 million; and

(3) ***DISMISSES*** this case.

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 and Code § 12.1-31, any comments on this Report must be filed on or before June 16, 2021. In accordance with the directives of the Commission's *COVID-19 Electronic Service Order*[254] the parties are encouraged to file electronically. 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

[254] *Commonwealth of Virginia, ex rel State Corporation Commission, Ex Parte: Electronic service among parties during COVID-19 emergency*, Case No. CLK-2020-00007, Doc. Con. Cen. No. 200410009, Order Requiring Electronic Service (Apr. 1, 2020) ("*COVID-19 Electronic Service Order*").

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.
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, Virginia 23219.