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ENERGY COMMISSION OF VIRGINIA

SUBCOMMITTEE 3: REGIONAL GREENHOUSE GAS INITIATIVE (RGGI)

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Based on 2026 Work Plan Research Recommendations

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DRAFT FOR DISCUSSION PURPOSES - NOT FOR DISTRIBUTION

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SUBCOMMITTEE 3, RGGI

POLICY RECOMMENDATION TO INCREASE TRANSPARENCY AND REPORTING BY STATE AGENCIES FOR PROGRAM IMPLEMENTATION AND ADMINISTRATION OF RGGI REVENUES (3a)

Policy Recommendation: State agencies shall submit annual reports documenting how administrative and programmatic funds are being used. Require transparency and reporting from state and local agencies where RGGI proceeds are allocated: Department of Housing and Community Development (DHCD), Department of Conservation and Recreation (DCR), and Department of Environmental Quality (DEQ). Direct DHCD to re-establish the HIEE Stakeholder Advisory Group for the Housing Innovations in Energy Efficiency (HIEE) programs (low-income energy efficiency).

- Model after DCR's method for CFPF with advisory panel and detailed public information and annual reporting of summary of awardees, grant amounts, and the total volume of applications received. See § 10.1-603.25. Virginia Community Flood Preparedness Fund; loan and grant program.

Additional Policy Option: Consider mandating administrative revenue-sharing between DHCD and Virginia Department of Energy to enable comprehensive analysis and program coordination on energy efficiency programs across the Commonwealth of Virginia.

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SUBCOMMITTEE 3: RGGI

POLICY RECOMMENDATION: REQUIRE DATA CENTER BACK-UP GENERATION TO BE COVERED UNDER RGGI, FOR STATE AIR POLLUTION CONTROL BOARD TO UPDATE REGULATIONS (3d)

Policy Recommendation: Direct the State Air Pollution Control Board to initiate a regulatory action prior to December 31, 2027, to amend the Regulation of Emissions Trading Programs (9VAC5-140) to include data center primary and backup generation under RGGI regulations as described below.

- Clarify that "CO2 budget unit" includes data centers' primary and backup generators if units at a single facility collectively have a capacity of 25MW and over.
- Amend definition of "unit" to include any electricity generating unit that emits carbon dioxide as a byproduct of consuming fuel, whether through combustion, electrochemical process, or other means.
    - Adding "electric chemical processes" would include fuel cells technology under RGGI regulations.
- Require data centers to submit the following information to DEQ:
    - Upon running permitted gen-sets, data centers must report within 24 hours: i) the number and type of each type of gen-set operated, ii) the total number of hours each type of gen-set was operated, iii) the total fuel consumed by each type of gen-set, iv) the reason why each type of gen-set was operated, and v) other information as required by DEQ.
    - When operating self-supplied power facilities, data centers must report within 24 hours: i) the number and type of each type of electric generating unit operated, ii) the total number of hours each type of electric generating unit was operated, iii) the total fuel consumed by each type of electric generating unit, and iv) other information as required by DEQ.

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CARBON BORDER ADJUSTMENT MECHANISM (CBAM) POLICY BRIEF (3e)

PREPARED FOR THE CONSIDERATION OF THE ENERGY COMMISSION OF VIRGINIA

William M. Shobe

University of Virginia

October 30, 2026

Discussion draft: please do not quote or distribute

Per request from Chair Surovell, Energy Commission staff consulted with William M. Shobe from the University of Virginia Weldon Cooper Center to assess carbon leakage in the broader PJM region given Virginia's re-entry into RGGI. This research reflects the analysis of carbon leakage in non-RGGI PJM states and presents a policy recommendation on how to address this issue.

Discussion draft (2026-10-30): do not share or distribute

Operation of a Virginia carbon border adjustment mechanism:

The Virginia CBAM would require that each LSE acquire and retire a GATS certificate for each MWh of electricity sales.

The CBAM applies the RGGI price from the latest allowance auction to the emission rate assigned to each GATS certificate.

Domestic generation is covered by RGGI, so domestic GATS certificates are assigned an emission rate of zero, while every imported MWh is assigned a default emissions rate equal to the natural gas rate (approx. 0.43t/MWh), and given the opportunity to demonstrate that it is cleaner than that rate by contracting with specific sources in the rest of PJM.

Assign the applicable emission rate to each certificate retired according to the following schedule:

- 0 for certificates from generation subject to the RGGI allowance requirement (RGGI-covered fossil generation)
- 0 for certificates from domestic non-emitting generation
- 0 for certificates from imported non-emitting generation, subject to anti-reshuffling limits
- ER: The measured emission rate reported in the GATS certificate for facility-specific contracts for non-domestic generation certificates
- ER^d: The *default emission rate (0.43t/MWh)* for "residual" GATS certificates from generation outside of RGGI

Electricity storage infrastructure (batteries and pumped hydro) must acquire GATS certificates with electricity purchased but only needs to retire certificates for "round trip losses" due to operation of the storage. The remainder of GATS certificates may be sold.

For regulated generators, revenues from the sale of GATS certificates are netted against allowance cost rate riders.

Anti-reshuffling requirement: an imported certificate derives from a bilateral contract for a specific unit and same time-period, settled between the generator's and the LSE's PJM accounts. (Purchases from the PJM wholesale market that do not have a contract inherit the default rate.)

Note: Revenues from the charges on imports can be rebated to LSEs without compromising the performance of the CBAM.

CBAM Policy Brief

William M Shobe
University of Virginia
October 30, 2026

Discussion draft: please do not quote or distribute

Summary

This policy brief suggests an administratively feasible and economically beneficial approach to controlling the leakage of generation from under the Regional Greenhouse Gas Initiative (RGGI) cap into the non-RGGI PJM states. The carbon border adjustment mechanism (CBAM) operates by applying the RGGI price to all electricity sales at LSEs in Virginia regardless of the location of the generation. LSEs acquire GATS certificates and pay the RGGI price on the applicable emission rate. The rate is zero for domestic generation already covered by RGGI. A default emission rate is applied to imports unless acquired generation and its associated certificates demonstrate a lower rate. For domestic generation, LSEs pay no more than before because the increased revenue to generators reduces RGGI rate riders accordingly. CBAM net revenues from imported electricity can be rebated to ratepayers to minimize disproportionate impacts. The CBAM outlined here, satisfies both constitutional and federal regulatory requirements and is implemented using existing accounting infrastructure. This policy reduces leakage and complements other state clean energy initiatives and benefits the state's economy.

RGGI and Generation Shifting

The function of a cap-and-trade regulatory framework like RGGI is to give participants in electricity markets incentive to reduce CO_2 emissions from generating electricity and to do so in a way that minimizes the cost of emission reduction. One of the key features that makes a program like RGGI so effective is the strong incentives that the price of RGGI allowances gives producers to shift towards cleaner generation over time. If some producers have this market signal to reduce emissions but others do not, the cost-effectiveness of program and the incentives for investing in clean generation can be compromised.

Virginia imports a substantial share of its electricity from the rest of the PJM regional transmission operator (RTO), primarily the non-RGGI states. Because most of the generators of imported electricity do not have to purchase allowances under the emission cap, some electricity generation is likely to shift into the rest of the PJM region, reducing the effectiveness of RGGI in reducing emissions from the states participating in the cap.

Existing state policies do not effectively address the "leakage" of generation and its associated emissions from Virginia into the rest of PJM. The existing policy portfolio in Virginia does work to reduce emissions, but current policies are incomplete because they do not directly address leakage.[1] For example, increasing low-emitting generation in Virginia does operate to reduce the leakage of generation and emissions, but given the rapid growth in electricity demand and the increasing price of RGGI allowances, current policies are clearly insufficient, and leakage will continue to grow without explicit policies to control it.

[1] Maryland, New Jersey, and Delaware also belong to both RGGI and PJM.

Background

If the cause of the increased imports is the difference in emission costs on either side of the porous jurisdictional boundary, one obvious possible response is to make every MWh *consumed* in Virginia face the same RGGI price per ton of emissions regardless of where the emissions are *generated*. The cost difference is eliminated if imported electricity pays the same price for emissions as domestic generation. The European Union and the US states of California and Washington all have implemented some version of what is often referred to as a carbon border adjustment mechanism (CBAM). The border adjustment policy proposed here imputes an emission intensity for imported electricity and charges the RGGI emission price on those imputed emissions. This eliminates the RGGI-induced shifting of emissions due to the shifting of generation dispatch within PJM.

Two essential design issues to need to be addressed: 1. Who has a compliance obligation, i.e, how is the adjustment enforced? and 2. How imputed emissions are estimated?

Applicable legal standards that determine the locus of the compliance obligation

There are external legal constraints on how such an adjustment might be implemented. The ability of states to regulate (or tax) interstate trade in electricity is constrained by the US Constitution and by the Federal Power Act (FPA). The restrictions are (1) that states may not discriminate against interstate commerce but may implement evenhanded rules that differentiate electricity on emission content rather than on its origin, and (2) that the regulation of electricity interstate-transmission and wholesale markets is reserved for the Federal Energy Regulatory Commission (FERC).

The "dormant" Commerce Clause bars discrimination against interstate commerce but permits evenhanded rules that differentiate on emissions content rather than origin (*Rocky Mountain Farmers Union v. Corey*, 9th Cir. 2013; the extraterritoriality strand was narrowed in *National Pork Producers v. Ross*, 2023). So legally permissible efforts to implement an emission price on imported electricity must apply the same pricing rule to local and imported electricity.

The FPA reserves to FERC the regulation of wholesale rates and practices in electricity markets, while reserving to the states authority over generation facilities, retail sales, and the environmental regulation of production (*Hughes v. Talen*, 2016). State authority extends to credits and charges denominated in environmental attributes: a certificate priced by a state is a separate commodity from wholesale energy, even when its value is expected to pass through to offers. The FPA requirement can be met by applying the border emission adjustment at the locus of the 'first purchaser' of electricity within the state, usually a load-serving entity (LSE).[2] As described subsequently, batteries, when they purchase of power through PJM act as conduits for the emission characteristics of the power they purchase.

[2] California applies its border adjustment to the first entity bringing power to the state's grid. For states like Virginia that participate in PJM, imports and domestic energy are not readily distinguishable, with make the LSE the administratively feasible locus for a border adjustment policy.

LSE fee structure

The minimum requirements for implementing a RGGI border adjustment for Virginia are (1) reliable emission monitoring of all covered sources of CO_2 emissions, (2) reliable measures of electricity sales by LSEs in the state, and (3) a system for tracking that can ensure the matching of generation emission attributes to the use of such attributes for compliance. These pieces are currently in place in PJM and facilitate an administratively feasible CBAM policy.

PJM maintains a database for tracking the energy and environmental attributes of generation in the RTO. The generation attribute tracking system (GATS) tracks both the creation and retirement of generation certificates, which contain information about the emission attributes of each MWh of generation in the region. So, each MWh of generation 'earns' the generator a GATS certificate. A GATS certificate's emission attributes are assets that the generator owns and can sell (recording the transfer in the tracking system). And each MWh certificate's emission attributes are recorded in the tracking system, once used, are no longer available for use by others.

The Virginia CBAM would require that each LSE acquire and retire a GATS certificate for each MWh of electricity sales. The CBAM would charge the RGGI price to the emission rate assigned to the GATS certificate. RGGI-covered GATS certificates are assigned an emission rate of zero (the RGGI price has already been paid on these), while every imported MWh is assigned a default emissions rate equal to the natural gas rate, and given the opportunity to demonstrate that it is cleaner than that rate by contracting with non-emitting (or low emitting) sources in the rest of PJM. The CBAM would assign the applicable emission rate to each certificate retired according to the following schedule:

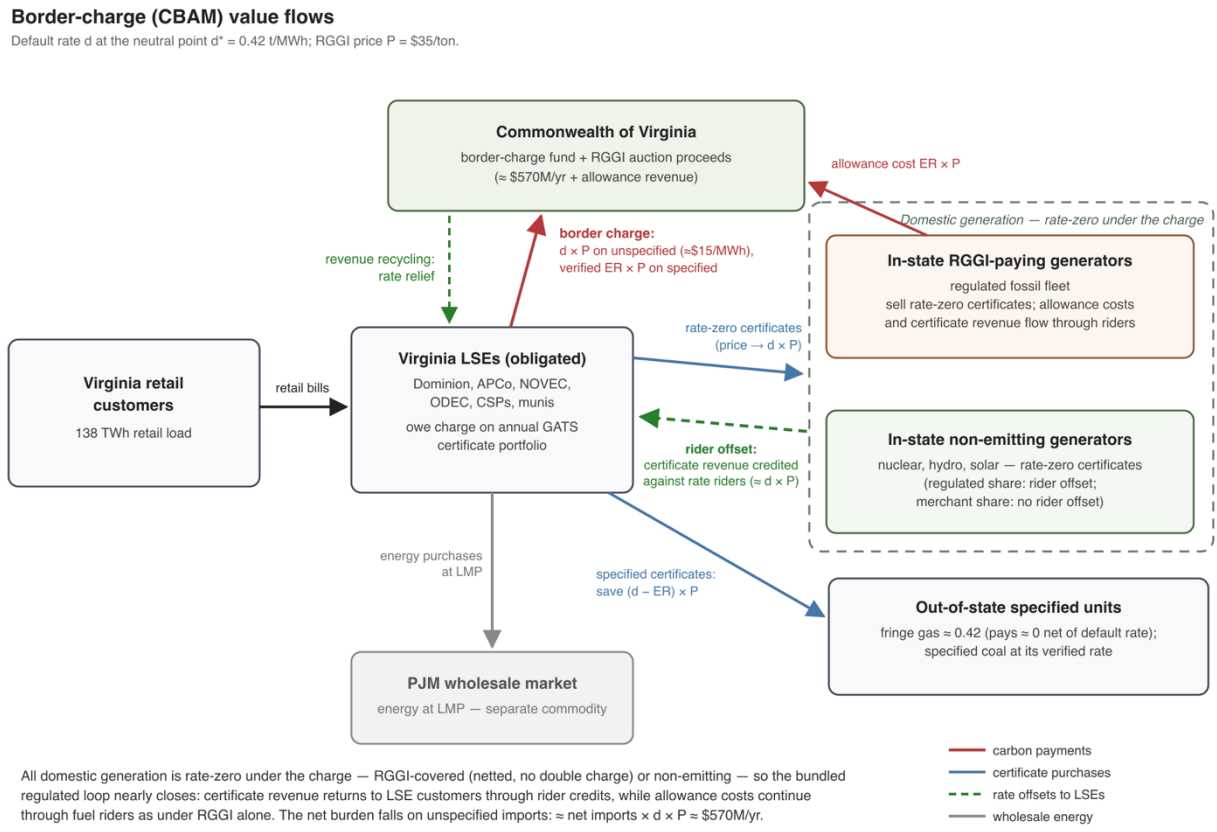
- 0 for certificates from generation subject to the RGGI allowance requirement (fossil generation)
- 0 for certificates from domestic non-emitting generation
- 0 for certificates from imported non-emitting generation, subject to anti-reshuffling limits
- ER: The measured emission rate reported in the GATS certificate for facility-specific contracts for non-domestic generation certificates.
- ER^d: The *default emission rate* for "residual" (generic) GATS certificates from generation outside of Virginia (see Appendix 2 on "residual" GATS certificates).

Important details: For imports from unspecified sources, a default implied emission rate, ER^d, is used. The choice of the default emission rate determines the extent to which imported electricity pays the RGGI price for embedded emissions. A $ER^d = 0$, is equivalent to the standard RGGI instance with no CBAM. $ER^d = 0.43$ tCO_2/MWh sets the default at the emission rate of new natural gas generation, which for reasons to be explained later is the highest practicable rate that satisfies the constitutional requirement of equal treatment of domestic and non-domestic generation. Setting ER^d equal to 0.43 eliminates RGGI induced leakage through the PJM dispatch channel. Residual GATS certificates comprise a pool of certificates left over after low-

emission certificates have been claimed and used. The emission rate is the average rate for the unclaimed certificates.

Energy storage units, such as pumped hydro or batteries, purchasing directly in the PJM wholesale market (that is, not from an LSE), act as a "conduit" for GATS certificates, net of round-trip storage loss. In this way, the storage entity is only responsible for the energy used in the storage round trip. The remainder of the GATS certificates purchased are available for sale.

To see how this works, suppose that the fuel cost of a Virginia gas unit is $20/MWh and for a West Virginia coal unit is $25. If the RGGI emission cost is $10/MWh, then Virginia joining RGGI but without a CBAM would result in the dispatch of the coal unit rather than the gas unit. But if the Virginia gas unit can earn anything over $5 for its GATS certificate, then the original dispatch order would be restored. Because a Virginia gas unit has already paid the RGGI price, the CBAM charge to an LSE for the retired domestic GATS certificate is $0. The LSE would be willing to pay up to $10 for the certificate because it avoids the fee for residual GATS certificates. Payments by LSEs to regulated generators for their GATS certificates get incorporated into lower RGGI rate riders, so the LSE net position doesn't change due to Virginia GATS purchases. GATS purchases from PJM result in CBAM revenues to the state, revenues that can be rebated to ratepayers.



The proposed CBAM can eliminate leakage while strengthening RGGI's existing qualities encouraging short-run shifting of Virginia generation from higher emitting fossil generation and the powerful long-run effect that RGGI membership has on encouraging the

investment in non-emitting new generation. It does this by shifting emission costs onto the generators of the emissions embedded in imported electricity.

LSEs purchase electricity from the PJM pool and, under the CBAM, must purchase and retire certificates to cover the electricity served. LSEs have four options for covering power purchases:

- Buy certificates from generators covered by RGGI - LSE emission fee is zero because the RGGI price was paid by the generator.
- Contract for the output and certificates of a non-emitting generator (subject to anti-reshuffling restrictions) - LSE emission fee is zero because the GATS certificates show zero emissions
- Contract for the output of a specific non-RGGI PJM generator and associated certificates - LSE pays the RGGI price on the GATS-recorded emissions - same as that paid on in-state certificates.
- Purchase residual (non-specific) PJM GATS certificates - LSE pays the default emission rate ER^d times the RGGI price on each certificate.

No distinction is made between in-state generation or imports, all must be covered by a certificate and are charged the same rate given the certificate attributes; this approach is non-discriminatory and hence permissible under the US Constitution.

LSEs have incentive to seek out contracts with low-emitting resources for their imported GATS certificates. Any generation with an emission rate lower than the default rate will be profitable to pursue.[3] The purchase of GATS certificates from outside of Virginia, to be effective, must satisfy what are known as 'anti-reshuffling' provisions (to be discussed shortly) to prevent the use of non-additional, low-emitting generation.

Costs and revenues

LSEs buy certificates to cover sales. Given the fee schedule above, an LSE would be willing to pay up to the RGGI price times the default rate: P times ER^d, for a Virginia GATS certificate because, once the LSE owns a Virginia GATS certificate it need not pay the RGGI price on its sales. The payment made by the LSE to the generator lowers the generator's net cost of a MWh of generation (and hence bids in the PJM energy procurement auction) by the amount of the payment. This is the mechanism by which the CBAM eliminates the shifting of generation due to RGGI: generator bids in the PJM energy auction are reduced by the income from selling the GATS certificates, resulting in increased dispatch from Virginia plants. The extra income that domestic regulated utilities earn lowers the rate riders that generators charge LSEs for energy by offsetting the cost of purchasing RGGI allowances. So, there is no net increase in LSE costs for domestic generation. Imported generation now has the same emission charge as

[3] Because LSEs can contract for the output of new natural gas generation, the default rate, ER^d, can't be expected to be binding at a rate above the emission rate for new natural gas generation.

domestic generation, but this increased cost to LSEs comes to the state as revenue. All or part of this revenue can be returned to the import-exposed LSEs to reduce ratepayer exposure to emission import costs, much the way that a share of the RGGI auction proceeds is rebated to ratepayers.

The net effect on Virginia ratepayers is zero or close to zero. The charge on emissions shifts the emission costs to PJM states outside of RGGI. It lowers the value of high-emitting generation relative to low-emitting generation and increased the value of in-state generation relative to out-of-state generation. The current in-state incentive to shift to lower-emitting generation is maintained because the GATS certificates that LSEs purchase have greater value to generators the lower are the associated emissions.

Anti-reshuffling provisions

Anti-reshuffling provisions are necessary to ensure that imported GATS are closely matched to energy delivered to Virginia in both time and attributes. Without these, a Virginia LSE could buy solar and wind certificates produced when their value in covering Virginia imports is very low and use them to cover imports during congested periods when the marginal emission rate is set by fringe coal plants. In that case, the purchased GATS certificates would represent little or no actual emission reduction. Anti-reshuffling provisions force a closer connection between the GATS certificate and Virginia generation displaced, referred to as 'delivered energy'. Effective anti-reshuffling provisions for a RGGI member state that is also in PJM are administratively feasible because GATS certificates are time differentiated at the hour level, and PJM keeps hourly meter and settlement data, which can be used to force a close match between GATS certificates used and energy delivered.

The anti-reshuffling provisions can be implemented with available data:

Key bundling requirement (essential). The certificate could arrive with the energy: a bilateral contract for the same unit, same period, settled between the generator's and the LSE's PJM accounts. (Purchases from the PJM wholesale market that do not have a contract inherit the default rate.)

Two possible extensions to cover edge cases:

1. **Hourly matching.** Zero-rated claims in hour, ***h***, are capped at the minimum of [the unit's metered output that hour times the LSE's contracted share, the LSE's load that hour].
2. **Aggregate physical consistency.** Total zero-rated import claims in hour, ***h***, must be no more than the metered net physical imports in that hour, pro-rated across claimants if oversubscribed.

Effect on emissions and revenues

The policy applies to PJM-covered LSEs, which comprise 99% of delivered electricity in Virginia.[4] Two LSEs are particularly large buyers of non-self-generated GATS certificates, NOVEC, with no generation of its own and with rapidly growing data center load, and APCo which sources two-thirds of its energy from specified West Virginia coal plants, Amos and Mountaineer at about 0.90 tCO_2/MWh, bearing an extra cost of between $14 and $21 per MWh at a RGGI price of $35.[5]

Based on 2025 data and a RGGI price of $35, the Virginia CBAM would reduce aggregate emissions by over 4 million tons of CO_2 per year in the short run (the first few years), according to my estimates. In the longer run, the effect is greater because of the CBAM effect on incentives to invest in low-emitting generation both within Virginia and in the rest of PJM.

The border emission charge raises substantial revenues; the price LSEs pay on imports depends on the extent to which they contract for specific resources or buy from unspecified residual generation. Assuming all imports are covered by *residual* GATS certificates, the program would generate on the order of $550 million per year at the import neutral, $ER^d = 0.43$. The revenues are "self-extinguishing", in the sense that, insofar as LSEs can find cheaper, non-emitting resources that satisfy the anti-reshuffling provisions, the import charges and CBAM revenues will fall. The import charge reinforces the emission-reducing effects of the cap by increasing the demand for low-emitting GATS certificates, which acts as a stimulus for increased investment in zero and low-emitting sources both in-state and in the rest of PJM.

The charge on domestic certificates, because it increases generator revenues, will be returned to LSE in the form of lower rates.

The border charge and congestion together exhibit a complementarity. During uncongested hours, increased imports are covered by the border charge. During congested periods, domestic generation covered by RGGI accounts for a larger share of sales. Reducing congestion may increase imported generation but exposes more sales to the border charge.

In the longer run, the CBAM has two side-effects that amplify its value in reducing emissions. First, by increasing the demand for certificates with low embedded emissions, it extends the incentive to build low emitting generation into the rest of PJM. Second, it increases the effectiveness of Virginia's investments in clean generation by reducing the extent to which it displaces Virginia natural gas generation for dirtier generation in the rest of PJM.

As an example, in 2025, Virginia electricity sales were about 145 TWh, with in-state generation of 108 TWh and net imports of 37 TWh. At the default emission rate of 0.43, the

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[4] 2025 values: Dominion Energy 64.5%, APCo 10.1%, NOVEC 8.9%, the nine ODEC cooperatives 8.0%, retail-choice CSPs 4.3%, and municipals 3.0%. Only $1.2 Old Dominion Power's LG&E/KU territory and two TVA-served systems are outside PJM's GATS coverage. Behind-the-meter self-supply is about 1 TWh. Transmission losses (about 6.4 TWh/yr) are ignored, although they probably should be accounted for, as is done in Washington's program

[5] Rebating some share of the CBAM revenues can be used to shield various classes of ratepayers and help allay issues of fairness and affordability for these two LSEs.

default charge would be about $15/MWh. The Dominion Energy LSE would cover most of its 89 TWh with its own fleet's certificates at no cash cost.[6] The Northern Virginia Electric Coop (NOVEC) would need to cover about 12 TWh of market purchases. It pays Virginia merchant generators anything up to $15/MWh for their certificates but pays no CBAM fee because the Virginia certificates were generated under RGGI. It won't pay more than $15, because it can opt to use residual GATS certificates at the default rate. Once all 108 TWh of in-state certificates are claimed, the remaining 37 TWh for which no certificates are available. The net-import position is the base on which the CBAM is charged, for net revenue of $555 million.

It is important to recognize that, for domestic generation, the CBAM only changes the locus of the payment not the ultimate incidence of the cost. When an LSE pays a generator for their certificates, the payments cover their share of the RGGI costs and are subtracted from the rate rider that generators charge to cover the RGGI allowances. In this way, the LSE is left in the same position as before the CBAM was implemented. For the residual, that is imported energy, there is a net payment. A share of this emission revenue could be rebated to ratepayers to reduce, or even eliminate, the ratepayer impact of the emission fee. The CBAM lowers the incentive to depend on dirty imports. This is not changed by rebating emission fees to classes of ratepayers.

The case of APCo requires special mention. Since RGGI does not apply to West Virginia generation, the CBAM would not change the dispatch from those plants. If the APCo area retains its current reliance on West Virginia coal plants, it would pay 0.9*$35 = $31.5/MWh in CBAM fees on those imports. If the CBAM revenues on the imports from West Virginia were rebated to ratepayers, APCo ratepayer costs would not change.

Planned generation and batteries

A CBAM has the beneficial side-effect of advancing the buildout of low-emitting generation in Virginia. With the CBAM in place, non-emitting generation retains its price advantage over emitting generation and no longer competes with implicitly subsidized fossil generation from elsewhere.

And the incentive to charge batteries using dirty imports during the uncontested early hours is greatly attenuated, so batteries are less likely to contribute to leakage, although they only reach their maximum potential when there are sufficient renewables to place renewables at the cost margin during at least some time period of the day.[7]

[6] There is an 'opportunity cost' equal to the market price of the certificates that could be sold rather than used.

[7] Batteries that are compensated for the full stack of grid services are also less likely to contribute to leakage. Reforming PJM battery compensation policies would tend to improve both the economic and emission performance of batteries.

New large load responsibilities

Virginia is a special case due to its rapidly growing electricity demand from concentrated large loads, primarily data centers. The speed of demand growth makes adding sufficient non-emitting capacity extremely challenging. Even with a CBAM in place, either additional fossil capacity or additional imports seem likely. Because the demand growth is due to data center deployment, there is an opportunity to close the leakage margin by requiring large new loads to arrange for 24/7 clean energy as a standard permitting condition. This could be accomplished through the same GATS accounting mechanism used to implement the CBAM, including the anti-reshuffling provisions.

Interaction with existing policies

The CBAM approach is generally complementary with existing state policies on emissions and on encouraging domestic generation, low-emitting generation in particular. It would encourage the accelerated buildout of domestic, low-emitting generation. It would also work in tandem with increased expenditures on energy efficiency.

Conclusion

This policy brief has outlined an administratively feasible and economically beneficial approach to controlling the leakage of generation from under the RGGI cap into the non-RGGI PJM states. The CBAM operates by applying the RGGI price to all electricity sales at LSEs in Virginia regardless of the location of the generation. LSEs acquire GATS certificates and pay the RGGI price on the applicable emission rate. The payment from LSEs to generators act to reduce the shifting of generation from Virginia generators to the rest of PJM. For domestic generation, LSEs pay no more than before because the increased revenue to generators reduces RGGI rate riders accordingly. Imported electricity does generate net revenue from LSEs, but these can be rebated to ratepayers through rate riders to minimize disproportionate impacts. A CBAM like the one outlined here, satisfies both constitutional and federal regulatory requirements and is implemented using existing accounting infrastructure.

A CBAM reduces leakage and complements other state clean energy initiatives without harming the state's economy. It operates by requiring imports to pay for their emissions on an equal basis to in-state generation. The net revenue, which is self-extinguishing as generation becomes cleaner, can be used for alleviating disproportionate impacts and for other beneficial state policies.

Appendix 1: Operation of a Virginia carbon border adjustment mechanism:

The Virginia CBAM would require that each LSE acquire and retire a GATS certificate for each MWh of electricity sales.

The CBAM applies the RGGI price from the latest allowance auction to the emission rate assigned to each GATS certificate.

Domestic generation is covered by RGGI, so domestic GATS certificates are assigned an emission rate of zero, while every imported MWh is assigned a default emissions rate equal to the natural gas rate (approx. 0.43t/MWh), and given the opportunity to demonstrate that it is cleaner than that rate by contracting with specific sources in the rest of PJM.

Assign the applicable emission rate to each certificate retired according to the following schedule:

- 0 for certificates from generation subject to the RGGI allowance requirement (RGGI-covered fossil generation)
- 0 for certificates from domestic non-emitting generation
- 0 for certificates from imported non-emitting generation, subject to anti-reshuffling limits
- ER: The measured emission rate reported in the GATS certificate for facility-specific contracts for non-domestic generation certificates
- ER^d: The *default emission rate (0.43t/MWh)* for "residual" GATS certificates from generation outside of RGGI

Electricity storage infrastructure (batteries and pumped hydro) must acquire GATS certificates with electricity purchased but only needs to retire certificates for "round trip losses" due to operation of the storage. The remainder of GATS certificates may be sold.

For regulated generators, revenues from the sale of GATS certificates are netted against allowance cost rate riders.

Anti-reshuffling requirement: an imported certificate derives from a bilateral contract for a specific unit and same time-period, settled between the generator's and the LSE's PJM accounts. (Purchases from the PJM wholesale market that do not have a contract inherit the default rate.)

Note: Revenues from the charges on imports can be rebated to LSEs without compromising the performance of the CBAM.

Appendix 2: GATS residual certificates

Every MWh generated in PJM gets a certificate in the GATS, recording where, when, and how it was made, including its CO_2 rate. Buyers with a value for low-emitting electricity generation (an LSE meeting an RPS, a corporation buying clean power, etc.) claim specific certificates and retire them. Most certificates, roughly three-quarters to four-fifths of PJM generation, are never claimed by anyone. At settlement, GATS sweeps these unclaimed certificates into a single pool, averages their attributes, and assigns the result pro-rata to every MWh of load that wasn't covered by a specific claim. That average is the **residual mix**: effectively "the certificate you get by default when you didn't pick one." Because the claimed certificates are disproportionately clean (clean attributes are the ones worth claiming), the residual mix is somewhat dirtier than the simple PJM average, for example, about 0.41 t CO_2/MWh in 2024. Each certificate is used exactly once: either claimed deliberately or assigned through the residual pool, so the system's attributes always add up to actual metered generation, with no double counting.

Appendix A. Research Memorandum

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SUBCOMMITTEE 3: 2026 WORK PLAN RESEARCH AND ANALYSIS

REGIONAL GREENHOUSE GAS INITIATIVE

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    f. RGGI-participating states in PJM, in restructured/deregulated markets
13. Expanding Programmatic Areas of Focus for RGGI Proceeds
14. Conclusion -- Draft policy considerations

1. Energy Commission 2026 Workplan Memorandum on RGGI: Virginia and the Regional Greenhouse Gas Initiative

June 3, 2026

Policy Objective. Evaluate redirecting a portion of Virginia's Regional Greenhouse Gas Initiative (RGGI) auction proceeds to address utility bill affordability.

Background. Virginia's participation in RGGI resumes July 1, 2026, with Virginia participating in the September 9 and December 2, 2026, auctions and a second-half-2026 allowance budget of 11.48 million allowances. Because Virginia's investor-owned utilities operate under a regulated compact, Dominion is expected to pass RGGI compliance costs directly through to customers via "Rider RGGI," with detail provided in its June 2026 SCC filing; when the state last participated, the typical residential bill carried roughly an additional $4.40 per month. Data-center load growth compounds the pressure: as fossil generation rises to serve record demand, regulated sources must purchase more allowances, and those costs flow through to all ratepayers. As Virginia re-joins RGGI in 2026, the current state policy would direct new RGGI auction proceeds into the DHCD HIEE programs as well as the DCR CFPF, as described above, continuing the state's efforts to invest in low-income energy efficiency programs and supporting community flood preparedness, respectively. Other RGGI states have used proceeds differently — New Hampshire rebated roughly 93 percent of its 2023 proceeds to ratepayers, with Maryland (56 percent) and Rhode Island (31 percent) also directing significant shares to bill assistance.

Project Goals and Research Questions. The purpose of a review of the Energy Commission would be to design a mechanism that returns part of RGGI proceeds to customers — through direct bill rebates to all ratepayers or to certain classes of ratepayers (e.g. residential customers) — to offset the new rider, without abandoning the program's core purposes. A key consideration and research question would be how to re-structure auction proceeds through trigger mechanisms, beneficiary prioritization, and protection for existing program commitments. Other key questions include:

1. What is the projected size of Rider RGGI on residential and other customer classes once participation resumes, and how is it expected to grow as data-center-driven generation increases allowance purchases?
2. What portion of proceeds could be redirected to direct bill rebates — for all ratepayers or for specified classes such as residential or low-income customers — while preserving the program's low-income home energy efficiency and community flood-preparedness objectives?
3. How have peer states (New Hampshire, Maryland, Rhode Island, New Jersey) structured bill rebate allocations, and what design lessons apply to Virginia's regulated-utility context?

4. What statutory changes to the allocation formula would be required, and how should any refund be designed to reach customers transparently and efficiently?

Energy Commission staff will conduct additional research activities, including interviews with key stakeholders. Depending on the outcome of the research and economic modeling, the Energy Commission could consider endorsing these policies in a legislative proposal for the 2027 General Assembly.

Project Approach. Energy Commission staff will conduct initial research, landscape analysis, peer state review and consultation with DEQ, DHCD, DCR, the SCC, the Office of Consumer Counsel, and consumer and environmental stakeholders. A third-party consultant would be required to support the project, including expertise in conducting economic modeling to develop projections of future clearing prices, and cap and revenue estimates to inform the proposed restructuring of the auction proceeds. Given that any reallocation outside current statutory parameters requires legislative authorization, staff would prepare draft legislative options for the 2027 session.

Legislative Background and Program Allocations

The Regional Greenhouse Gas Initiative (RGGI) is a regional cap and trade program to reduce carbon dioxide (CO_2) emissions from the power sector. The multi-state compact limits how much CO_2 regulated power plants can emit and requires them to buy allowances for those emissions. Those allowances are then auctioned each quarter and generate revenue for participating states.

In 2020, Virginia joined RGGI following the enactment of Chapter 1219, 2020 Acts of Assembly (the Clean Energy and Community Flood Preparedness Act[1], patroned by Senator Lewis through Senate Bill 1027, and Delegate Herring through House Bill 981), joining 10 other participating states. This legislation tasked the State Air Pollution Control Board (administered by the Virginia Department of Environmental Quality, DEQ) with implementing and managing an auction program to sell allowances into a market-based trading program consistent with the RGGI program.

Virginia participated in RGGI from 2021 through 2023 and sold an average of 5.67 million allowances in each quarterly auction. During that period, Virginia earned total proceeds of $825.8 million.[2] The Virginia State Air Pollution Control Board voted to repeal Virginia's participation in RGGI in June 2023, however, the Circuit Court of Floyd County ruled this action was "unlawful and without effect."[3] The court went on to state that the "only body with the authority to repeal the RGGI Regulation would be the General Assembly…" In 2026, the passage of House Bill 29 by the General Assembly provided DEQ with clear direction to reinstate the RGGI regulation in Virginia. Governor Spanberger approved amendments to Virginia's 2024-2026 Biennial Budget under HB29 on February 20, 2026.

[1] Section § 10.1-1330. Clean Energy and Community Flood Preparedness, https://law.lis.virginia.gov/vacode/title10.1/chapter13/section10.1-1330
[2] The Regional Greenhouse Gas Initiative: Auction Results, https://www.rggi.org/auctions/auction-results
[3] Charlie Paullin, "Judge deems Youngkin's actions to withdraw Virginia from RGGI 'unlawful'", Virginia Mercury, November 2024, https://virginiamercury.com/2024/11/20/judge-deems-youngkins-actions-to-withdraw-virginia-from-rggi-unlawful/

HB29 directs DEQ to "take all actions necessary to rejoin the Regional Greenhouse Gas Initiative" by May 21, 2026.[4] Virginia's participation, along with their compliance requirements, will resume on July 1, 2026.

According to Dominion Energy, the average Virginian was paying an extra $4.40 on their bill when the state was last enrolled in RGGI.[5] Since Virginia's withdrawal from RGGI, those fees have not been added to utility bills, however they will be reinstated as Virginia re-enters the regional program. This impact on the consumer bill differs significantly depending on a state's energy market structure. In most RGGI states, electricity generation is deregulated. Independent power producers in these states must bear the cost of CO_2 allowances and attempt to recoup these expenses through the PJM wholesale market. To stay competitive, generators absorb some of these costs. Conversely, Virginia operates under a regulatory compact of regulated monopolies. This structure allows investor-owned utilities with a generation fleet, such as Dominion, to pass the entire cost of RGGI participation directly to utility customers. Dominion will be detailing the cost of "Rider RGGI" in its June 2026 filing to the State Corporation Commission (SCC).[6]

By law, 50 percent of RGGI revenue is allocated to the Low-Income Energy Efficiency Program Fund (also known as the Housing Innovations in Energy Efficiency program, or HIEE) administered through the Department of Housing and Community Development (DHCD) and 45 percent is allocated to the Community Flood Preparedness Fund (CFPF) administered through the Department of Conservation and Recreation (DCR). DEQ receives three percent to cover administrative expenses related to running the program and to carry out statewide climate change planning and mitigation activities. DHCD, in partnership with Virginia Department of Energy (Virginia Energy), may receive two percent of the proceeds to administer and implement the low-income energy efficiency programs.[7] Virginia's participation in RGGI raised $372.5 million from 2021-2023 to enhance community flood prevention and protection, and $413.9 million for energy efficiency upgrades to new and existing housing.[8] Since fiscal year 2021, HIEE funds supporting low-income energy efficiency have been allocated to DHCD's Affordable and Special Needs Housing (ASNH) program and the Weatherization Deferral Repair (WDR) Program.

According to the Department of Planning and Budget (DPB), the fiscal impact analysis for Delegate Herring's House Bill 397 and Senator Locke's Senate Bill 802 in the 2026 General Assembly found that: "Clearing prices per allowance since the last auction participated in [December 2023] have

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[4] Carbon Trading, Virginia Department of Environmental Quality, https://www.deq.virginia.gov/air energy/greenhouse-gases/carbon-trading

[5] State Corporation Commission, "Status Report: Implementation of the Virginia Electric Utility Regulation Act Pursuant to §§ 56-596 B and 30-205 of the Code of Virginia – November 1, 2024", page 6, https://rga.lis.virginia.gov/Published/2024/RD717/PDF

[6] French, et al., "The Northeast is set for a star turn in the affordability debate", E&E News by Politico, May 2026, https://www.eenews.net/articles/virginias-carbon-market-comeback-risks-a-multistate-affordability-crunch/

[7] The Regional Greenhouse Gas Initiative, "The Investment of RGGI Proceeds in 2021", June 2023, p. 46, RGGI_Proceeds_Report_2021.pdf

[8] Virginia Conservation Network, "Bill of the Day: RGGI Budget Battle", March 2024 https://vcnva.org/bill-of-the day-rggi-budget/

increased from $14.88 to $19.63 in June 2025. With current trends, **Virginia participating in RGGI could result in approximately $115.6 million per auction or $462.6 million per fiscal year, with additional revenues resulting from interest**."[9]

Comparison with Peer States

The member states of RGGI include Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. Within this group, Delaware, Maryland, and New Jersey also participate in PJM, the regional transmission organization responsible for the power grid that includes Virginia.

States maintain individual discretion over the allocation of auction proceeds, allowing them to fund diverse initiatives such as greenhouse gas abatement, climate change adaptation, energy efficiency, clean energy, beneficial electrification, or direct bill relief. According to the most recent report on RGGI proceeds, 2023 investments from RGGI were primarily focused on energy efficiency programs (64%), followed by direct bill assistance (15%), beneficial electrification (9%), and clean and renewable energy (6%).

While there is no uniform mandate from RGGI to directly refund proceeds to ratepayers, several states have implemented direct bill assistance programs. Notably, New Hampshire mandated that a majority of proceeds be rebated to ***all*** retail electric ratepayers in the state, resulting in approximately 93% ($41.1 million) of its 2023 proceeds being utilized for direct bill assistance. Other states that directed a portion of RGGI auction proceeds in the form of bill assistance in 2023 are Maryland (56%), and Rhode Island (31%).[10] Maine and New Jersey have allocated a small portion, 10% and 7% respectively, of their historic ("All-time") RGGI proceeds to direct bill assistance.[11] Collectively, direct bill assistance initiatives funded via RGGI in 2023 provided over $128 million in consumer credits or assistance.[12]

Other states have signaled their intent to increase direct bill assistance. New Jersey's Governor Sherrill plans to use the state's Board of Public Utilities' available uncommitted and future proceeds from RGGI auctions to offset increases to other parts of ratepayers' bills, "especially for vulnerable families struggling to make ends meet."[13,14] This shift marks a change in strategy, as the state's previous RGGI investments primarily supported clean transportation and building decarbonization, with direct bill

[9] Fiscal Impact Statement for House Bill 397, Department of Planning and Budget https://lis.blob.core.windows.net/files/1101315.PDF
[10] The Regional Greenhouse Gas Initiative, "The Investment of RGGI Proceeds in 2023", July 2025, https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2023.pdf
[11] Ibid
[12] Ibid
[13] Adam Aton, "Mikie Sherrill uses New Jersey's RGGI funds for affordability", Energywire, February 2026, https://subscriber.politicopro.com/article/eenews/2026/02/20/mikie-sherrill-uses-new-jerseys-rggi-funds-for affordability-ee-00790282
[14] French, et al., "The Northeast is set for a star turn in the affordability debate", E&E News by Politico, May 2026, https://www.eenews.net/articles/virginias-carbon-market-comeback-risks-a-multistate-affordability-crunch/

assistance accounting for only 7% of historical investments from RGGI proceeds.[15] Leaders of the Sherrill administration noted that allocation of funds outside of existing statutory parameters for the use of RGGI funds would require legislative authorization.[16]

However, not all states employ the RGGI model. Other states have taken a multi-sector approach to limit CO_2 emissions such as Washington and California, and Oregon currently considering a proposed program.

Technical Background: How RGGI works

To comply with their state's regulations, fossil fuel-fired power plants sized 25 megawatts or greater must acquire enough allowances to cover their CO_2 emissions. Generators subject to these regulations comply by purchasing these CO2 allowances at regional quarterly auctions held by RGGI's administrative agency.

Each state independently sets its own CO_2 budget through state regulation, using the RGGI Model Rule as a template, and issues CO_2 allowances. The RGGI cap is comprised of the total sum of all CO_2 allowances issued by the participating RGGI states, with each state's budget declining at 3% per year (from the base cap level) through 2030.

Virginia's share of the regional cap is specified by the Department of Environmental Quality (DEQ) in the implementing regulations. Virginia's 2021 budget of 27.16 million tons of CO_2 was derived from actual historical power sector emissions from Virginia's regulated sources—electric power plants with a capacity of 25 megawatts or greater—benchmarked against a base period (2021). When Virginia joined RGGI in 2021, its CO_2 allowances represented ~28% of the regional cap for the then eleven-state group, making it the largest single emitter of the RGGI coalition. Virginia's allowance budget has been set for the second half of 2026 covering 11.48 million allowances, and they will participate in the September 9 and December 2, 2026, auctions.[17]

To maintain market stability, RGGI employs two key reserve mechanisms. The Cost Containment Reserve (CCR) holds a quantity of allowances that are sold off if allowance prices exceed predefined price levels. The CCR acts as a "ceiling" safety valve, triggered only if emission reduction costs are higher than projected. Conversely, the Emissions Containment Reserve (ECR) acts as a "floor" mechanism, tightening the regional cap if prices fall below a defined trigger price. This means states withhold allowances from circulation at the auctions if prices drop very low, which secures additional emission reductions beyond what the annual 3% cap decline guarantees on its own.

Why RGGI is an Effective Mechanism to Reduce Greenhouse Gas Emissions

[15] The Regional Greenhouse Gas Initiative, "The Investment of RGGI Proceeds in 2023", July 2025, https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2023.pdf
[16] New Jersey Department of Environmental Protection, "DEP, BPU AND EDA JOINT STATEMENT ON EXECUTIVE ORDER #1", February 2026, https://dep.nj.gov/newsrel/26_00219/
[17] RRGI Inc, "RGGI States Welcome Virginia", April 2026, https://www.rggi.org/sites/default/files/Uploads/Press Releases/2026_04_29_VA_Welcome_Statement.pdf

Larger, More Liquid Market: A regional cap-and-trade program provides maximum flexibility for participating generators to achieve emission reductions at the lowest cost. RGGI allows generators with low-cost emission reductions to pursue abatement, while generators with high-cost emission reductions can buy allowances instead. This would not be possible in a scenario where Virginia establishes a carbon tax on its own, instead of participating in a regional market.

Reducing Carbon Leakage: By participating in RGGI the risk of "carbon leakage" — the relocation of carbon-intensive production from jurisdictions with strict emission-reduction regulations to those with laxer ones — is reduced compared to a *Virginia-only policy*. This is because RGGI's cap covers multiple states simultaneously, so there are fewer "uncapped" jurisdictions within the grid to absorb leakage. It should be noted that the full implications of leakage *within* the RGGI compact are still unclear.

Greater Emissions Reductions: By establishing a regional cap which *shrinks over time*, RGGI secures emission reductions, instead of just setting a price for carbon emissions, which makes emissions more expensive without guaranteeing actual reductions. A 2023 report from Acadia Center found that RGGI states had a nearly 50% reduction in CO_2 from power plants from 2008-2021. Between 2021 and 2023, when Virginia was participating in RGGI, emissions from power generators decreased; however, they rose quickly once the state exited the cap-and-trade program.

State	Year	Gross Load (MWh)	Steam Load (1000 lb)	SO2 Mass (short tons)	CO2 Mass (short tons)	NOx Mass (short tons)	Heat Input (mmBtu)
VA	2020	65,933,786.98	25,363,195.49	1,525.07	32,753,218.96	10,526.45	535,643,476.63
VA	2021	55,185,504.67	28,656,693.55	1,322.42	28,629,990.77	8,941.00	461,962,605.34
VA	2022	51,295,714.22	31,633,767.86	1,331.96	27,274,536.81	8,395.69	433,142,524.82
VA	2023	51,323,765.10	25,931,155.49	530.06	25,550,855.90	7,044.97	419,572,676.64
VA	2024	61,863,106.85	28,186,815.93	710.08	30,780,894.34	9,200.43	504,739,758.16
VA	2025	63,709,770.27	34,466,556.55	1,046.80	33,359,746.02	11,200.98	532,488,446.96

Source: U.S. EPA, Clean Air Markets Program Data, Virginia's annual emissions from 2020-2025, https://campd.epa.gov/data/custom-data-download

Glossary of Terms:[18]

Allowance: As defined by RGGI, "A CO_2 allowance represents a limited authorization to emit one short ton of CO_2 from a regulated source, as issued by a participating state." (one allowance = one short ton of carbon dioxide). A carbon allowance should not be confused with a carbon credit, which represents one metric ton of CO_2 under a carbon market with no cap.

CO_2 budget (and annual % decline): Each state independently sets its own CO_2 budget through state regulation, using the RGGI Model Rule as a template. Each state's budget declines at 3% per

[18] The Regional Greenhouse Gas Initiative: Elements of RGGI, https://www.rggi.org/program-overview-and-design/elements

year (from the base cap level) through 2030. Virginia's CO_2 allowance budget was 27.16 million tons when it entered RGGI in 2021.

Regional cap: The RGGI cap is comprised of the total sum of all CO_2 allowances issued by the participating RGGI states. Virginia's budget comprised ~28% of the regional cap for the then eleven-state group, making it the largest single emitter of the RGGI coalition.

Cost Containment Reserve (CCR): holds a quantity of allowances that are sold off if allowance prices exceed predefined price levels. The CCR acts as a "ceiling" safety valve, triggered only if emission reduction costs are higher than projected. The CCR is replenished annually and is set at 10% of the regional cap each year.

2. Addendum to Work Plan – Dominion "Rider RGGI" Petition

June 8, 2026

Governor Spanberger signed House Bill 29, directing the Virginia Department of Environmental Quality (DEQ) to "take all actions necessary to rejoin the Regional Greenhouse Gas Initiative" by May 21, 2026. DEQ published its Carbon Rule in the Virginia Register on May 18, 2026.[19] Virginia's participation, along with their compliance requirements, will resume on July 1, 2026.

On June 5, 2026, Dominion Energy Virginia (Dominion) filed a petition (PUR-2026-00085) with the State Corporation Commission (SCC) to reinstate and update the rate adjustment clause designated Rider RGGI to recover projected and actual costs related to the purchase of allowances through the Regional Greenhouse Gas Initiative.

Dominion is seeking to update and reinstate Rider RGGI to recover projected RGGI compliance costs to occur over the period of March 1, 2027 through February 29, 2028 (the "Rate Year"). The petition estimates the monthly Rider RGGI to have a $13.00 impact on a typical residential customer's monthly bill (assuming 1,000 kWh average monthly usage).

The Company projects approximately 51 million CO_2 allowances will be required from July 1, 2026, through December 31, 2028, estimating allowance prices ranging from $37.04 to $38.32 based on data from the Intercontinental Exchange Futures Daily Market Report as of April 28, 2026. Notably, the latest RGGI auction (Auction 72) was held on June 3, 2026 and cleared at $35 per ton of carbon.[20]

While the standard impact on a residential bill is estimated at $13 for Rider RGGI, Dominion proposed a "Mitigation Proposal" to spread "Pre-Rate Year" costs over two years instead of one, which would lower Rider RGGI by approximately 20%, from $13 to $10.36. This voluntary proposal is based on current market prices and projections. Crucially, the company notes that "if prices in the upcoming auctions continue to increase such that a significant under-recovery would be expected for the Rate Year, the Mitigation Proposal may no longer be in customers' best interest. The Company will keep the Commission Staff apprised of these auction results as the case proceeds."[21]

[19] Virginia Register of Regulations, Volume 42 Issue 20, May 18, 2026, https://register.dls.virginia.gov/vol42/iss20/v42i20.pdf
[20] The Regional Greenhouse Gas Initiative, Auction 72, https://www.rggi.org/Auction/72
[21] Petition For Approval to Reinstate and Update the Rate Adjustment Clause Designated Rider RGGI, Pursuant to § 56 585.1 A 5 e of the Code of Virginia (PUR-2026-00085) – Petition, page 6, https://www.scc.virginia.gov/docketsearch/DOCS/8cn%2401!.PDF

3. HB 30: 2026 Special Session I Budget Bill (2026 – 2028 Biennium) Final budget language as adopted – 06/29/2026 (Item 367 F.)

The final budget language in the 2026-2028 Biennium Budget Bill (HB30) included a redirection of 45 percent (45%) of new RGGI auction proceeds to fund electric utility customer credits for residential, small business and church classes.[22] This new allocation will primarily go to customers of Dominion Energy Virginia, while electric co-operatives and municipal utilities may receive a certain passthrough credit as well. The final budget language included an amendment offered by Governor Spanberger to clarify that credits shall also be remitted to customers of electric cooperatives and is referenced below.

Item 367

Natural and Historic Resources

Department of Environmental Quality

Language:

Page 490:

F. Notwithstanding any other provision of law, beginning July 1, 2026, an amount equal to 45 percent of all revenue collected pursuant to a program established under § 10.1-1330 of the Code of Virginia, shall be remitted by the Commonwealth to any Phase I or Phase II Utility, as those terms are defined in subdivision A 1 of § 56-585.1 of the Code of Virginia, which has a rate adjustment clause petition approved or pending approval by the State Corporation Commission (the "Commission") pursuant to subdivision A 5 e of § 56-585.1 of the Code of Virginia for recovery of the costs of emissions allowances, or an entity organized pursuant to Chapter 9.1 of Title 56 for distribution permitted only to Virginia customers and reflected as a line item on the customer bill labeled RGGI Credit. Each Phase I or Phase II Utility shall subsequently distribute such funds received from the Commonwealth as a credit to its customers in the residential, Small General Service, and church classes in a manner approved by the Commission, including that such credit shall be reflected as a line item on the customer Appropriations($) First Year Second Year FY2027 FY2028_ ITEM 367. 491 Item Details($) First Year Second Year FY2027 FY2028 bill labeled RGGI Credit. Such credit shall only be distributed to Virginia customers. The remaining 55 percent of the revenue collected shall be distributed consistent with § 10.11330 C. of the Code of Virginia.

Amendment Explanation:

(This amendment expands the credit to be provided to Phase I and Phase II Utility customers in the residential, Small General Service, and church classes in a manner approved by the State Corporation

[22] HB30, 2026-2028 Biennium, June 29, 2026. https://budget.lis.virginia.gov/get/budget/5311/HB30/.

Commission from revenue collected through RGGI to include Virginia cooperatives, and ensures that the credit only goes back to Virginia utility customers.)

4. Additional Budget Amendments for the 2026-2028 Biennium

The budget for the biennium 2026-2028 (HB30) also directs unobligated balances in DHCD's the Low-Income Energy Efficiency Program Fund for the following purposes:

Section	Amount	Purpose
Page 110, Lines 23-30. K	$11,400,000	For flood relief
Page 110, Lines 31-38. L.	$18,000,000	For flood relief
Page 110, Lines 42-51. N.	$5,000,000	For the Manufactured Home Park Acquisition Pilot Program
Page 110, Lines 52-56. O.	$5,000,000	For the Virginia Pilot Down Payment Assistance Program
Page 111, Lines 50-55. S.	$25,000,000	To support the implementation of weatherization projects
Page 120, Lines 33-37. AA.	$1,480,000	For Albemarle County accessible walking trail
Total	$65,880,000	

§ 1-41. DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (165)

Page 110, Lines 23-30. K. The authorization provided under Item 113, Paragraph L., Chapter 1, 2022 Acts of Assembly, Special Session I, that directs the department to use up to **$11,400,000 of unobligated balances in the Low-Income Energy Efficiency Program Fund** (02017) for flood relief is hereby continued. Using these funds, the department shall continue to administer a program established for the purposes of providing relief to residents of Virginia that lost or sustained property damage as a result of a flood disaster, mudslide, or landslide occurring on or after August 1, 2021, but before September 30, 2021, and subject to a Major Disaster Declaration (FEMA-4628-DR) issued by President Biden on October 26, 2021.

Page 110, Lines 31-38. L. The authorization provided under Item 113, Paragraph O., Chapter 1, 2023 Acts of Assembly, Special Session I, that directs the department to use up to **$18,000,000 of unobligated balances in the Low-Income Energy Efficiency Program Fund** (02017) for flood relief is hereby continued. Using these funds, the department shall continue to administer a program established for the purposes of providing relief to residents of Virginia that lost or sustained property damage as a result of a flood disaster, mudslide, or landslide occurring on or after July 1, 2022, but before August 31, 2022, and subject to a Major Disaster Declaration (FEMA-4674-DR) issued by President Biden on September 30, 2022

Page 110, Lines 42-51. N. The authorization of **$5,000,000 in unobligated balances in the Low-Income Energy Efficiency Program Fund** (02017) for the Manufactured Home Park Acquisition Pilot Program provided in Item 102, paragraph M.1 through M.7., Chapter 725, 2025 Acts of Assembly shall continue, including all reporting requirements and other conditions set forth in the

prior authorization. Notwithstanding the provisions of Item 102, paragraph M.1. through M.7., Chapter 725, 2025 Acts of Assembly, guidance, or criteria to the contrary, the department may use up to $750,000 of the funds provided for the Manufactured Home Park Acquisitions Pilot Program to award grants to eligible groups as defined in Item 102, paragraph M.2., Chapter 725, 2025 Acts of Assembly to complete any necessary due diligence work necessary prior to making an offer on a manufactured home park.

Page 110, Lines 52-56. O. The authorization of **$5,000,000 in unobligated balances in the Low-Income Energy Efficiency Program Fund** (02017) for the Virginia Pilot Down Payment Assistance Program provided in Item 102, paragraph N.1 through N.7., Chapter 725, 2025 Acts of Assembly shall continue, including all reporting requirements and other conditions set forth in the prior authorization.

Page 111, Lines 50-55. S. Notwithstanding the provisions of § 10.1 - 1330, Code of Virginia, the Department shall utilize **$25,000,000 of unobligated balances in the Low-Income Energy Efficiency Program Fund** (02017) to support the implementation of weatherization projects consistent with the recommendations of the Income Qualified Energy Efficiency and Weatherization Task Force. It is the intent of the General Assembly that funds authorized for this purpose can be used until June 30, 2030.

Page 120, Lines 33-37. AA. Notwithstanding the provisions of § 10.1 - 1330, Code of Virginia, the department shall utilize **$1,480,000 of unobligated balances in the Low-Income Energy Efficiency Program Fund** (02017) for Albemarle County to design and construct an accessible walking trail to connect Biscuit Run Park to the Monacan Indian Nation Tribute Park within the Southwood Mobile Home Park Redevelopment Project.

5. Peer state comparisons on rebates, bill credits and bill payment assistance

New Hampshire

In 2008, New Hampshire joined RGGI through HB1434, which also directed that funds from auction proceeds should be used "to support energy efficiency, conservation, and demand response programs to reduce greenhouse gas emissions generated within the state [...]" and "at least 10% of the moneys shall be used to assist low-income residential customers [...] to reduce total energy use including heating fuels and to foster the development and retrofitting of highly efficient and affordable housing." Crucially, the New Hampshire legislature established that **amounts in excess of pre-determined threshold prices for allowances were to be rebated to all electric ratepayers in the state on a per-kilowatt-hour basis.**

In 2012, HB1490 amended the RGGI state statute (RSA 125-O:20-29) to lower the rebate threshold auction proceeds to $1 and allocated the remaining proceeds to core energy efficiency programs and associated RGGI administration costs.[23]

Table 1. 2022-2024 New Hampshire Annual Auction Proceeds and Investments

Year	Annual Auction Proceeds (in millions)	Total annual amount of funds directed to Energy Efficiency Fund (in millions)	Total annual amount of rebates (in millions)	Average rebate to monthly residential bill	Average residential bill (650kW per month)
2022	$43.2	$2.5	$40	$2.41	-
2023	$44.4	$2.59	$41.1	$2.52	-
2024	$65.8	$2.6	$62.59	$3.25	$138-160

Source: State of New Hampshire Department of Environmental Services and Department of Energy, "RSA 125-O:21 Regional Greenhouse Gas Initiative: 2023, 2024 and 2025 Annual Reports", https://www.energy.nh.gov/sites/g/files/ehbemt551/files/inline-documents/sonh/2023-2024-2025-rggi-report-to-legislature.pdf

Rhode Island

Rhode Island's 2007 Implementation of the Regional Greenhouse Gas Initiative Act authorized the state's entry into RGGI and directed how auction proceeds were to be used (RIGL §23-82-6) for several purposes, such as the promotion of cost-effective energy efficiency and conservation, promotion of cost-effective renewable non-carbon emitting energy technologies, cost-effective direct rate relief for consumers, and direct rate relief for low-income consumers, among others.

[23] New Hampshire Department of Environmental Services and the Public Utilities Commission, "2012 RGGI Annual Report" https://www.energy.nh.gov/sites/g/files/ehbemt551/files/inline-documents/sonh/2012-rggi-report-to-legislature.pdf

Part of the funds are also set aside for the administration of the program, and it is capped at a percentage or dollar figure, whichever is greater. Crucially, the Rhode Island's Office of Energy Resources (OER) in consultation with the Climate Change Coordinating Council and the board prepares a draft proposal on how the proceeds are to be allocated, holding public hearings and accepting public comments on the draft proposal.[24] **As such, any direct relief measures are not a fixed refund mandate through legislation but rather decided through the state's annual allocation plan. Additionally, executive discretion has been leveraged with increasing frequency to deliver direct utility bill relief in response to rising winter electricity costs.**

The state's governor in August 2022 directed $3.8 million in RGGI proceeds to rate-relief allocated to 38,900 low-income residents for the winter months.[25,26] Later in October the governor directed an additional $1.5 million, and in December announced yet another $1.5 million which in total provided roughly $190 per customer during the winter electricity rates.[27,28,29,30]

In September 2023, Governor McKee announced $3 million in RGGI funding would be directed to rate relief to roughly 38,900 low-income residents, delivering approximately $26 in monthly savings across a three-month period.[31,32]

The state's allocation plan for the first 2026 auction (Auction 71) has already been approved and contains 1 million in direct rate relief bill assistance for low-income customers, which comprises 8%

[24] State of Rhode Island Office of Energy Resources, "Notice of Public Comment and Public Hearing: Proposed 2026-B Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds", June 2026, Archived RGGI Plans and Documents | Rhode Island Office of Energy Resources

[25] State of Rhode Island Governor Dan McKee, "Governor McKee Announces Plan for Direct Rate Relief to Over 39,000 Low-income Customers Electricity Bills This Winter", August 2022, Governor McKee Announces Plan for Direct Rate Relief to Over 39,000 Low-income Customers Electricity Bills This Winter | Governor's Office, State of Rhode Island

[26] State of Rhode Island, Office of Energy Resources, "2022-B Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds", September 2022, 2022-B Final Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds_0.pdf

[27] State of Rhode Island Governor Dan McKee, "Governor McKee Unveils New Website for Connecting Rhode Islanders to State Energy Assistance Programs", October 2022, https://energy.ri.gov/press-releases/governor-mckee-unveils-new-website-connecting-rhode-islanders-state-energy

[28] State of Rhode Island, Office of Energy Resources, "2022-C Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds", November 2022, 2022-C Proposed RGGI Allocation Plan _FINAL.pdf

[29] State of Rhode Island Governor Dan McKee, "Governor McKee Announces Additional $1.5M in Direct Electricity Rate Relief to Approximately 39,000 Customers This Winter", December 2022, https://governor.ri.gov/press-releases/governor-mckee-announces-additional-15m-direct-electricity-rate-relief-approximately

[30] State of Rhode Island, Office of Energy Resources, "2022-D Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds", January 2023, Office of Energy Resources -- 2022-RGGI-D Allocation Plan Final - January 20.pdf

[31] State of Rhode Island Governor Dan McKee, "Governor McKee Announces Additional Action to Combat Winter Heating Costs", September 2023, Governor McKee Announces Additional Action to Combat Winter Heating Costs | Rhode Island Office of Energy Resources

[32] State of Rhode Island, Office of Energy Resources, "2023-A Plan for the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds", September 2023, Office of Energy Resources -- 2023-RGGI-A Final Allocation Plan.pdf

of the action proceeds.[33] Mostly recently, the Governor announced as part of an emergency plan in July 2026 that OER will seek to apply $28 million of available RGGI funds for "direct credits **for every residential electric customer** (emphasis added), reaching more than 450,000 households statewide, during the peak winter heating months [...]. For the average ratepayer, the approximately $61 in total credits will fully offset the rate increase during the three most expensive winter months."[34]

Maryland

The Healthy Air Act (Ch. 23, Acts of 2006) was signed into law on April 6, 2006 and required Maryland to join the Regional Greenhouse Gas Initiative (RGGI) by July 2007.

Maryland's code directed the state to join RGGI no later than June 30, 2007, as a full participant in the Regional Greenhouse Gas Initiative among Mid-Atlantic and Northeast states.(Md. Environment Code Ann. § 2-1002). The state's Subtitle 09 "Maryland CO_2 Budget Trading Program" detailed how RGGI auction proceeds would be used to encourage: (a)Promotion of energy efficiency measures; (b) Direct mitigation of electricity ratepayer impacts attributable to the implementation of this subtitle; (c) Promotion of renewable or non-carbon-emitting energy technologies; (d) Stimulation or reward of investment in the development of innovative carbon emissions abatement technologies with significant carbon reduction potential; and (e) Funding to implement this subtitle.

Senate Bill 268 and House Bill 368 from 2008 (Chapters 127 and 128, respectively) created the Maryland Strategic Energy Investment Program (SEIF) —a special, non-lapsing fund administered by the Maryland Energy Administration (MEA) — to decrease energy demand and increase energy supply to promote affordable, reliable, and clean energy. SEIF has historically been primarily funded through the proceeds from RGGI auctions, but recently has increasingly received funds from Alternative Compliance Payments (ACP) for Maryland's Renewable Portfolio Standard (RPS) program. This legislation directed SEIF to invest the funds (1) in the promotion, development and implementation of cost-effective energy efficiency and conservation programs, projects, or activities, including the measurement and verification of energy savings; renewable and clean energy resources, climate change programs related to reducing or mitigating the effects of climate change; and demand response programs; (2) to provide targeted programs to reduce electricity consumption by customers in the low-income and moderate-income residential sectors; (3) to provide supplemental funds for low-income electricity assistance through the Electric Universal Service Program (EUSP) and other electricity assistance programs in the Department of Human Resources (DHS), among other purposes.

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[33] State of Rhode Island, Office of Energy Resources, "2026-A Plan For the Allocation and Distribution of Regional Greenhouse Gas Initiative Auction Proceeds", May 2026, 2026-A Final Plan for the Allocation and Distribution of RGGI Auction Proceeds_0.pdf

[34] State of Rhode Island Governor Dan McKee, "Governor McKee Signs Executive Order Directing $28 Million in Emergency Relief to Help Protect Rhode Island Households from Winter Electricity Price Spike", July 2026, Governor McKee Signs Executive Order Directing $28 Million in Emergency Relief to Help Protect Rhode Island Households from Winter Electricity Price Spike | Governor's Office, State of Rhode Island

Crucially, funds received by SEIF have historically been legislatively allocated. Currently, under Section 9-20B-05 of the State Government article, RGGI auction proceeds deposited into the Fund are statutorily mandated to be allocated as follows:

- At least 50% is credited to an energy assistance account dedicated to the Electric Universal Service Program (EUSP)
- At least 20% is directed to energy efficiency and conservation programs for low- and moderate-income households
- At least 20% is assigned to renewable and clean energy programs

Primary funding for EUSP Bill Assistance is generated through the utility ratepayer service charge. Although Strategic Energy Investment Fund (SEIF) RGGI funds are designated for bill assistance via the EUSP, they serve a supplemental role, covering benefits for eligible households only after ratepayer revenues have been fully depleted.

Table 2. Households served with RGGI funds through SEIF

Fiscal Year	**Households Served**	**Total Benefits Paid (Does not include RGGI funds)**	**SEIF Benefits Paid (with RGGI funds)**
2022	80,077	$61,750,557.48	$24,294,731
2023	96,367	$90,470,384.00	$42,817,693.00
2024	112,132	$71,642,510.66	$68,817,693.00
2025	71,764	-	$60,191,869

New Jersey

New Jersey formally rejoined the Regional Greenhouse Gas Initiative (RGGI) in 2020, becoming the tenth state to join the greenhouse gas cap-and-invest program. Investments from RGGI auction proceeds are guided by the Strategic Funding Plans established by 3 state entities: the Department of Environmental Protection (DEP), the Board of Public Utilities (BPU), and the Economic Development Authority (EDA). The funding plan identifies how the RGGI auction proceeds will be distributed for the 3-year funding period.

New Jersey's The Global Warming Solutions Fund Act from allocates how much each agency gets from RGGI auction proceeds:

- The New Jersey Economic Development Authority (NJEDA) receives 60% of auction proceeds

- **The New Jersey Board of Public Utilities (NJBPU) is allocated 20% of auction proceeds, which have been used for bill credits for low and moderate income ("LMI") residential customers.**[35]
- The New Jersey Department of Environmental Protection (NJDEP) receives the remaining 20% of funds.

New York *[NEW CONTENT]*

New York was one of the first signatory states that agreed to implement RGGI in December 2005. In New York, the Department of Environmental Conservation (DEC) manages the CO_2 budget trading program and cap allocation, while the New York State Energy Research and Development Authority (NYSERDA) runs the CO_2 allowance auction program and allocates proceeds. NYSERDA reviews and updates the Operating Plan annually, with input from a group of stakeholders which advise NYSERDA regarding strategies to best utilize RGGI funds.

The Operating Plan Amendment for 2026 has a funding horizon that covers activities through March 31, 2029. The Operating Plan outlines four themes for the RGGI programmatic investments — (i)Affordability, (ii) Energy abundance, diversity, and reliability, (iii) Energy innovation and economic development, (iv) Thriving communities and environments — and proposes that 62% of planned RGGI programmatic investments go towards programs under the Affordability theme. Crucially, for the term of the 2026 Operating Plan Amendment, if additional RGGI auction proceeds are realized above those expected from the assumptions that have been used in the 2026 Amendment to estimate auction proceeds for the next three fiscal years, NYSERDA will use "34% of those proceeds to implement ratepayer-funded programs, prompting DPS and LIPA to reduce ratepayer collections by a proportionate amount."[36]

This structure contrasts with New Hampshire's approach to allocating RGGI revenues. Although both states use allowance price thresholds to direct funding, their priorities differ: New York allocates most of its revenues to programmatic funding and uses any excess to offset existing ratepayer-funded programs, whereas New Hampshire prioritizes direct rebates to electric ratepayers and directs the remaining funds toward energy efficiency programs.

Staff Recommendation: Allow the 2026-2028 budget language to proceed for the next biennium to assess how bill credits perform under current budget language. Virginia's bill credits were enacted in statute recently but have not yet been disbursed, and state utilities have not commenced charging for the cost of RGGI allowances on customer bills.

[35] State of New Jersey, Board of Public Utilities, "In the matter of the establishment of the residential universal bill credit ("RUBC)", page 13, 8-13-25-8F.PDF

[36] New York State Energy Research and Development Authority (NYSERDA), "New York's Regional Greenhouse Gas Initiative Operating Plan Amendment for 2026", January 26, 2026, page 7, 2026 Final RGGI Operating Plan Amendment [PDF]

Dominion submitted additional filings to its Rider RGGI petition addressing the new budget language regarding the bill credits. Dominion staff states that "there is uncertainty surrounding the timing of the transfer of proceeds between RGGI, the Commonwealth, and the utilities, as well as uncertainty regarding the final value of any allocated proceeds, including the allocation methodology, which appears to be outside of the Commission's purview."[37] As such, Dominion proposes that the RGGI Credit be derived and applied to customer bills on a quarterly basis via a formula-based mechanism which is yet to be determined. Furthermore, Dominion estimates that Company's customers under the Residential, GS-1, and Church classes should receive a credit that will approximately offset the initially proposed Rider RGGI.

DEQ is collaborating with the SCC to provide direction around the allocation percentages of auction proceeds for bill credits among utilities.[38]

[37] Dominion's 2026 Petition Rider RGGI (PUR-2026-00085), Supplemental Direct Testimony of Lisa Crabtree, p. 3, 8#7701!.PDF

[38] Virginia Department of Environmental Quality, "Air Pollution Control Board Meeting--August 18, 2026", August 2026 Air Pollution Control Board Meeting--August 18, 2026

6. Projected size of Dominion's Rider RGGI on residential and other customer classes

The projected cost of Rider RGGI for a typical residential month ranges from $10.36 to $13, depending on whether Dominion's mitigation proposal is accepted. The table below outlines the price impact on remaining customer classes once Rider RGGI is incorporated into their bills. Specific monthly bill averages and exact RGGI Rider charges are excluded because they vary significantly based on peak kWh usage, load factor, and total consumption.

Table 3. Rider RGGI impact on Dominion's customer classes

Class	Average Monthly Bill	RGGI Rider Amount	RGGI Rider Price Difference
Residential	$182-$187	$13	6.9-7.1%
GS-1 (base months, phase 1)	-	-	7.1-9.1%
GS-2 (base months)	-	-	6.7-11.1% depending on the load factor
GS-3	-	-	6.9%-12% depending on load factor and peak
GS-4 (primary service)	-	-	6.8-13.2% depending on load factor and peak
GS-5 (primary service)	-	-	10.8-13.6% depending on load factor and peak
Church Class (base months)	-	-	6.8-7.3% depending on kwh

Source: Dominion's 2026 Riger RGGI Petition[39]

Dominion prepared a long term forecast of RGGI compliance costs but did not analyze costs beyond 2030, as there is significant uncertainty associated with key cost drivers and future allowance pricing.[40,41]

[39] Dominion's 2026 Petition Rider RGGI (PUR-2026-00085), Direct Testimony of M. Robert Hines, pages 15-40, 8cnm01!.PDF

[40] Dominion's 2026 Petition Rider RGGI (PUR-2026-00085), Direct Testimony of Lisa R. Crabtree, page 6, 8cnj01!.PDF

[41] Dominion's 2026 Petition Rider RGGI (PUR-2026-00085), Filing Schedules 8, 46A, 46B, and 46C, 8cnn01!.PDF

7. RGGI Allowance Price Trends

The 2025 Annual Report published by RGGI details how the clearing price in the past few years has steadily increased.[42] The weighted average for the clearing price in 2025 was $21.81, but this has steadily increased in 2026 to $24.99 in the March auction, $35 in the June auction and $37.65 in September auction.[43] RGGI Auction 73 held on September 9, 2026, cleared at a record-high $37.65 per ton, generating over $1 billion in total revenue.

Figure 1: CO2 Allowance Prices in the Auctions and Secondary Market 2025

Volume Weighted Averages								
Product	2022	2023	2024	2025	2025			
					Q1	Q2	Q3	Q4
Futures Prompt Month Price	$13.41	$14.08	$21.57	$22.81	$21.03	$19.90	$22.14	$ 26.12
Physical Delivery in COATS	$13.32	$14.20	$21.05	$23.05	$21.53	$20.69	$22.55	$ 25.75
Auction Clearing Price	$13.46	$13.58	$20.17	$21.81	$19.76	$19.63	$22.25	$ 26.73

Source: Potomac Economics, Annual Report on the Market for RGGI CO2 Allowances: 2025

Multiple factors are influencing the increase in the clearing price of RGGI allowances. According to an August 2026 report by RGGI's independent market monitor, the surplus supply of allowances has decreased following the previous compliance period due to a growing allowance demand — which rose from 80 million in 2024 to 85 million in 2025 — alongside an increase in emissions, which climbed by 4 million in the first half of 2026 (excluding Virginia) compared to the prior year.[44]

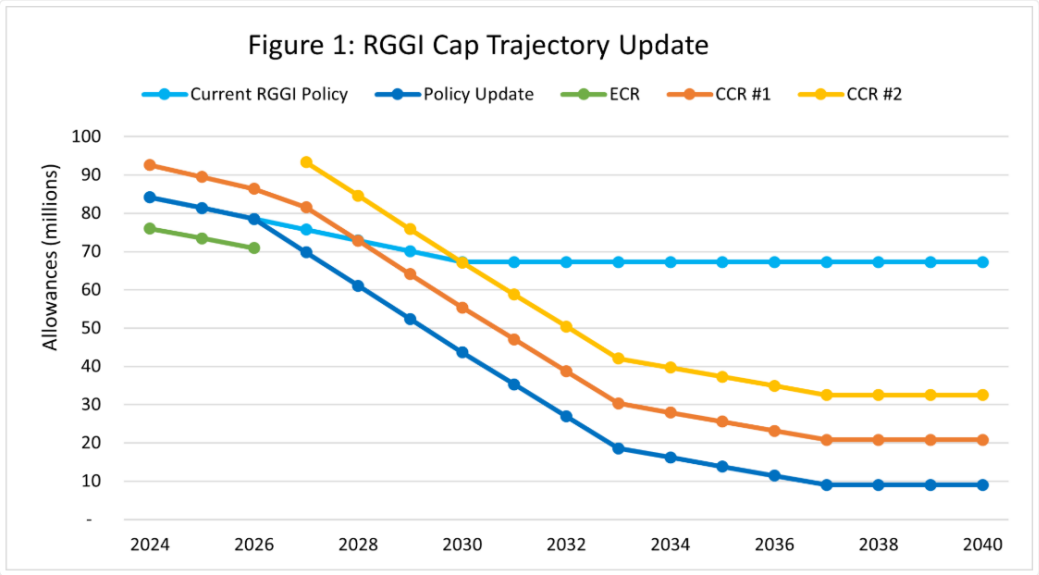
Another contributing factor for the fall in surplus is the decreasing allowance cap, which follows the RGGI program design. This will continue to be a factor in the future given the 2025 Third Program Review which updated the RGGI Model Rule. Under RGGI's updated model rule, every state's emissions budget declines steeply. The regional allowance budget cap will decline from close to 70 million tons in 2027 to 18.5 million tons in 2033 — an average of 8.5 million tons per year — resulting in about 73.57% decline under 6 years. While the updated rule also implements additional cost containment reserves to bolster affordability protections, a shrinking allowance supply against the estimated ever-increasing growing demand mechanically pushes auction prices up.

Figure 2: RGGI Cap Trajectory Update

[42] Potomac Economics, "Annual report on the market for RGGI CO_2 Allowances: 2025", RGGI Inc, May 2025, MM_2025_Annual_Report

[43] RGGI Inc, Auction Results, Auction Results | RGGI, Inc.

[44] Potomac Economics, "Report on the supply and demand for RGGI CO_2 allowances: Second quarter 2026", RGGI Inc, August 2026, MM_Supply_Demand_Report_2026_Q2



This figure compares the current regional base cap (light blue) with the updated cap trajectory (dark blue). The orange and yellow lines display the total updated regional cap if all allowances are released from the updated first and second Cost Containment Reserve tiers, respectively.

Source: RGGI Inc, Program Review | RGGI, Inc.

Lastly, the report details that Virginia's re-entry into RGGI in July 1, 2026 brought an additional 12.6M of allowances (including CCR allowances) for sale in the two later auctions in 2026 (September and December auctions). However, Virginia compliance entities had 17M tons of covered emissions in the last two quarters of 2025. This essentially means that Virginia's regulated entities are bringing more demand compared to the added supply allocated to Virginia's emissions budget. With limited allowances steadily decreasing, rising regional electricity demand will only compound these market pressures.

Demand for RGGI allowances will be heavily driven by unprecedented load growth within Dominion's service territory. Currently, the DOM Zone faces extraordinary electricity demand, with approximately 70,000 MW of large-load delivery point requests seeking interconnection—nearly tripling its peak demand of 24,678 MW recorded in January 2025.[45]

To meet the growing energy demands, Dominion's latest Integrated Resource Plan (IRP) outlines the company preferred plan to maintain grid reliability, calling for the construction of 8.5 GW of gas-fired assets alongside aggressive renewable energy additions.[46] To date, Dominion's proposed natural gas facility developments include:

- In Mach 2025, Dominion proposed the Chesterfield Energy Reliability Center (CERC), an approximately 944 megawatt nominal flexible fuel electric generating facility in Chesterfield County, and sought approval for approval of a certificate of public convenience and necessity

[45] Dominion's Application for approval of its large-load connection queue process standards (PUR-2026-00011)- Direct Testimony of Jacqueline R. Vitiello, https://www.scc.virginia.gov/docketsearch/DOCS/8%40%23301!.PDF
[46] Dominion 2025 update to the 2024 Integrated Resource Plan (PUR-2025-00184), p. 52, 88_t01!.PDF

("CPCN").[47] In late November 2025, the SCC granted Dominion a CPCN to construct and operate CERC.[48]

- Dominion proposed the Cumberland Energy Center, a 3,000 megawatt (3 gigawatts) combined cycle natural gas plant planned to come online by 2033 or 2034.[49] If approved, it will be, by far, the largest natural gas facility in Dominion's Virginia fleet.[50] The full cost of the new plant is yet to be determined, but Dominion confirmed that it will cost more than the Chesterfield Energy Reliability Center (CERC), which is priced at $1.47 billion.[51]

These factors will continue to impact both the cost and availability of RGGI allowances, ultimately pushing Dominion's Rider RGGI costs upward.

[47] Dominion Application for Certificate of Public Convenience and Necessity to construct/operate the proposed Chesterfield Energy Reliability Center and approval of designated Rider CERC (PUR-2025-00037), 845n01!.PDF
[48] SCC, Final Order (PUR-2025-00037), November 25, 2025, 89g501!.PDF
[49] Dominion Energy, Cumberland Energy Center | Dominion Energy
[50] Shannon Heckt, "Dominion announces plans for new 3-gigawatt gas plant in Cumberland County", Virginia Mercury, May 2026, Dominion announces plans for new 3-gigawatt gas plant in Cumberland County • Virginia Mercury
[51] Ibid

8. DEQ Administration and Air Board

Per the recently adopted budget (HB30) for 2026-2028, Virginia currently allocates 45 percent (45%) of RGGI auction proceeds to bill credits.

The remaining 55 percent (55%) is split as follows:

- Fifty percent (50%) of RGGI revenue is allocated to Department of Housing and Community Development (DHCD) (for the Housing Innovations in Energy Efficiency program, or HIEE);
- Forty-five percent (45%) is allocated to DCR (for the Community Flood Preparedness Fund or CFPF);
- Three percent (3%) of the remaining RGGI revenues is allocated to DEQ to cover administrative expenses related to running the program and to carry out statewide climate change planning and mitigation activities;
- Two percent (2%) is allocated to DHCD, with an optional partnership with Virginia Department of Energy (Virginia Energy), to administer and implement the low-income energy efficiency programs.

Preliminary research suggests that the allocation towards DEQ administration costs from the latest auction in September 9, 2026, would result in approximately $4.28 million, while DHCD would receive $2.8 million for administrative purposes, after allocating the respective revenues to bill credits, HIEE and CFPF.[52]

As RGGI auction proceeds continue to grow, the revenues allocated for administrative purposes are also increasing. Some stakeholders have suggested establishing a dollar amount of RGGI revenues for these purposes.

Policy Recommendation: Energy Commission Staff propose greater transparency, oversight and reporting requirements from all state agencies to better document and report on how administrative funds are being used.

Policy Consideration: Consider directing a specific allocation (percentage) of funds to Virginia Department of Energy to support the analysis and implementation of certain energy efficiency, renewable energy, and workforce development programs, such as implementing certain recommendations from the Virginia Energy Plan, supporting local government deployment of renewable energy and energy storage projects, or other programs and projects as identified.

[52] Energy Commission Staff analysis using published data from RGGI Auction 73, Auction_73_State_Proceeds_and_Allowances.pdf

9. *Historic and Future Allocations to Program Funds for Low-Income Energy Efficiency Programs at DHCD*

Virginia's Housing Innovations in Energy Efficiency (HIEE) program is the mechanism DHCD uses to pass through RGGI revenues into low-income energy efficiency efforts through two primary programs:

- ASNH-EE (Affordable and Special Needs Housing — Energy Efficiency)

This programs funds highly energy-efficient features in new and rehabilitated affordable multi-family housing, blending the Virginia Housing Trust Fund (VHTF) with other state and federal sources. The program targets housing development for Virginia's most vulnerable populations.

- WDR (Weatherization Deferral Repair)

This program funds repairs to homes currently ineligible for weatherization due to structural or safety issues. Once repaired, these homes become eligible for federal Weatherization Assistance Program (WAP) dollars. As such, WDR functions as a "gateway" — fixing the barrier that was blocking access to other energy-savings programs.

Between 2021 and 2022, DHCD was allocated more than $250 million from RGGI auction proceeds. A VCU study from 2023 highlights how this amount significantly surpassed all other Virginia-based low-income energy efficiency initiatives combined: roughly $17.25 million from the federal Low-Income Home Energy Assistance Program (LIHEAP)—designated mostly for bill relief alongside low-income weatherization support; approximately $13 million annually from federal Weatherization Assistance Program (WAP); $15 million per year that Dominion Energy and Appalachian Power (APC) must dedicate to low- and moderate-income (LMI) energy efficiency, $6 million annually from Dominion's Energy Share program, as well as low-income energy efficiency investments from Virginia's natural gas utilities, estimated at under $4 million.[53]

This significant expansion of low-income energy efficiency funding provides vital support to Virginia residents experiencing substantial energy burden. Targeted at those with the greatest need, these initiatives address critical utility affordability challenges. Data from the U.S. Department of Energy (DOE) shows that low-income households in Virginia—those earning under 80% of Area Median Income (AMI)—allocate roughly 7% of their income to home energy expenses, surpassing the 6% threshold for a "High" energy burden. The impact is even more severe for extremely-low-income households (0–30% AMI), who face an average energy burden of 17%. This exceeds the 10%

[53] Damian Pitt, "Investing in Virginia through Energy Efficiency: An Analysis of the Impacts of RGGI and the HIEE Program", VCU Scholars Compass, January 2024, "Investing in Virginia through Energy Efficiency: An Analysis of the Im" by Damian Pitt, I-Shian Suen et al.

threshold for a "Severe" energy burden and stands at over eight times the 2% average spent by households earning above 80% AMI.[54]

The same research study found that low-income energy burdens hit "Severe" levels (10%+ of income) across much of Virginia, especially rural areas, such as Southwest Virginia, Southside Virginia, the Northern Neck, and the Eastern Shore. The study found that:

- Continued RGGI participation could yield $2.5–$3.3 billion total from 2021 to 2030, representing $125–$165 million annually.
- Potential direct benefits include upgrading up to 130,000 homes, generating over 590,000 MWh in annual electricity savings, and delivering $89 million in annual customer bill reductions (roughly $676 per household each year).
- Broader statewide economic benefits could total $2.03–$2.67 billion while sustaining up to 2,115 jobs.

Importantly, the study's initial projections are now outdated due to the significant growth in resulting annual revenues. The fiscal impact statement for Delegate Herring's House Bill 397 and Senator Locke's Senate Bill 802 during the 2026 General Assembly noted: "With current trends, Virginia participating in RGGI could result in approximately $115.6 million per auction or $462.6 million per fiscal year, with additional revenues resulting from interest."[55] Prior to the publication of the fiscal impact statement, auction clearing prices had fluctuated between $22 and $26 per allowance.[56] However, prices rose to $35 in the June 2026 auction and $37.65 in September 2026, pushing total cumulative proceeds to a record *$1.07 billion*. Virginia's share of auction proceeds in the latest auction was approximately $259 million.

Allowance Prices and Volumes

Auction	Date	Quantity Offered	CCR Sold	Quantity Sold	Clearing Price	Total Proceeds
Auction 73	2026-09-09	27,389,847	1,148,000	28,537,847	$37.65	$1,074,449,939.55
Auction 72	2026-06-03	18,349,699	0	18,349,699	$35.00	$642,239,465.00
Auction 71	2026-03-11	18,234,876	7,853,278	26,088,154	$24.99	$651,942,968.46
Auction 70	2025-12-03	15,230,235	0	15,230,235	$26.73	$407,104,181.55
Auction 69	2025-09-03	15,177,783	0	15,177,783	$22.25	$337,705,671.75
Auction 68	2025-06-04	15,244,479	0	15,244,479	$19.63	$299,249,122.77

A more recent study published in January 2025 by Virginia Housing Alliance found that the ASNH supplemental program helped fund 8,892 energy-efficient affordable housing units while leveraging $178.1 million in HIEE funds. Similarly, the WDR program helped fund more than 2,600 unique home repairs for 1,966 income-qualifying Virginians while leveraging $25.5 million in HIEE

[54] Ibid.
[55] Department of Planning and Budget, 2026 General Assembly Session, House Bill 297 State Fiscal Impact Statement, https://lis.blob.core.windows.net/files/1196457.PDF
[56] The Regional Greenhouse Gas Initiative, Auction Results, Auction Results | RGGI, Inc.

funds.[57] These measurable impacts underscore the role that targeted funding plays in enhancing both housing sustainability and long-term affordability across the Commonwealth.

As Virginia resumes its participation in RGGI, HIEE offers a key vehicle to address the Commonwealth's worsening energy affordability challenges, especially for addressing low-income energy burdens. Low-income households often cannot take advantage of standard state and federal energy efficiency tax credits or rebates because those incentive structures demand upfront capital investment. By bridging this gap, targeted energy efficiency initiatives like HIEE play an essential role in reducing energy burdens for lower-income residents.

Policy Consideration: To ensure effective deployment of RGGI program funds, policy makers may wish to direct DHCD to re-establish the HIEE Stakeholder Advisory Group, which convened regularly during the initial phase of Virginia's involvement in RGGI. This would function similarly to the advisory group that advises DCR in making project selections for funding rounds. Furthermore, instituting mandatory transparency and reporting regarding program performance, including allocation details, beneficiaries served, and remaining balances, would support program transparency and oversight. For instance, CFPF maintains transparency by publishing an annual summary of awardees, grant amounts, and the total volume of applications received.

Policy Consideration: During Energy Commission Staff stakeholder interviews, some individuals proposed establishing funding to support the weatherization workforce. Energy Commission Staff recommend monitoring the Weatherization and Energy Efficiency Task Force as workforce development is within scope of that multi-stakeholder work group. The Energy Commission has a seat on this Task Force. The state agencies have the authority to expand the program guidelines to incorporate workforce development as a permitted use of RGGI funds if necessary. Additional statutory directives could be considered by the legislature to expedite cross-agency coordination and improved outcomes, if needed.

[57] Virginia Housing Alliance, "Virginia's Housing Innovations in Energy Efficiency (HIEE) Program July 2025 | Impact Report", July 2025, https://vahousingalliance.org/wp-content/uploads/HIEE-Impact-Report-2025.-VHA-AECP-1.pdf

10. Community Flood Preparedness Fund (CFPF), Department of Conservation and Recreation (DCR)

The Virginia Community Flood Preparedness Fund (CFPF) was established to provide support for regions and localities across Virginia to reduce the impacts of flooding, including flooding driven by climate change. The fund provides loans and grants to identify and address flood vulnerability for communities throughout the Commonwealth. The fund operates through a three-tier funding structure addressing different phases of community adaptation development: planning grants for capacity building, study grants for technical analysis, and implementation grants for actual construction. Priority is given to projects that are in concert with local, state and federal floodplain management standards, local resilience plans and the Virginia Coastal Resilience Master Plan.

According to the Georgetown Climate Center, the CFPF stands out as one of the nation's most comprehensive state-level climate adaptation funding initiatives, serving as a promising model through several key design features:[58]

- Comprehensive Planning Emphasis: To ensure implementation projects target the root causes of flooding rather than mere symptoms, applications require DCR-approved Resilience Plans. This prerequisite establishes a structured framework for communities to conduct thorough vulnerability assessments and prioritize essential infrastructure investments.
- Strategic Project Evaluation: During the grant proposal evaluation process, DCR scores each project across three main criteria: Project Types, Scale, and Lifespan.
- Rigorous "No Adverse Impact" Standards: Applicants must establish that proposed initiatives reduce flood risks without transferring flood-related problems to adjacent properties.
- Equity-Focused Design (The 25% Mandate): Statutory provisions require at least 25 percent of grant funds to be awarded to low-income areas—a threshold that surpasses equity requirements in most other state programs. Under Virginia law, eligible low-income geographic areas include localities with a median household income at or below 80% of the local median income, as well as designated qualified opportunity zones.

Since its inception in 2021, the CFPF has awarded more than $274.7 million to Virginia communities for innovative flood mitigation and resilience projects.[59] However, demand for these resources consistently exceeds available funding. The program remains oversubscribed, with community needs continuing to outpace the funds provided to date. Demonstrating this ongoing demand, DCR received 78 applications during Round 6, the most recent grant cycle, requesting nearly $129 million in grant

[58] Joshua Saks, "Issue Brief | Virginia's Community Flood Preparedness Grant Program: A Model for State Climate Adaptation Funding", Georgetown Climate Center, July 2025, Issue Brief | Virginia's Community Flood Preparedness Grant Program: A Model for State Climate Adaptation Funding - Georgetown Climate Center

[59] Department of Conservation and Recreation, Community Flood Preparedness Fund, September 2026, DCR Presentation on CFPF

funding, yet only $73.9 million was awarded.[60] Currently, the Department has $178.6 million in total of unfunded eligible requests, with $50 million resulting from the most recent grant cycle.[61] As additional plans are submitted and project expenditures rise, the project pipeline continues to expand, leading to an increased demand for funding.

During Energy Commission Staff stakeholder interviews, stakeholders emphasized the necessity of a statewide needs assessment to evaluate flood resilience measures and underscored the need for funding at the necessary scale: the pipeline of proposals continues to expand as localities progress through the successive stages of funding—from initial studies to plan development and project implementation. Consequently, grant requirements are escalating because funds are increasingly allocated toward project execution rather than preliminary research alone. Furthermore, an increasing number of applications are being submitted by localities that previously had not sought funding. Overall financial demands will inevitably rise, driven by increasing construction costs and enhanced data that highlight the complex factors required to achieve comprehensive flood resilience.

Beyond the administrative complexities across the three funding phases, the overall financial requirement remains substantial. Accurate forecasting is exceptionally difficult, as cost estimates consistently understate actual needs. This situation is further compounded by increasingly frequent, severe, and unpredictable hurricane seasons, which impede recovery efforts from prior events. *Ultimately, the primary challenge lies not in administering the fund, but in securing sustained funding at the scale required to execute projects as needs are identified.* As such, stakeholders feel that a statewide needs assessment is essential for establishing a baseline to prioritize resources and ensure vulnerable communities receive targeted support.

Policy Consideration:
Request state agencies to conduct a statewide needs assessment to determine the overall funding required to address the volume of need within each program area's goal.

[60] Ibid
[61] Ibid

11. Data Centers, DEQ and RGGI Implications

Fossil fuel-fired power generation units with a capacity of 25 megawatts (MW) or larger are required to obtain CO_2 allowances to meet RGGI compliance standards. However, data centers can satisfy their primary or backup power requirements by using multiple smaller generation units that individually remain below this 25 MW limit, thereby bypassing RGGI regulation. For example, a data center facility operating 25 MW of gas generation across several smaller turbines avoids triggering stationary source requirements for any single unit, leaving the site as a whole exempt from RGGI compliance despite meeting or exceeding the capacity threshold of a covered facility.

Table 4: Number of unit groupings above 25MW from data centers located in Virginia [REVISED DATA per DEQ Update]

Operational Status	Number of facilities with units above 25MW when "bubbled"	Number of Units	Size of Unit Groupings (MW)
All	241	12401	30,753.89
Operating	203	8822	23,462.536
Planned	38	3579	7291.35

Source: DEQ, data only contains permits up to September 25, 2026.[62]

Table 5: Operating data center facilities in Virginia with unit groupings above 25MW [NEW DATA per DEQ Update]

Operation Status	Number of facilities with units above 25MW when "bubbled"	Number of Units	Size of Unit Groupings (MW)
Behind-The-Meter (BTM)	1	8	132
Emergency	163	1630	17263.65
Non-Emergency	33	2114	5657.75
Old-Emergency	6	186	409.13

Source: DEQ, data only contains permits up to September 25, 2026.

A recent report by the State Corporation Commission to the General Assembly found that permitted data center generators were the following:

- Tier 2 (or earlier) gen-sets: 10,290 gen-sets with a combined capacity of 26,718 MW.
- Tier 4 or Tier 4-equivalent gen-sets: 3,477 gen-sets with a combined capacity of 6,414 MW.[63]

[62] This research is preliminary and does not distinguish between units for emergency operations, non-emergency operations or behind-the-meter primary generation.
[63] State Corporation Commission, "RD637 - Report on Information Concerning Data Centers – October 1, 2026", October 1, 2026, Report on Information Concerning Data Centers – October 1, 2026

Research Question: If data center generators were regulated at the facility level, how would that impact RGGI's overall CO_2 emissions coverage? Additionally, what would be the total aggregate megawatt usage and CO_2 output for those facilities?

Assuming that these data centers are all limited by air permits to emissions of 100 tons per year (tpy) of NOx each and that all of them actually emit NOx at their permitted level of 100 tpy, then the 241 facilities (operated and planned) would cumulatively emit 24,100 tpy of NOx.

Hypothetically, using a CO_2-to-NOx emission ration 100:1 (this is perhaps conservative considering data centers are installing greater numbers Tier 4 generators) the 12,500 tons tpy of total NOx emitted by these 421 data centers would equate to approximately 3.012 million tpy of CO2. Multiplied by a $14/ton RGGI allowance price, Virginia would get an additional $40.17 million in RGGI revenue annually if data centers' backup generation were covered under RGGI. If a price of $35 per ton is assumed (such as the one reflected in the June 2026 auction), Virginia would get $105.43 million annually in RGGI revenues if data centers' backup generation were covered under RGGI.

Looked at another way, *each Tier 4 or Tier 4 "equivalent" diesel generator* that emits 100 tpy of NOx may emit up to 2 million tons of CO_2 (based on a 20,000:1 emissions ratio), thereby resulting in up to $28 million of additional RGGI revenue per generator annually based on $14 allowance price. If a price of $35 per ton is assumed (such as the one reflected in the June 2026 auction), the Virginia would get $70 million annually in RGGI revenues.

These are rough estimates using assumptions that do not reflect how data centers use a wide variety of diesel generator types and sizes. Additionally, these estimates are assuming the maximum level of emissions allowed based on air permits, not actual emissions that data centers released. To get an accurate number of the tpy of CO_2 a data center actually emits, each of its diesel generators would have to be assessed individually, on a generator-by-generator basis. This data could potentially be calculated based on fuel usage, which would require data centers to share this information with DEQ.

For example, in calendar year 2025, Virginia recorded approximately 1,352 tons of NO_2 emissions from combined data center generator sets. Based on an estimated emission factor of 0.2 pounds of NO_2 per gallon of fuel, this corresponds to approximately 13.5 million gallons of diesel fuel consumed. Applying a CO2 emission factor of 22.38 pounds per gallon of fuel, this equates to roughly 150,000 tons of CO2 emissions.[64] Assuming a $14/ton RGGI allowance price, Virginia would have received $2.1 million in RGGI revenue annually from the 2025 CO_2 emissions from data centers. Assuming a higher RGGI allowance price of $35 per ton, Virginia would have received $5.25 million in RGGI revenues from the 2025 CO_2 emissions from data centers.

ECVA staff recommends that DEQ be appropriately funded to support the administrative tasks relating to this technical work of bringing data centers under RGGI regulations. Additionally, ECVA staff recommends requiring data centers to report real-time CO_2 emissions and operational run time hours to DEQ.

[64] Data received from DEQ.

Policy Consideration: Include data center primary and backup generators into RGGI framework where each generator may be less than 25MW but collectively at a single facility in excess of 25 MW:

- Option A: By "bubbling" or treating all the units in the facility as one; or,
- Option B: By lowering the MW threshold to a lesser figure, to be determined.
    - There is a risk of setting the MW threshold too low, which may include backup generation from hospitals, schools and critical operation facilities, which would then necessitate exemptions from RGGI regulations. However, there is a case precedent established for lowering the MW threshold in NY, where a 15MW capacity generator is subject to RGGI if it is co-located with a unit greater than 25MW, or co-located with one or more other unit that is over 15MW.[65]

Policy Consideration: Policymakers could consider removing all regulatory references to combustion in 9VAC5-140. Although fuel cells do not rely on combustion, they are increasingly deployed in data centers for primary and backup power, providing a cleaner, quieter, and more efficient alternative to conventional diesel generators or gas turbines. However, because they still emit CO_2, policy makers could consider subjecting fuel cell units exceeding 25 MW to RGGI regulations. This initiative could potentially conflict with current executive agency directives, which prioritize restricting new behind-the-meter fossil fuel generation for data centers while promoting the use of fuel cells using low-carbon fuels where available.[66]

[65] New York, CO_2 Budget Trading Program General Provisions, Applicability, 6 CRR-NY 242-1.4
[66] Virginia Energy, "Virginia Energy Plan", October 2026, pages 144-145, 2026 Virginia Energy Plan | Virginia Energy

12. Utility Practices under RGGI

Energy Commission staff carried out in-depth research prompted by a critical need to evaluate the underlying mechanics of Virginia's participation in the Regional Greenhouse Gas Initiative (RGGI). Establishing a comprehensive framework for RGGI going forward requires addressing foundational operational and cost-recovery questions that extend well beyond the immediate scope of transient budget language. As the Commonwealth navigates its decarbonization goals, a clear analysis of the key cost-drivers associated with RGGI compliance becomes essential to safeguarding ratepayer interests and maintaining grid reliability.

A central focus of this inquiry is examining how electric utilities recover RGGI allowance costs through rate structures, how RGGI impacts utilities' dispatching and their performance in PJM energy markets. Policy considerations to achieve long-term affordability are laid out for the Commission's consideration.

12a. Utility Costs Related to RGGI Compliance

Dominion estimates of required allowances and their associated costs are significantly higher compared to APCo and the electric coops. In its latest filing, Dominion projects approximately 51 million CO_2 allowances will be required to cover CO_2 emissions from its Virginia-based generation fleet from July 1, 2026, through December 31, 2028 (a 30-month period).[67] The Rider RGGI will take effect March 1, 2027 and seeks to recover projected RGGI compliance costs to occur over the period of July 1, 2026 through February 29, 2028 (a 20-month period) with a total Virginia Jurisdictional revenue requirement of $1,179,089,492.[68] In a past filing from 2022, Dominion projected requiring approximately 31,000,000 allowances for the period from August 1, 2022 through December 31, 2023 (a 17 month period), with a projected revenue requirement of approximately $373 million on a Virginia jurisdictional basis.[69] In 2020, Dominion estimated that the company would initially require approximately 19,000,000 CO2 allowances per year to cover CO2 emissions from its Virginia-based generation fleet.[70]

In contrast, in a petition filed in 2022 to recover RGGI compliance costs, APCo stated that it incurred costs of $340,981 in 2021, and had forecasted incurring $158,159 for 2022, and $300,390 in 2023 for its Clinch River Plant, a two unit 484 MW gas-fired plant in Russell county.[71]

Virginia electric cooperatives that are members of the Old Dominion Electric Cooperative (ODEC) — A&N, BARC, Community, Mecklenburg, Northern Neck, Prince George, Rappahannock, Shenandoah Valley, Southside — meet their energy demands through a mix of self-

[67] Dominion Rider RGGI 2026 (PUR-2026-00085), 8cn$01!.PDF
[68] Ibid
[69] Dominion Rider RGGI 2022 (PUR-2022-00070), 7p$r01!.PDF
[70] Dominion Rider RGGI 2020 (P UR-2020-00169), 4q3701!.PDF
[71] APCo E-RAC 2022 (PUR-2022-00001), Direct Testimony Tyler H. Ross, page 8, 7n%g01!.PDF

owned generation facilities and external procurement methods, including through the PJM capacity market and Power Purchase Agreements (PPAs). While their nuclear operations do not incur RGGI-related charges — such as the North Anna Power Station, a 1,890MW nuclear facility, in which ODEC holds an 11.6% ownership interest (~218 MW of entitled capacity) alongside Dominion — several other facilities in their Virginia fleet are subject to compliance regulations that require the purchase of allowances:

- Marsh Run Power Station: A 504MW natural gas peaking unit.
- Louisa Power Station: A 504MW natural gas peaking unit.
- Clover Power Station: A 438MW coal plant, with 50% ownership held alongside Dominion.

Additionally, Virginia electric cooperatives, including those not affiliated with ODEC such as Central Virginia, Craig-Botetourt, and NOVEC, may also incur RGGI costs through PJM capacity purchases and PPAs when projects are located in RGGI-member states and have compliance costs embedded in the agreements.

15. **12b. Mechanisms under which utilities recover RGGI allowances** *[NEW AND REVISED CONTENT]*

Utilities recover the costs of RGGI allowances under Code § 56-585.1 A 5 e. Dominion recovers them through a RGGI-specific rider while APCo recovers it through its broader E-RAC.

Dominion records purchased CO2 allowances as an intangible asset representing funds expended but not yet recovered from customers. As Dominion's generating units emit CO2 each month, these allowances are expensed or amortized to account for the emissions. Depending on the timing of auctions relative to allowance purchase dates, Dominion may maintain an intangible asset on its balance sheet for purchased but unamortized allowances. Conversely, during periods when Dominion experiences an allowance deficit, a reduction to rate base is recorded within the Rider RGGI revenue requirement. Dominion earns an ROE on the inventory of the allowances before they are expensed or amortized.

Some stakeholders have raised concerns regarding Dominion's recovery of allowance costs, specifically concerning the application of a return on equity (ROE) to the associated inventory. In past filings for example, Dominion's ROE was 9.2% for Rider RGGI in 2020, resulting in $4.95 million (3%) of the proposed $167.76 million revenue requirement. In Dominion's 2026 Rider RGGI petition, the company has stated that it will incur a total of $17.4 million in financing costs between July 2026 and February 2028 based on the Company's 9.8% return on equity.[72]

[72] Dominion Rider RGGI 2026 (PUR-2026-00085) Direct Testimony of Michael Goggin, page 13, 8#x901!.PDF

Table 6: Financing Costs Under Dominion's Proposed and Alternative Recovery Methods

	Rate Year Financing Cost (March 2027–February 2028)	Pre-Rate Year Financing Cost (July 2026–February 2027)	**Total Financing Cost**	**Total Ratebase Impact**
Proposed Method	$10.3 million	$7.1 million	**$17.4 million**	**$113 million**
Alternative Mitigation Proposal	$18.6 million	$7.1 million	**$25.7 million**	**$205 million**

Source: Dominion Rider RGGI 2026 (PUR-2026-00085) Direct Testimony of Michael Goggin, page 14, 8#x901!.PDF

In past proceedings, SCC staff and other intervenors have suggested the Commission to consider including that inventory in the biennial review rate base rather than in the RAC. This would give Dominion an opportunity to recover these financing costs through base rates rather than dollar-for-dollar recovery through Rider RGGI.

Alternatively, during stakeholder interviews that Energy Commission staff carried out, other stakeholders have suggested re-instating authority to the SCC to be able to set distinct ROE to separate rate adjustment clauses or riders. The Grid Transformation and Security Act (GTSA) of 2018 restricted the State Corporation Commission's (SCC) authority by implementing a uniform Return on Equity (ROE) across all riders, which aligns with the ROE established in biennial rate cases. Consequently, the SCC was deprived of the following capabilities:

1. Denying a utility's petition for a rider or approving projects under a base rate, meaning it is required to accept the project as a rider.
2. Applying distinct ROEs to separate rate adjustment clauses (RACs) or riders.
3. Consolidating or rolling riders back into base rates.

In 2022, Delegate Wilt introduced HB839 which attempted to restore some of that authority by allowing the SCC to authorize the recovery of proposed costs through base rates, even if the project was initially submitted as a petition for a rate adjustment clause. The bill did not pass and was continued to 2023. The Energy Commission of Virginia could consider restoring the SCC authority to set different ROEs for separate RACs. This is a topic which could appear during review of performance-based regulation, or PBR, for which there is a forthcoming report by the State Corporation Commission.

Another path for ensuring lower costs for the purchase of RGGI allowances is to treat RGGI allowance purchases like fuel costs are treated (as a pass through without an ROE). Currently, Dominion and APCo recover the cost of RGGI allowances through riders under § 56-585.1 A 5 e, which allows compliance costs to be recoverable as an expense and through a return on rate base, which includes financing costs for allowance inventory, cash working capital, and deferred costs. In

the PUR-2020-00169 proceeding on Dominion's first Rider RGGI, the Hearing Examiner concluded that the 2020 amendment adding "costs of allowances purchased" did not limit the Commission's ability to treat these costs as expense or rate base items. As the Examiner noted, had the legislature intended such a limit, "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."[73]

Instead of amending the language of § 56-585.1 A 5 e, which utilities use for other riders such as APCo's E-RAC and Dominion's Rider E, to specifically disallow an ROE on Rider RGGI, the Energy Commission recommends moving the recovery cost method for "the costs of allowances purchased through a market-based trading program for carbon dioxide emissions" into the fuel factor section of code (§ 56-249.6). This would effectively disallow any ROE for Rider RGGI. Merging the fuel factor proceeding with the RGGI proceedings could also address concerns over lack of transparency between the costs and revenues associated with RGGI allowances as well as concerns over cost-recovery for uneconomic dispatch (as explained in the following sections, 12c and 12d, respectively).

Policy Consideration: Lower or disallow the ROE on Rider RGGI.

- Option A**:** Authorize the SCC to be able to set distinct ROE to separate rate adjustment clauses (RACs) or riders.
- Option B: Merge Rider RGGI with Fuel Factor proceeding under § 56-249.6, effectively disallowing ROE on RGGI rider.

12c. Interactions between fuel factor and RGGI

Crucially, it is important to note that the cost of RGGI compliance and the benefits flow through separate and different mechanisms. While the costs of RGGI are recovered through riders, the revenues associated from RGGI compliance are reflected in the fuel factor and recovered under Code § 56-249.6. This is because when Dominion or APCo bid their units to *PJM in the energy and ancillary services markets* with the cost of RGGI embedded in the bid, they recover this revenue if their bid clears the auction. However, this is a dynamic issue.

When a market clearing price is established across PJM—for instance, at $30/MWh—all dispatched units receive that clearing price. Utilities that are subject to RGGI compliance can include the cost of environmental compliance (such as the purchase of RGGI allowances) in their bids to the PJM market — *though generators retain the flexibility to offer at lower rates to remain competitive* (for example, by not including RGGI allowance costs). Dominion and APCo have historically indicated that RGGI costs are included in its cost-based offers. This has important repercussions:

- If an external unit (in this example, let's assume a non-Virginia utility) sets the clearing price, Dominion receives the clearing price. Associated net revenues are subsequently credited back

[73] Dominion Rider RGGI 2020, PUR-2020-00169, Report of Hearing Examiner, June 2,2021, p.29 50fr01!.PDF

to customers through the fuel factor mechanism. If Dominion's bid was lower than the clearing price, they would have received the associated net revenues regardless of whether individual offers incorporated RGGI cost.

- However, if Dominion's offer doesn't reflect its true RGGI cost (i.e., it bids without including RGGI cost), the unit is artificially cheap and may get dispatched in hours where the clearing price is actually below its true all-in cost (fuel + RGGI). In those hours, Dominion still gets paid clearing price — but that price may not cover the RGGI cost it just incurred, so the realized net margin on that energy is lower than expected, sometimes even negative. That shows up as less net revenue flowing back to customers through the fuel factor than if the offer had properly reflected RGGI cost and only dispatched when the clearing price covered it.
- However, when a Dominion unit sets the regional clearing price, the resulting higher market price increases revenues for Dominion, which ultimately benefits customers. However, because Dominion is a load-serving entity purchasing significant megawatt-hours to fulfill customer demand, higher market clearing prices driven by RGGI also increase Dominion's wholesale energy procurement costs. Consequently, RGGI impacts both the revenues earned from PJM sales and the costs incurred for PJM energy purchases. Ultimately, the revenues from PJM sales and the costs for PJM energy purchases balance each other out - as long as the revenues match the cost incurred.

Stakeholders have requested enhanced transparency regarding this matter to prevent duplicate accounting between cost-recovery mechanisms via rate riders and revenues generated through dispatch in PJM energy markets. As mentioned in the previous section, moving the RGGI allowance cost recovery to the fuel factor, would allow this accounting to be more transparent.

1. **12d. Economic dispatch and must-run practices (uneconomic dispatch)** *[NEW AND REVISED CONTENT]*

Intervenors have expressed ongoing concerns regarding utilities' frequent practice of self-scheduling coal and natural gas units under must-run dispatch, specifically questioning whether the RGGI allowance costs tied to emissions from these units should be eligible for cost recovery.

For APCo, recovery of RGGI allowance costs related to self-scheduling was governed by the Commission's 2022 E-RAC Final Order.[74] That order denied recovery for RGGI costs associated with economically self-scheduled generation at Clinch River without prejudice, as the record lacked detailed justification for each dispatch hour. To address this, the Commission mandated that APCo maintain comprehensive logs detailing the hours, megawatts, and rationale for every self-scheduling event at the facility. In an earlier proceeding that year, Dominion had been similarly directed to maintain records associated with a hybrid biomass and coal-fired power plant. And in a 2022 Fuel Factor Proceeding, Dominion proposed a stipulation which was approved in the Final Order, where it agreed to "to maintain records created in the normal of course of business pertaining to its dispatch decision

[74] APCo E-RAC Final Order (PUR-2022-00001), 7p3501!.PDF

of its coal units, […] and make them available upon request as a part of the discovery process in any future fuel factor or other relevant proceedings."[75,76]

In Dominion's 2022 RGGI proceeding, the hearing examiner concluded that Dominion's 2022 Fuel Order was relevant, as it found that Dominion's self-scheduling process "appears to be reasonable and designed to provide lower overall fuel costs," and thus the Commission declined to prohibit self-scheduling going forward. Since the Commission had found Dominion's self-scheduling to be reasonable then, consequently the Commission stated that it cannot find that RGGI allowances for those associated emissions are unreasonable and as such cost-recovery must be approved.

During the 2026 General Assembly session, delegate Irene Shin introduced HB1360 which addresses utility self-scheduling practices. The enacted language in Chapter 310 requires investor-owned utilities to include, in any fuel factor proceedings before the SCC, the following information about coal- and oil-fueled generating facilities designated as must-run units: (i) all hours committed as "must-run" for any of its coal fueled or oil-fueled electric generating units, (ii) the marginal operating costs of such units during each hour when they were designated as must-run, (iii) the reason for making each such must-run commitment, and (iv) the energy market clearing price set by the regional transmission entity for that same hour. The bill also directs the SCC to use existing authority to assess on a case-by-case basis whether it was reasonable and prudent for the utility to commit its coal- and oil-fueled facilities as must-run, and clarifies that the SCC must deny cost recovery for any must-run decisions by a utility that it deems unreasonable or imprudent.

However, because fuel factor proceedings and RGGI cost-recovery petitions are conducted in separate regulatory dockets under distinct statutory standards, the enactments in Chapter 310 do not predetermine how the SCC will rule on RGGI allowance cost recovery.

Policy Consideration:

- Option A: To align these frameworks, statutory language could be proposed directing the SCC to disallow cost recovery for RGGI allowances associated with emissions from generating units during hours when the SCC determines in a fuel factor proceeding that the unit's operation was uneconomic or imprudent.
- Option B: Alternatively, combining the fuel factor and Rider RGGI dockets would facilitate a more efficient and accurate accounting of economic dispatch.

12e. How PJM addresses RGGI and how utilities include RGGI costs in their PJM bids

PJM's energy market procures electricity to meet consumers' demands both in real time --- through the Real-Time Energy Market (five minutes) — and in the near term — through the Day-Ahead Market (one day forward). The energy market is where PJM sets wholesale electricity prices, and environmental compliance costs (such as those for emissions control, air quality standards, and

[75] Dominion Rider S, Virginia City Hybrid Energy Center for rate years commencing April 2022-2023, Final Order (PUR-2021-00114), 6j7_01!.PDF

[76] Dominion 2022 Fuel Factor, Final Order 7nql01!.PDF

other regulatory requirements) are considered part of the resource's total cost of providing energy.[77] As such, PJM's Energy Market rules *allow* participants to account for the cost of environmental compliance when bidding and settling in the day-ahead and real-time markets.[78]

Once Virginia re-entered into RGGI, PJM's market monitor noted that generators can include RGGI costs in their cost-based offers starting on July 1, 2026, per their approved Fuel Cost Policies.[79]

PJM's capacity market, either through the Reliability Pricing Model (RPM) or the Fixed Resource Requirement (FRR) Alternative, are designed to ensure adequate availability of necessary resources, such as new or existing generation or demand response, can be called upon to ensure the reliability of the grid.[80] While resources must meet reliability requirements, the capacity auction price reflects the value of capacity to meet demand in the future, not the marginal cost of producing electricity at that moment. This differs from the cost-based bids in the energy market which includes compliance costs. As such*, compliance costs are generally not reflected in PJM's capacity market* in the same way they are in the energy market.

Ancillary market. PJM's ancillary services are a broad category of market products that help maintain the reliability and stability of the electricity grid. Ancillary services help balance the transmission system as it moves electricity from generating sources to retail consumers. Throughout the day, PJM operates markets to procure two important ancillary services:

- Regulation is used to control small mismatches between load (the electricity being consumed) and generation (the electricity being produced), adjusting for small tips to either side of the scale.
- Reserves help to recover system balance by making up for generation deficiencies if there is loss of a large generator, resulting in a large tip in the scale. The reserve market is a specific type of ancillary service focused on providing or removing power to maintain system balance.

Ancillary services are priced separately from energy. However, resources are compensated for their lost opportunity costs when being committed to the ancillary services. Since that opportunity cost is derived from the unit's energy offer, it may have some RGGI costs embedded in the reserve/regulation opportunity cost.

The energy market is where PJM's Operating Agreement and Cost Development Guidelines apply, and where compliance costs are explicitly recognized as part of the resource's cost of service. The capacity and ancillary markets are separate reliability and performance markets, with their own cost models and settlement rules. This separation reflects the different purposes of each market:

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[77] PJM Manual 15: Cost Development Guidelines, Section 1.7, Components of Cost, page 12, https://www.pjm.com/-/media/DotCom/documents/manuals/m15.pdf

[78] Ibid, page 23

[79] Monitoring Analytics, "VA RGGI Integration Status and Cost-Based Offers", June 8, 2026, VA RGGI Integration Status and Cost-Based Offers

[80] PJM, Capacity Market, PJM - Capacity Market (RPM), PJM Learning Center - Capacity Market (RPM)

energy markets price the actual electricity delivered, while capacity and ancillary markets price the ability to deliver that electricity under stress conditions.

12f. RGGI-Participating States in PJM, in Restructured/Deregulated Markets:

Virginia's place in the region is structurally different from other states in both PJM and RGGI, so Virginia's utilities must address cost recovery in a unique way rather than looking to other states for comparison purposes.

- New Jersey: Restructured market; NJ utilities generally don't have generation to bid into PJM;
- Delaware: Same structure as NJ; no meaningful ownership of generation;
- Maryland: Major IOUs are largely divested of generation

Similarly, the utilities in RGGI in northeastern states are also predominantly divested of generation assets, so there's not a close analog through the New York Independent System Operator (NYISO) or the Independent System Operator for New England (ISO-NE).

Virginia has a unique situation through participation in RGGI while also still having vertically-integrated utilities whose generation is bid into the RTO. Thus, it continues to be the job of Virginia's policy oversight and public utility regulator to make sound judgements about utility operations, environmental compliance and cost recovery.

13. Expanding Programmatic Areas of Focus for RGGI proceeds

During the research that Energy Commission staff conducted on how peer states allocate RGGI revenues to ratepayer relief efforts, staff conducted a broader analysis on the use of auction proceeds overall. One case study is particularly relevant to Virginia given the overlap with other priority areas of the Energy Commission 2026 Work plan —specifically, supporting renewable energy, geothermal, and energy efficiency adoption in public schools to support these public facilities to function as energy-resilient centers within communities.

Through its Decarbonizing Public Schools Program, Maryland directs RGGI revenue from the Strategic Energy Investment Fund, along with funding from the Climate Action Plan and Alternative Compliance Program, toward school decarbonization efforts. In 2026, approximately $36 million in grant funding will be made available to build institutional capacity, manage energy data, incorporate net-zero energy design into public school portfolio planning, install solar power, and complete energy efficiency upgrades. Funding is provided across several proposal categories:

- Capacity Building for Energy Management, Efficiency, Sustainability, and Portfolio Planning
- Energy Efficiency
- Solar on Schools
- Net Zero Energy Schools

Policy Consideration: Allocate a certain percentage of new or existing RGGI proceeds for public school energy resilience projects.

14. CONCLUSION
Staff Policy Recommendations and Considerations for Energy Commission

Energy Commission Staff has researched potential policies brought forward in the Commission's approved workplan around the allocation RGGI auction proceeds and potentially proposing bill credits to address energy affordability as Virginia re-enters RGGI. The recommendations address core RGGI implementation issues in Virginia and further legislative options for long-term electricity affordability.

A. RGGI Revenue Allocations and Programmatic Considerations

1. Increase transparency, reporting, oversight, and establish metrics for how funds are being used from all state agencies including DEQ, DHCD and DCR. Re-establish HIEE Advisory Group to help advise DHCD during selection of HIEE projects.
    a. *See Section 8: DEQ Administration and Air Board.*
    b. *See Section 9: Historic and Future Allocations to Program Funds via DHCD, HIEE.*

B. Utility and Regulatory Considerations

2. Give SCC authority to set different ROEs for riders.
    a. *See Section 12b. Mechanisms under which utilities recover cost of RGGI allowances.*

3. Merge Rider RGGI with Fuel Factor proceeding under § 56-249.6, effectively disallowing ROE on RGGI rider and ensuring better accounting of economic dispatch, and costs and revenues associated with RGGI rider.
    a. Clarify how HB1360 (Shin, 2026) directly impacts RGGI cost recovery
    b. *See Section 12b-12d.*

4. Include data center backup generators that are in aggregate >25MW into RGGI rules for compliance. Require data centers to report to DEQ the operational run-time hours of their generators, including real-time NOx and CO2 emissions, and fuel usage.
    a. Additional Policy Consideration: Amending regulations to include fuel cells technology under RGGI regulations.
    b. *See Section 11. Data Centers, DEQ and RGGI Implications.*

5. Preliminary Proposal to establish a carbon border adjustment mechanism (CBAM).
    a. Research contracted through University of Virginia Weldon Cooper Center (not included in this memo).

C. Alternative Policy Considerations and Proposals - No Longer Being Pursued

6. Consider lower percentage allocation for utility customer credits in order to hold ratepayers harmless – recalibrate ratepayer credits to cover only Rider RGGI with no additional bill credits.
    a. Staff monitoring Rider RGGI proceeding and RGGI bill credit implementation.
    b. *See Section 5: Peer state comparisons on rebates, bill credits and bill payment assistance.*

7. Keep the RGGI Auction Proceeds Allocation from 2026-2028 Biennium Budget As-Is
    a. Continue to monitor this topic.
    b. *See Section 5: Peer state comparisons on rebates, bill credits and bill payment assistance.*

8. For DCR CFPF: require a needs assessment – what is the volume of unfunded projects?
    a. *See Section 10: Historic and Future Allocations to Program Funds via DCR, CFPF.*

9. Allocate a certain part of RGGI funds for public school energy resilience projects.
    a. This may be done administratively by broadening program guidelines via executive or agency action for future program allocations.
    b. *See Section 13. Expanding programmatic areas of focus for RGGI proceeds.*

10. For HIEE – Direct DHCD and Virginia Works to develop workforce needs assessment and determine if program guidelines can be amended to expand usage of funding for workforce development.
    a. Can be accomplished through Weatherization Task Force.
    b. *See Section 9: Historic and Future Allocations to Program Funds via DHCD, HIEE.*