

Virginia's Proposed Regulations for Linking with the Regional Greenhouse Gas Initiative: *Complexity, Innovation, and a Few Cautions*

October 5, 2018

Karl R. Rábago

Pace Energy and Climate Center



Research support provided by Joseph O'Brien-Applegate and Geordi Taylor, Pace Energy and Climate Center

Virginia's Proposed Regulations for Linking with the

Regional Greenhouse Gas Initiative:

Complexity, Innovation, and a Few Cautions

Karl R. Rábago, Executive Director

Pace Energy and Climate Center¹

¹ Research support provided by Joseph O'Brien-Applegate and Geordi Taylor, Pace Energy and Climate Center.

The Pace Energy and Climate Center is a project of the Elisabeth Haub School of Law at Pace University. More than a think tank, the Pace Energy and Climate Center turns ideas into action. We believe thoughtful engagement of government and key stakeholders leads to better public policy. We conduct research and analysis on legal, regulatory and policy matters because thorough, objective analyses are essential to finding solutions to today's complex energy and climate change challenges. We are lawyers, economists, scientists, and energy analysts, committed to achieving real-world progress.

For more information, visit <http://energy.pace.edu>.

Table of Contents

<i>Introduction</i>	4
<i>Procedural Background</i>	5
<i>Virginia’s Proposed Consignment Auction—Innovation, with Complexity</i>	6
<i>Other Issues Raised by Virginia’s Participation in RGGI</i>	11
1. <i>Aggressive vs. Conservative Emissions Caps</i>	12
2. <i>Stable Funding for Pollution-Reducing Clean Energy and Customer Benefit Programs</i>	13
3. <i>Emissions Leakage</i>	14

Virginia’s Proposed Regulations for Linking with the Regional Greenhouse Gas Initiative: *Complexity, Innovation, and a Few Cautions*

Introduction

Virginia is poised to become the first new state to join the Regional Greenhouse Gas Initiative (“RGGI”) in several years through the regulatory adoption of a state program that is “linked” to RGGI. RGGI is a multi-state mandatory market-based program aimed at reducing carbon dioxide (“CO₂”) emissions from electric power plants. The program works by setting and periodically reducing an allowable cap on greenhouse gas emissions.

RGGI compliance is achieved and accounted for by an allowances system that permits trading. Nearly all allowances, which must be procured and annually retired by emitters in order for them to comply, are sold by participating states. Revenues from the sale of allowances fund clean energy programs that advance energy efficiency, renewable energy, and other customer benefit programs.¹ The cap-and-trade model offers economic benefits over traditional command-and-control approaches by leaving it up to polluters to decide the most effective path to meeting the allowance retirement requirement—whether through generation efficiency improvements, fuel switching (such as from oil to gas, or from coal to renewable energy), or the market purchase of allowances.

Virginia has 32 electric generating facilities that are larger than 25 MW in size, which is the size at which RGGI applies. These facilities are owned by only 12 companies,² so there are

¹ Regional Greenhouse Gas Initiative, <https://www.rggi.org>.

² [Town Hall Agency Background Document regarding proposed Regulation for Emissions Trading](https://www.townhall.virginia.gov/L/GetFile.cfm?File=1\4818\8130\AgencyStatement_DEQ_8130_v1.pdf), https://www.townhall.virginia.gov/L/GetFile.cfm?File=1\4818\8130\AgencyStatement_DEQ_8130_v1.pdf, at p. 7.

insufficient owners and plants in Virginia to sustain effective competition for carbon allowances without linkage to a larger program. RGGI gives Virginia access to a large enough market to reap market efficiencies under a cap-and-trade program. In other words, Virginia's linkage to RGGI will allow more reductions in CO2 emissions on a shorter time line and at lower cost than if Virginia tried to accomplish the same results by acting solely within its own borders.

Procedural Background

In June 2016, Governor McAuliffe of Virginia issued an executive order³ directing the Commonwealth's Secretary of Natural Resources to convene a work group to study ways to reduce CO2 emissions from electric power plants. The work group submitted its final report⁴ to the Governor in May 2017. In 2017, Governor McAuliffe issued a subsequent executive directive⁵ to the Virginia Department of Environmental Quality ("VA DEQ"). The Governor directed the development of a proposed regulation that would create a system for the control of CO2 emissions through the use of market-based mechanisms and the trading of CO2 allowances in the context of a multi-state trading program—the Regional Greenhouse Gas Initiative.⁶

The VA DEQ published a proposed regulation in the Virginia Register in early January 2018.⁷

³ VA Exec. Order No. 57, Development of Carbon Reduction Strategies for Electric Power Generation Facilities (June 28, 2016), <https://www.naturalresources.virginia.gov/media/governorviriniagov/governor-of-virginia/pdf/eo/eo-57-development-of-carbon-reduction-strategies-for-electric-power-generation-facilities.pdf>.

⁴ Governor Terence R. McAuliffe's Executive Order 57 Work Group, *Report and Final Recommendations to the Governor* (May 12, 2017), <https://www.naturalresources.virginia.gov/media/governorviriniagov/secretary-of-natural-resources/pdf/eo57-report-final-5-12-17.pdf>.

⁵ VA Exec. Directive 11, Reducing Carbon Dioxide Emissions from Electric Power Facilities and Growing Virginia's Clean Energy Economy (May 16, 2017), <https://www.deq.virginia.gov/Portals/0/DEQ/Air/GHG/eo11.pdf>.

⁶ *Id.* at p. 2.

⁷ Regulation for Emissions Trading Programs, 34:8 Va. Reg. Regs. 924 (proposed January 8, 2018), <http://register.dls.virginia.gov/details.aspx?id=6770>.

In March 2018, the Virginia Legislative Assembly passed HB 1270, which would have prohibited the Commonwealth from adopting any regulation establishing a carbon dioxide cap-and-trade program or joining in RGGI. Virginia's new Governor, Ralph Northam, vetoed the bill in April 2018, and the veto was sustained by the Virginia House later that month.⁸

The comment period for DEQ's proposed rule closed on April 9, 2018. The DEQ is evaluating comments⁹ and is expected to issue a final rule in 2018. Unless delayed or successfully defeated by litigation, Virginia could join RGGI by the end of 2018 or early in 2019.¹⁰

Virginia's Proposed Consignment Auction—Innovation, with Complexity

Virginia, and its governors in particular, deserve credit for taking on the complex issue of beginning to regulate carbon emissions from the power sector and other parts of the state economy. The additional factor of federal-level regulatory retreat from an effective carbon emissions reduction system¹¹ makes the role of RGGI even more important.

The VA DEQ was required to thread a careful path in designing a regulation that would work in Virginia and ultimately be compatible with RGGI.¹² The common approach of securing a foundational piece of legislative direction and authority was not available. Likewise, the system had to be set up so as to work with the tradable allowances that are the cornerstone of

⁸ See, Virginia Legislative Information System, HB 1270 Regional Greenhouse Gas Initiative; prohibition on participation by Commonwealth (2018 Session), <https://lis.virginia.gov/cgi-bin/legp604.exe?181+sum+HB1270>.

⁹ VA DEQ, Greenhouse Gases, New and Existing Power Plants, <https://www.deq.virginia.gov/Programs/Air/GreenhouseGasPlan.aspx>.

¹⁰ James A. Bacon, *Virginia's Date with RGGI* (May 24, 2018), <https://www.baconsrebellion.com/wp/virginias-date-with-rggi/>.

¹¹ See, e.g., Lisa Friedman and Brad Plumer, *E.P.A. Announces Repeal of Major Obama-Era Carbon Emissions Rule*, New York Times (October 9, 2017), <https://www.nytimes.com/2017/10/09/climate/clean-power-plan.html>.

¹² The VA DEQ received a large number of comments from a diverse set of stakeholders. See <https://www.deq.virginia.gov/Programs/Air/GreenhouseGasPlan/AdditionalComments.aspx>.

cap-and-trade systems, while simultaneously ensuring that proceeds from the sale of allowances did not become revenue that flows into state fiscal accounts.¹³

The VA DEQ adopted an innovative approach based on a consignment method to accomplish these objectives. The approach has the consequence of added administrative complexity as compared to simpler models used in other states. In addition, the consignment model links funding used for clean energy and customer benefit programs to auction proceeds less directly than in other states. Interestingly, the consignment model may offer a real benefit in ensuring that auction proceeds that are used for these programs are more secure and less subject to being redirected to purposes in the state budget not related to CO2 reductions.

A fairly typical approach to participation by a state in the RGGI cap-and-trade program involves the auction of allowances by the state. Regulated sources must pay for the allowances they need. The auction lets market demand set the price. And proceeds generate revenues that establish the budget for clean energy and customer benefit programs. The VA DEQ determined that the basic auction mechanism is cost-effective because of its transparency and because a secondary market for allowances is not involved.¹⁴

The VA DEQ was not in a position to use a conventional auction mechanism, however, because the sale of allowances would give rise to general revenues, and one of RGGI's primary aims—apart from carbon reduction—is to generate revenue specifically for clean energy and customer benefit programs. The general revenues would become the management prerogative of the General Assembly, which has been hostile to carbon regulation and cap-and-trade regulation.

¹³ James A. Bacon, *supra*.

¹⁴ Town Hall Agency Background Document, *supra*, at p. 7.

In order to avoid this potential difficulty, the VA DEQ designed an innovative approach: it proposed a consignment auction.

The consignment auction proposed by the VA DEQ is designed to be revenue neutral. Allowances will be allocated to the polluting plants and to the Virginia Department of Mines, Minerals, and Energy (“VA DMME”). These “conditional” allowances must then be consigned to the VA DEQ for sale at auction. Upon consignment, a conditional allowance becomes an allowance for compliance purposes, and then can be sold back to regulated polluters through an auction. Because the process involves consignment, the revenues from the auction sale are distributed to the units that were allocated and then consigned their allowances, and to the DMME. Utilities impacted by the program will be expected to use these distributed auction revenues to offset customer impacts associated with the program.¹⁵

What makes the consignment auction method work to internalize some of the CO₂ costs associated with operating polluting generators is the method of allocating allowances to those generators. First, some allowances are allocated to a cost-containment reserve and an emission containment reserve, pools that Virginia will rely upon to mitigate conditions of extremely high or low allowance prices. In addition, some allowances are allocated to the VA DMME to support pollution-reduction programs. The rest of the allowances are then allocated on an “updating output” basis to regulated generators. What this means is that the total of the remaining allowances is distributed to generators based on the relative or percentage share of each of those generators to the total electrical output over the prior three years. As a result, generators with the highest output-to-emissions ratio will do better in the system than those with more emissions per

¹⁵ See, ICIS, Virginia DEQ unveils proposal to link with RGGI (November 13, 2017), <https://www.icis.com/resources/news/2017/11/13/10163075/virginia-deq-unveils-proposal-to-link-with-rggi/>.

unit of output. Cleaner facilities could earn more allowances worth of revenue from the auction than they need to spend on compliance allowances. And highly polluting facilities might need to supplement auction proceeds with internal operating dollars in order to stay in compliance. These same incentives would play out on a portfolio basis for companies that own and operate several regulated generators.

The VA DMME will be allocated 5% of the annual budget of allowances. The VA DMME oversees utility run energy efficiency programs, and when allocated, consigned, and auctioned allowances are sold, the receipts from the sale of those allowances can be used by the VA DMME to “assist the department for the abatement and control of air pollutions, specifically CO2.”¹⁶ In other RGGI states, such funds are used to support clean energy and customer benefit programs, which in turn are designed to reduce demand for emissions-producing energy and the economic burdens that RGGI compliance might otherwise impose on customers through electricity rates.

Complexity – The proposed Virginia consignment auction method therefore is more complicated than a simple allowance auction. In the early stages of system operation, this complexity is likely to reveal itself in slightly higher administrative costs than might otherwise be experienced, though these impacts should attenuate rapidly with operational experience.

The “updating output” method also raises issues of administrative complexity if Virginia and RGGI decide to broaden the scope of regulated sources of emissions. Tracking emissions

¹⁶ See Regulation for Emissions Trading Programs, 34:8 Va. Reg. Regs. 924, 9VAC5-140-6210.B.

rates is relatively easy with large generators, which also have emissions reporting requirements with the US EPA.¹⁷

Finally, the entire Virginia process carries a large potential for litigation, legislation, and regulation risk. The large electric utilities, Dominion and Appalachian Power, both commented strongly in opposition to the proposed regulation,¹⁸ and could choose to pursue litigation strategies in opposition to the regulation. While the Virginia General Assembly did not overturn Governor Northam's veto of SB 1270, future legislation may be possible. And finally, the Virginia State Corporation Commission, VA DEQ, and VA DMME all have roles in implementing the proposed regulation. This adds some degree of regulatory uncertainty to this proposed novel program.

Innovation – Despite the complexity and uncertainty associated with the VA DEQ's proposed regulation, the consignment auction with revenue neutrality does offer an intriguing innovative benefit. One of the challenges of RGGI participation using the traditional auction pathway is that the auction proceeds are credited to the statewide budget, and then must be appropriated to the clean energy and customer benefit programs for which they were intended. In tight budget times, or in the hands of a legislature less fully committed to maximizing the pollution reduction benefits of auction-generated revenues, there can be a strong temptation to re-direct those funds to other purposes.

The problem of not appropriating the full value of auction proceeds directly to clean energy and customer benefit programs has occurred for several years in New York. In 2016, RGGI-generated funds were used to pay for property tax credits in areas near closing power

¹⁷ U.S. Environmental Protection Agency, Greenhouse Gas Reporting Program, <https://www.epa.gov/ghgreporting/learn-about-greenhouse-gas-reporting-program-ghgrp>.

¹⁸ Town Hall Agency Background Document, *supra*, at pp. 24-34, 15-17.

plants, to create a clean energy workforce training program, and for clean energy tax credits.¹⁹ In 2017, a bill passed the NY Senate, but did not make it into law, that would have appropriated all RGGI funds to provide support payments for un-economic nuclear power plants. And in 2017, NY used \$37 million in RGGI funds for tax credits and property tax mitigation.²⁰ Similarly, after considering, but not undertaking such action in earlier years,²¹ the Connecticut legislature in 2017 drew from RGGI funds to balance a statewide budget deficit.²²

This is not a trend that should continue or catch on. Funding support for programs that reduce electricity use, increase renewable energy generation, and provide other environmental and customer benefits is critical to ensuring that CO2 control regimes have a “virtuous circle” of auction proceeds reducing the need for allowances.

Because it has been necessary for the VA DEQ to pursue a strategy that avoided the creation of general revenue funds through the consignment auction with revenue neutrality, Virginia’s proposed approach may provide a path to ensuring that the integrity of pollution reduction funding through allowance options is preserved.

Other Issues Raised by Virginia’s Participation in RGGI

The decision by Virginia Governors McAuliffe and Northam to follow a regulatory path toward RGGI participation comports relatively well with the model for state participation

¹⁹ Gerald B. Silverman, Martha Kessler, and Adrienne Appel, *Concerns Raised Over Use of RGGI Funds*, Bloomberg BNA (April 18, 2016), <https://www.bna.com/concerns-raised-rggi-n57982069943/>.

²⁰ Environmental Advocates of New York chronicles the RGGI funds spending patterns in NY in a report released in May 2018. See Conor Bambrick, *RGGI at a Crossroads*, Environmental Advocates of New York (May 2018), available at http://eany.org/sites/default/files/documents/rggi_at_a_crossroads.pdf.

²¹ *Id.*

²² Keith M. Phaneuf, Jacqueline Rabe Thomas, and Mark Pazniokas, After 117-day Marathon, Senate Passes Bipartisan Budget, The CT Mirror (October 26, 2017), <https://ctmirror.org/2017/10/26/its-night-when-the-budget-details-come-to-light/>. The final approved CT budget allocated RGGI and other clean energy program funding to the state general fund: \$10m from RGGI, \$14m from the CT Green Bank, and \$63.5m from the Energy Efficiency Fund.

established by RGGI. States wishing to join can make use of a model rule available from RGGI.²³ Comments submitted by the RGGI states on the proposed Virginia regulation suggest that the path to Virginia joining the program will not be technically complicated. However, Virginia's potential participation in RGGI does raise several important substantive issues that Virginia and the other RGGI states will have to address: first, there is the issue of the emissions cap established in Virginia; second, securing stable funding for clean energy and customer benefit programs; and third, preventing and mitigating emissions leakage.

1. Aggressive vs. Conservative Emissions Caps

The proposed Virginia rule reflects either a 33 million- or a 34 million-ton cap. RGGI experience thus far indicates that compliance with CO₂ emissions caps is both less expensive and takes less time than was initially feared when the program launched. Existing RGGI states and the CO₂ source operators in those states have had several years to learn this reality and master the techniques of cap-and-trade system participation. Virginia will be a new participant, and will likely be concerned about overly ambitious targets or expeditious timeframes for emissions reductions. Current RGGI states therefore urged Virginia to adopt an even lower allowance budget than proposed by the VA DEQ.²⁴ In addition, the “updating output” approach, with its basis in historical emissions, might not serve as the strongest possible driver for sector transition to cleaner sources of electricity. Indeed, because emissions levels influence allowance allocations for three subsequent years, there may even be some incentive to pay for allowances

²³ The Regional Greenhouse Gas Initiative, Model Rule and MOU Versions, <https://www.rggi.org/program-overview-and-design/design-archive/mou-model-rule>.

²⁴ RGGI States' Comments on Proposed Virginia Regulation for Emissions Trading (April 9, 2018), https://rggi.org/sites/default/files/Uploads/Participation/2018_04_09_Virginia_Comments.pdf.

rather than clean up the power mix in order to push costs into future years. The declining overall emissions cap should compensate for this incentive to some degree.

2. Stable Funding for Pollution-Reducing Clean Energy and Customer Benefit Programs

The goal of state budget revenue neutrality built into the proposed Virginia regulation creates potentially perverse outcomes regarding state budgets for clean energy and customer benefit programs. The funding at the VA DMME is based on the auction value of 5% of the allowed cap of total allowances. As a result, when the cap is reduced or the auction value of allowances decreases, the budget for pollution reduction programs is also reduced.²⁵ Of course, the demand for and value of energy efficiency and other pollution-reducing programs is not dependent on the cost of emissions allowances. In order to ensure that markets for energy efficiency and renewable energy and other programs to reduce pollution can reach self-sustaining levels, Virginia will have to look to additional sources of funding.

In the summer of 2018, Virginia enacted new legislation called the Grid Transformation & Security Act (“GTSA”),²⁶ which requires major utilities in Virginia to develop renewable energy generation and nearly \$900 million in energy efficiency programs over the next decade.²⁷ While this spending can help ensure strong funding for clean energy programs, it also maintains the market monopoly status of the largest utilities in the Commonwealth. Additional permanent

²⁵ For example, with a cap of 33 million tons, the 5% allocation to the VA DMME would represent 1.65 million allowances. If the market clears at a price of \$4 per allowance, the annual VA DMME budget would be \$6.6 million, net of any administrative costs. If the clearing price falls to \$3 per allowance, the allocable auction revenues fall to \$4.9 million.

²⁶ 2018 VA S.B. 966, <http://lis.virginia.gov/cgi-bin/legp604.exe?181+sum+SB966>.

²⁷ For a description of Dominion Virginia Electric Power Company’s first proposed plan under the GTSA, see Robert Walton, *Dominion Targets 3 GW of Wind and Solar, \$870M Efficiency Spending in Grid Mod Plan*, Utility Dive (July 27, 2018), <https://www.utilitydive.com/news/dominion-targets-3-gw-of-wind-and-solar-870m-efficiency-spending-in-grid/528726/>.

clean energy and customer benefit program funding in the VA budget from RGGI auction proceeds would bolster funds aimed at a wider range of programs and participants.

3. Emissions Leakage

The potential participation of Virginia in the RGGI program raises the important issue of emissions leakage. Emissions leakage can occur when a carbon-regulated state is located inside the same power market as an unregulated state. As carbon control regulation increases the price of electricity from polluting generation in the regulated state, there is an economic incentive to substitute local generation that reflects an internalized cost of carbon with imports from an unregulated state source. Several mechanisms exist to address this potential problem, but more work is needed within the RGGI program to put concrete measures in place to prevent Virginia's potential linkage to RGGI from creating such leakage.²⁸

The VA DEQ maintains that the proposed updating output system incentivizes in-state generation, which will serve as an effective mechanism for addressing leakage. In addition, the VA DEQ points out that the RGGI program is designed to track and avoid leakage through routine program review.²⁹ The cost containment reserve mechanism can also help in reducing the incentive to seek out-of-state dirty power imports to meet electrical demand. As Virginia links with RGGI, it will be vitally important that RGGI states and officials actively monitor markets for the occurrence of emissions leakage, and take action promptly and decisively in order to avoid compromising the emissions reductions benefits of the program.

²⁸ See Sheryl L. Musgrove *et al*, *Emissions Leakage in RGGI: An Analysis of the Current State and Recommendations for a Path Forward*, Pace Energy and Climate Center (December 5, 2017), available at <http://peccpublication.pace.edu/sites/default/files/publications/RGGI%20Leakage%20Paper%20FINAL.pdf>.

²⁹ Town Hall Agency Background Document, *supra*, at p. 25.