December 21, 2021
Andrew McKeon, Executive Director
RGGI, Inc.
90 Church Street, 4th Floor
New York, NY 10007
info@rggi.org

RE: RGGI Program Review Comment

Dear Mr. McKeon and Members of the RGGI Board:

The Regional Greenhouse Gas Initiative (RGGI) is a signature success in the fight against climate change. The program is a model of effective interstate collaboration and innovative policy design. Over the last thirteen years fossil fuel generators have seamlessly incorporated allowance costs into daily operations while preserving efficient and reliable market operations, and states have raised billions of dollars in revenues used to provide bill assistance and support myriad energy efficiency and other climate-forward programs. RGGI has undergone marked changes since the program was created yet core tenets remain intact. The Third Program Review is an opportunity to build upon past success and make important adjustments to facilitate more rapid power sector decarbonization and ensure an equitable distribution of benefits to communities across the RGGI region. There are several issues and challenges that deserve attention; we have focused on a handful that we believe are among the most pressing.

A. About Exelon

Since our inception in 2000, Exelon has maintained a strong leadership position on the need to reduce carbon and other harmful emissions in our industry and across the national economy. Our electric generation fleet produces almost two times more zero-carbon electricity than our next largest competitor, and the emissions profile of our fleet is no accident. We have made a conscious decision that the availability of affordable, carbon-free electricity is imperative to staving off the worst effects of climate change and, consequently, we generate the most carbon-free electricity, have the lowest total CO_2 emissions, and have the lowest emission rate by far among the nation's large generation companies.

Exelon's nuclear units play a significant role in the U.S. emissions-free generation fleet, producing 11.1 percent of domestic zero-carbon electricity – 1 out of every 10 emissions-free megawatts. The national electric sector emissions rate (957.2 pounds of CO_2 MWh of electricity supplied) would be five percent higher without Exelon's nuclear generation. The electric sector emissions rate would be 22 percent and 39 percent higher in PJM and New York ISO, respectively, without Exelon's nuclear generation. In 2019, our generation intensity rate was 100 pounds of CO_2 per MWh, about 90 percent lower than the national average emission rate and far below the contemporaneous glidepath intensity rate suggested by the Science Based Targets initiative as necessary for industry to progress toward limiting average global temperature increase to 2°C by 2050.

B. Environmental justice considerations should inform RGGI program design

The Environmental Protection Agency describes environmental justice as affording every person "[t]he same degree of protection from environmental and health hazards" and "equal access to the decision-making process to have a healthy environment in which to live, learn, and work."[1] In addition to the substantial climate benefits that RGGI has provided since 2009, auction proceeds have supported

[1] "Environmental Justice." EPA, *The Environmental Protection Agency*, 10 Dec. 2021, https://www.epa.gov/environmentaljustice.

investments in energy efficiency, clean and renewable energy, additional greenhouse gas abatement programs, and direct bill assistance.[2] Taken together, these initiatives have offered opportunities to advance causes of equity and environmental justice, even if front-line communities have not always been the primary focus of attention. Looking forward, more directly addressing the specific needs of these communities should be a priority.

1. The size threshold for budget sources should be reduced

Outside of New York,[3] the minimum size for covered units is 25 MW.[4] This aspect of RGGI's program design was intended in part to allow operators of smaller units to avoid the administrative burden of participating in RGGI while ensuring that a majority of emissions from electricity generating units fall under the purview of the program. However, the minimum size requirement results in an exemption for over 5.6 GW of aggregate nameplate capacity – representing nearly 1,500 individual units across the 11-state RGGI footprint.[5] Many of these units are in densely populated urban areas where they contribute to local air quality problems. Including these smaller units in RGGI would provide an incremental greenhouse gas reduction benefit while also helping to limit the emissions of harmful particulate matter, other precursor pollutants to ground-level ozone, and hazardous pollutants. Moreover, concerns regarding the administrative burden of RGGI participation have diminished as the program itself has become established. State agencies have straightforward registration processes; quarterly allowance auctions are open, competitive, and carefully monitored; and a variety of third parties are available to assist in managing compliance requirements.

2. The program review should include an examination of local CO_2 emissions caps

The overall program cap ensures that polluters cannot simply purchase their way to unlimited emissions without making real reductions. Adopting more targeted limits focused on locations with acute air pollution problems would enhance GHG reduction co-benefits. The program review is an ideal forum for participating states to assess the feasibility of creating subgroups of units subject to localized CO_2 emissions caps. Targets can be further tailored for certain periods of the year, such as during the summer months when weather conditions and increased vehicular traffic degrade local air quality.

3. The COATS platform should be expanded to provide data and analysis on the impacts of pollution on environmental justice communities

The RGGI CO_2 Allowance Tracking System (COATS) provides a wealth of data on budget sources in each state, aggregate and unit-level emissions statistics, data on allowance transactions, and other valuable information. COATS should be expanded to include visualization and analytical tools to help identify how budget sources affect front line communities and how emissions concentrations have changed over time. For units reporting under EPA-administered programs, additional emissions information and unit characteristics can be ingested and made available. Links to resources hosted elsewhere, such as EPA EJSCREEN, and information provided by state agencies should also be aggregated and placed prominently in the RGGI website.

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[2] *The Investment of RGGI Proceeds in 2019*. The Regional Greenhouse Gas Initiative, Inc. June 2021. https://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2019.pdf

[3] New York requires that any fossil-fired electricity generating unit 15 MW or greater that is sited at an existing budget source or any 15 MW unit or larger located at the same site as two or more units that are 15 MW or larger purchase and retire CO_2 emissions allowances. Other states participating in the program set the minimum size threshold at 25 MW.

[4] Nameplate capacity.

[5] S&P Capital IQ. *Power Plant Units* [Data File]. Retrieved from https://www.capitaliq.spglobal.com/.

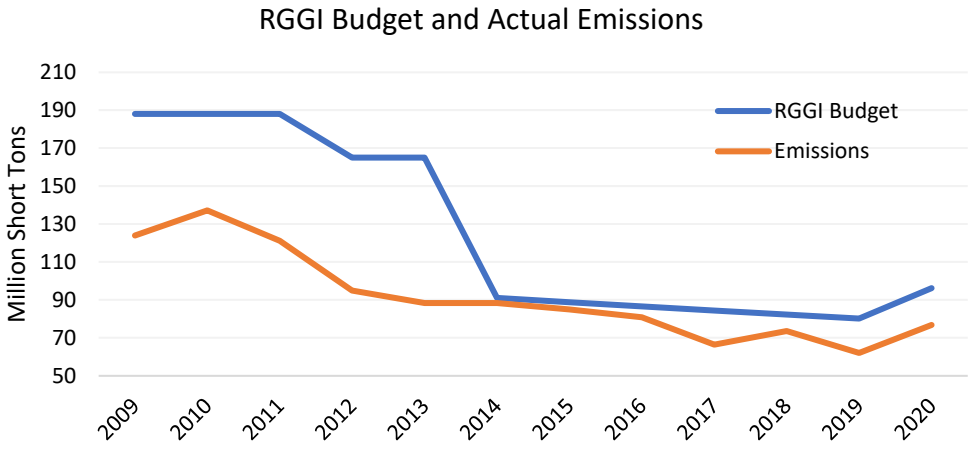
4. The program review process is critical to ensuring access and inclusivity in critical decision-making

The RGGI program review coordinators have made a demonstrable effort to ensure inclusivity and accessibility through the first two public listening sessions. One of the sessions was held in the evening, translation and transcription services were available, meeting materials were provided well in advance, meeting facilitators managed the flow of the discussion effectively, and members of the public were invited to provide comments. We encourage the participating states to organize and publicize public comment sessions as well. As others have suggested, the program review section of the RGGI website can serve as a clearinghouse for information on state-level planning and proceedings. The program review is well underway but information on state priorities is spotty. Also, information on how RGGI program participation has been or will be incorporated into state environmental greenhouse gas and clean energy goals should be made available.

During the modeling and analysis phase of the program review, detailed data on unit dispatch and CO_2 and non-CO_2 air emission should be part of the results distributed publicly. Greater geographical and temporal granularity than has been provided in the results and analysis from previous modeling exercises would enhance understanding of program impacts, as would incorporating the results into a viewing platform that allows for easier comparisons across scenarios.

C. The allowance budget is too high

RGGI has suffered from an over-allocation of allowances since auctions began. Decisions about an appropriate cap level are typically rooted to current conditions and fail to acknowledge the decline in emissions due to exogenous factors. As a result, there is long-standing bias towards setting the cap above a level that will be binding on budget source emissions. Further, the need for dramatic reductions in greenhouse emissions in all sectors of the economy is only becoming more acute. These two factors: the persistently skewed budget-setting process and the urgent need for aggressive reductions in greenhouse gas emissions, coupled with the fact that the buildup of heat-trapping gases in the atmosphere will continue to affect the earth's climate for centuries, all underscore the need target a more aggressive year-on-year decline. At a minimum, the program review should include a full accounting of current state decarbonization and clean energy policies and goals.



Source: RGGI COATS

As we live through the deleterious effects of anthropogenic climate change states and the federal government may enact ever more ambitious greenhouse gas programs, but advances in state and federal policy are not typically coordinated with the RGGI program review. The RGGI model rule also should include a mechanism that allows for amendments to key features such as the program budget and auction mechanisms in response to state and federal policy initiatives.

D. Banking adjustments should be automatic

The treatment of banked allowances held by private parties is another area of concern. The banking adjustment is a manual process that requires advance planning and careful implementation. An enhanced system could involve timely calculations of the quantity of banked allowances at the end of each calendar year and a corresponding automatic downward adjustment(s) in the allowance allocation(s) in a subsequent year or years. An alternative though less favorable option would be to limit the banking term for newly issued allowances to a set number of years.

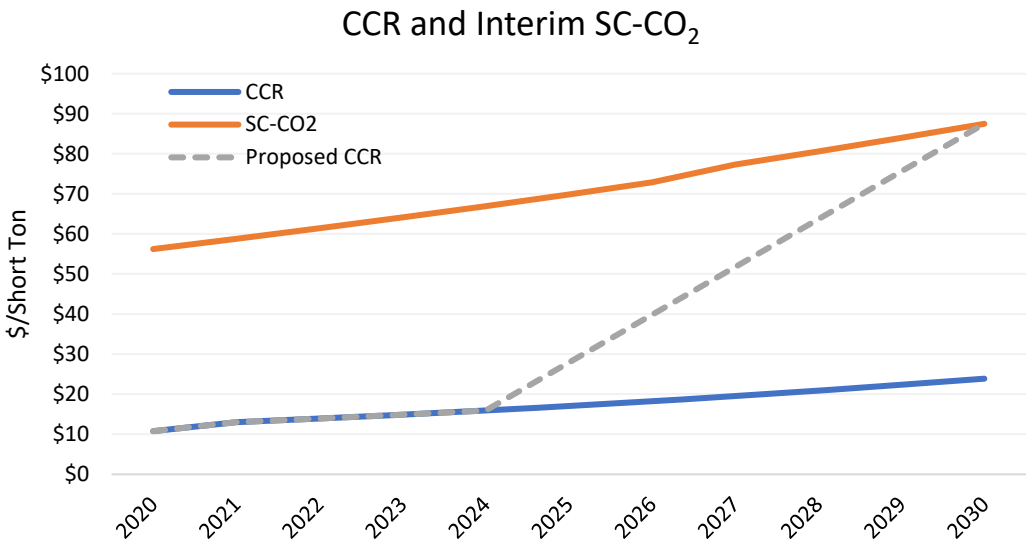
E. The Cost Containment Reserve allocation should not be incremental to the base cap

The tons allocated to the cost containment reserve (CCR) should not be incremental to the base cap. An automatic 10 percent increase in the cap for a given year triggered by bids at a quarterly auction that exceed an arbitrarily low price threshold is only acceptable if those additional allowances are borrowed from future year budgets. By definition, the total quantity of CCR tons available for 2021-2030 is equivalent to the average annual base cap over that period. As such, budget sources can, for a modest incremental fee, generate an entire extra year of emissions. The circumstances contributing to more aggressive bidding may only be transitory, but the allowances distributed to buyers (and the emissions that the allowances permit) are effectively permanent. The excess allowances contribute to the supply overhangs that have become a long-standing feature of RGGI and trigger the need for heavy-handed administrative interventions.

F. Price thresholds for the various auction mechanisms are too low

The CCR, emissions containment reserve (ECR), and minimum reserve price are all, in theory, critical components of a well-managed allowance auction process. These mechanisms dampen price volatility and provide a measure of price certainty to market participants and affected entities. The ECR is a welcome addition to the RGGI program, and though experience with the mechanism is limited, it should narrow the band of pricing during the normal course of market operations. Nevertheless, the price levels for all three mechanisms are too low.

A cap set at an appropriate level should align with a corresponding price somewhere along a region-wide GHG emissions abatement curve, but the curve is opaque to market participants. Further, the constituent parts of the curve are all subject to change, sometimes rapidly, as in the case of commodity prices, and sometimes more slowly, as in the case of installed costs for new clean energy resources. The auction price mechanisms are a reasonable accommodation to the prospect of prolonged periods of prices at or near zero, punctuated by shorter periods of potentially extreme price fluctuations, all within the context of an abatement curve lacking in clarity. But the current price thresholds do not (necessarily) correspond to any points along a regionwide abatement curve nor do they conform with generally accepted estimates of the costs of the damages caused by each ton of CO_2 emissions.



Source: RGGI COATS, Interagency Working Group on Social Cost of Greenhouse Gases, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990*

By design, the CCR, ECR, and auction minimum communicate to market participants an acceptable range of allowance prices. Without a transparent abatement curve, these price levels are the only signals that market participants can rely upon to anchor expectations. The SC-CO_2 above would be the most appropriate target for the CCR price threshold. Bringing the CCR level in line with the SC-CO_2 could be achieved incrementally over a multi-year period such that the two curves merge within a pre-defined period. To preserve benefit of limiting allowance price fluctuations to a relatively narrow range, the ECR and auction minimum should be raised commensurate with the increase in the CCR.

G. Tools are available to effectively mitigate emissions leakage

Emissions leakage is a phenomenon resulting from differences in regulatory requirements across jurisdictions that engage in trade. Leakage has beset RGGI from the beginning, but a few mitigating trends have recently emerged. Consumers in the RGGI states are using energy more efficiently, energy produced from clean resources such as nuclear and renewables is slowing gaining market share, and coal generation in most of the RGGI states is in rapid and terminal decline. Most importantly, the geographical scope of RGGI is growing, with new Jersey rejoining 2020, Virginia joining in 2021, Pennsylvania planning to join as soon as sometime in 2022, and North Carolina exploring participation as well. Still, because fossil generators located outside of RGGI can dispatch based on economics that exclude the cost of CO_2 emissions, residents and business in the RGGI states are unable consume an energy mix that reflects their policy preferences. Correcting for emissions leakage is fundamental to ensuring the overall success of RGGI.

Both PJM and NYISO have examined the use of an approach known as border adjustments to account for the imputed emissions of energy moved between jurisdictions with a CO_2 policy and those without. In single-state control areas such as the NYISO, implementing border adjustments is a straightforward exercise. In the PJM market, where only a portion of the states within the RTO footprint currently participate in RGGI, implementation of border adjustments would need to be coordinated with the grid operator. Analysis that Exelon presented in the PJM Carbon Price Senior Task Force (CPSTF) stakeholder forum demonstrated that properly structured border adjustments can meaningfully reduce

emissions leakage.[6] However, PJM has since discontinued the formal work of the CPSTF and is not likely to move forward with border adjustments without a clear request from RGGI-participating states to do so. We strongly encourage the RGGI program review to include discussion of how participating states should engage with their grid operators on this issue.

We look forward to working with state officials and the stakeholder community to ensure the success of the program review.

Sincerely,

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[6] Exelon. *Exelon Alternative Border Adjustment Methodology*. PJM Carbon Price Senior Task Force. 2021, https://www.pjm.com/-/media/committees-groups/task-forces/cpstf/2021/20210527/20210527-item-02-exelon-alternative-border-adjustment-methodology.ashx