



November 29, 2021

Submitted via email to info@rggi.org

Re: Comments on RGGI Program Review Topics for Public Consideration

Environmental Defense Fund (EDF) strongly supports the continued leadership of the RGGI states in placing binding limits on carbon dioxide (CO₂) emissions from electricity generation. EDF is an international environmental advocacy organization with 2.5 million members nationwide, including nearly 750,000 members in the 11 RGGI member states, and we are dedicated to finding innovative approaches to solving our most difficult environmental challenges. EDF has extensive experience with carbon market design: we appreciate the challenges and benefits of a regional framework for reducing carbon pollution through a market-based program, and we respectfully offer the following comments and recommendations for consideration on RGGI Program Review priorities.

Throughout the review process, EDF will be focused on the following key priorities to improve the RGGI program:

- 1) An updated cap in line with the ambition necessary from the power sector over the upcoming decade in order to meet the United States' economy-wide greenhouse gas (GHG) reduction commitments
- 2) An adjustment to the Cost Containment Reserve (CCR) mechanism to ensure carbon dioxide emissions do not exceed the established budget
- 3) Measures that ensure equitable program benefits and protections for disproportionately impacted communities; and
- 4) Policies that reduce emissions leakage and maximize the environmental integrity of the program

RGGI is a growing, internationally significant carbon market whose states make up more than one sixth of the total U.S. population. The diversity of states that have joined or are in the process of joining underscore the importance of the program serving as a leader in demonstrating cost-effective, near-term carbon reductions while prioritizing equity.



Strengthen the Emissions Cap

RGGI states should update the emission cap to achieve at least an 80% reduction in carbon dioxide emissions from 2005 levels by 2030, in line with what is required from the power sector to facilitate the emission reductions needed across the economy to avert the worst impacts of climate change.

Reducing emissions from the electricity sector will play a critical role in the effort to achieve GHG emission targets across the economy – particularly in the upcoming decade. Not only is the power sector the second largest source of GHG emissions in the country,¹ but the sector presents many of our most cost-effective and readily accessible reduction opportunities. Moreover, low-carbon electricity will accelerate emission reductions across other sectors like transportation, buildings, and industry by allowing these sectors to increasingly rely on clean electricity instead of burning fossil fuels.

The latest IPCC report² makes it clear that we must quickly ramp up efforts to cut both CO₂ and non-CO₂ GHG emissions to avoid the worst impacts of climate change. The IPCC's previously modeled emission pathways limiting warming to 1.5°C show CO₂ emission reductions of 50% below 2010 levels by 2030 on average, with emissions continuing to decline dramatically and reaching net zero around 2050.³ The majority of warming today is caused by the buildup of CO₂ in the atmosphere over time, and much of the carbon pollution we are emitting today will linger in the atmosphere for hundreds of years, so fast and sustained reductions are urgently needed.

Consistent with emission reduction pathways likely needed to limit warming to 1.5°C,⁴ President Biden announced a Nationally Determined Contribution under the Paris Agreement to reduce U.S. GHG emissions by 50-52% below 2005 levels by 2030 – a target aligned with the science and necessary to secure a safer climate. **Analyses have shown that reducing emissions from electricity generation by at**

¹ U.S. EPA. 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks. Available at: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>.

² IPCC. 2021. Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press. Available at: https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM_final.pdf.

³ See Environmental Defense Fund. 2021. Recapturing U.S. Leadership on Climate: Setting an Ambitious and Credible Nationally Determined Contribution. Available at: <https://www.edf.org/sites/default/files/documents/Recapturing%20U.S.%20Leadership%20on%20Climate.pdf>.

⁴ See Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C. Available at: <https://www.ipcc.ch/sr15/chapter/spm/>. Half of pathways consistent with limiting warming to 1.5°C show a reduction of 40 to 50% below 2010 levels by 2030 for the sum of all greenhouse gas emissions, using the standard carbon dioxide-equivalent metric with a 100-year GWP.



least 80% by 2030 is critical to achieving the Biden administration’s commitment to a 50-52% reduction in emissions across the economy by 2030.⁵

Reducing emissions from electricity generation by 80% from 2005 levels by 2030 is both technically and economically feasible across the United States, according to a study released in 2020 by researchers at UC Berkeley and several independent NGOs.⁶ The same study found that we can achieve these reductions without increasing customer costs associated with generating and delivering electricity and without compromising reliability.

In a letter⁷ to the Biden administration, 13 power providers from across the country, including multiple energy companies operating in the RGGI market including Calpine, National Grid, New York Power Authority, and Exelon, outlined how ensuring emissions decline 80% from 2005 by 2030 is not only necessary, but feasible. A dozen⁸ individual power companies have committed to slash pollution by 80% by 2030 themselves. These include:

- National Grid, which operates in several RGGI states, has committed to reducing emissions by 80% from a 1990 baseline by 2030⁹
- Eversource Energy, which operates in Connecticut, New Hampshire, and Massachusetts, has committed to carbon neutrality by 2030¹⁰
- Green Mountain Power, which operates in Vermont, has committed to achieving 100% carbon free energy by 2025 and 100% renewable energy by 2030¹¹

⁵ Multiple independent analyses conducted before President Biden’s announcement of the U.S. emissions target for 2030 scoped a path to a bold U.S. Nationally Determined Contribution (NDC), from a range of groups including Environmental Defense Fund, Natural Resources Defense Council, America is All In, the University of Maryland and others. They all found that cutting power sector emissions around 80% below 2005 levels by 2030 is essential in reaching the overall target. See <http://blogs.edf.org/climate411/2021/06/10/the-key-to-reaching-bidens-new-climate-goal-an-enforceable-clean-electricity-standard-that-slashes-pollution/>.

⁶ Goldman School of Public Policy. 2021. Powering America’s Clean Economy: A Supplemental Analysis to the 2035 Report. Available at: <https://energyinnovation.org/wp-content/uploads/2021/04/2030-Report-FINAL.pdf>.

⁷ See <https://int.nyt.com/data/documenttools/power-sector-letter/3e5ca64b01b81888/full.pdf>.

⁸ See <https://www.edf.org/sites/default/files/documents/Power%20Companies%2080%20by%202030.pdf>.

⁹ National Grid has committed to reduce Scope 1 and 2 GHG emissions by 80% by 2030 relative to a 1990 baseline. See <https://www.nationalgridus.com/media/pdfs/our-company/usnationalgridresponsiblebusinesscharter2020us.pdf>.

¹⁰ See https://www.eversource.com/content/docs/default-source/investors/env-commitment.pdf?sfvrsn=594bf862_4.

¹¹ See <https://greenmountainpower.com/gmp-launches-vision-to-have-100-renewable-energy-by-2030/>.



Several states within RGGI have set their own targets for economy-wide GHG reductions – including Virginia’s commitment to net zero emissions by 2045,¹² New York’s commitment to a 40% reduction in GHG emissions below 1990 levels by 2030 and net zero by 2050 through the Climate Leadership and Community Protection Act (CLCPA),¹³ and Massachusetts’s commitment to reducing emissions by 50% from 1990 levels by 2030 and 75% by 2040.¹⁴

RGGI states also have their own power sector requirements, including Maine’s requirement that 80% of retail electricity sales come from renewable energy by 2030,¹⁵ the CLCPA’s requirement of a zero-emissions electric grid by 2040 for New York with 70% renewable energy by 2030, and Vermont’s Renewable Energy Standard requiring 75% renewable electricity by 2032.¹⁶

States outside of RGGI, like Colorado¹⁷ and Oregon,¹⁸ have already adopted policies to reduce emissions from the electricity sector 80% below 2005 levels by 2030.

The RGGI states should evaluate cap levels that are, at a minimum, consistent with these state goals to maintain their position as national leaders in decarbonizing electricity generation.

An EDF analysis¹⁹ released last year found that states with gubernatorial and/or statutory commitments to reduce greenhouse gas emissions, which includes all RGGI states, were collectively not on track to meet their targets and need to secure additional reductions through more ambitious policies. A stronger emissions cap under RGGI can be a powerful tool to help states achieve their targets and reduce emissions in line pathways likely to limit warming to 1.5°C.

¹² See <https://lis.virginia.gov/cgi-bin/legp604.exe?201+ful+CHAP1191>.

¹³ See <https://legislation.nysenate.gov/pdf/bills/2019/S6599>.

¹⁴ See <https://malegislature.gov/bills/192/S9>.

¹⁵ See <https://legislature.maine.gov/bills/getPDF.asp?paper=SP0550&item=1&snum=129>.

¹⁶ See <https://legislature.vermont.gov/statutes/fullchapter/30/089>.

¹⁷ HB 21-1266 requires electric utilities in Colorado to submit plans for reducing GHG emissions by 80% from 2005 levels by 2030. If a utility does not file a plan by the deadline, the Air Quality Control Commission is directed to issue a rule requiring the utility to meet the reduction requirement. See https://leg.colorado.gov/sites/default/files/2021a_1266_signed.pdf.

¹⁸ HB 2021 requires retail electricity providers to reduce GHG emissions from electricity sales by 80% by 2030, 90% by 2035, and 100% by 2040. See <https://olis.oregonlegislature.gov/liz/2021R1/Downloads/MeasureDocument/HB2021/Enrolled>.

¹⁹ Environmental Defense Fund. 2020. Turning Climate Commitments into Results: Progress on State-led Climate Action. Available at: https://www.edf.org/sites/default/files/documents/FINAL_State%20Emission%20Gap%20Analysis.pdf.



Climate change is already devastating local communities and economies, and without strong action to reduce emissions, those costs will continue to rise.²⁰ By pairing an enforceable limit with a price on pollution, RGGI can deliver tremendous environmental benefits. **By accelerating near-term reductions and providing a clear price signal that incentivizes clean investments, RGGI can enable greater ambition – but only if the cap is sufficiently strong to secure the level of reductions needed.**

We also encourage the states to evaluate cap levels beyond 2030 that put the states on track to achieve fully decarbonized electricity generation as quickly as possible. As noted above, many individual states within RGGI have already established GHG reduction targets beyond 2030, and RGGI should ensure its cap is consistent with these targets. It is important for states to begin considering emission limits after 2030 now so that resource planning decisions being made today are aligned with longer term climate goals, in particular by prioritizing investments to enable a resilient, carbon-free grid.

Adjust the Emissions Budget to Account for Allowances from the Cost Containment Reserve

Effective deployment of stability mechanisms such as the Cost Containment Reserve help maintain an effective program, but these mechanisms should be crafted in a way that does not undermine the efficacy of the program in achieving stated emission reduction targets. The states should consider adjusting the allowance budget to account for allowances added from triggering the CCR. While the maintenance of a CCR can mitigate significant fluctuations in allowance prices, this price containment mechanism must not compromise the ability of RGGI to reduce emissions in line with the established CO₂ emissions budget. **To ensure necessary reductions, states should consider deducting at least as many allowances as are released under the CCR from future years' emissions caps like the approach California has adopted for the cost containment mechanism under that state's cap-and-invest program.**²¹ Deducting CCR allowances from future cap levels would ease unanticipated market constraints while ensuring achievement of the RGGI states' commitment to long-term pollution reduction goals. To ease fluctuations in cap levels resulting from these deductions in any given year, the states should consider spreading out the deductions over multiple years.

Additionally, the minimum reserve price and CCR trigger prices should be set high enough to ensure allowance prices provide strong market signals to reduce emissions and invest in clean electricity. We recommend that the RGGI states explore the benefits of higher price triggers as part of the review process and use the results of that analysis to determine appropriate price levels.

²⁰ See, for example, https://www.edf.org/sites/default/files/content/NC_Costs_of_Inaction.pdf.

²¹ See Environmental Defense Fund. 2014. Carbon Market California: A Comprehensive Analysis of the Golden State's Cap-and-Trade Program, <http://www.edf.org/sites/default/files/content/carbon-market-california-year-two.pdf>.



Ensure Equitable Program Benefits

EDF strongly encourages RGGI states to convene, listen to, and incorporate feedback from community-based and environmental justice organizations, labor, and other frontline communities to develop measures that ensure the benefits of the program are distributed equitably. EDF is not offering specific policy or programmatic recommendations at this time because we are not an environmental justice or frontline organization.

Environmental justice and equity-focused organizations as well as frontline communities most affected by pollution from electricity generation must be meaningfully involved in the Program Review, have access to the necessary resources to participate, and have their input substantively shape program design and implementation.

EDF acknowledges that many environmental justice-focused groups consider market-based policies like RGGI to be a “false solution.”²² While EDF continues to believe that market-based policies like RGGI play a critical role in the climate policy portfolio, we are simultaneously seeking to respect, understand, and cede space for the deep-seated concerns of many advocates and communities.

Equity must be central in the *process* of the Program Review as well as the *outcomes* of that review. Environmental justice advocates should be consulted, and their recommendations seriously considered at every step of the process; the final product of the Program Review must elevate outcomes that provide direct benefits to and not add burden to disproportionately impacted communities.

Additionally, in EDF’s experience there is a range of diverse perspectives on market-based policies among environmental justice and equity advocates. It will be critical to create a space that can represent this diversity and bring organizations to the table for constructive and forward-looking conversation, including by addressing substantive concerns related to RGGI specifically and market-based solutions generally. These stakeholders should be assured that their participation is intended to improve equity outcomes within RGGI but in no way undermines their ability to continue opposing market-based policies generally, consistent with their values.

Other jurisdictions within the U.S. have wrestled with incorporating equity principles into carbon pricing and a number of policy solutions have been adopted or proposed. RGGI should consider lessons from other jurisdictions and EDF would welcome the opportunity to draw on our experience across the country to offer topics for discussion regarding how to center equity in RGGI’s Program Review process.

²² NAACP. 2021. Nuts, Bolts, and Pitfalls of Carbon Pricing: An Equity-Based Primer on Paying to Pollute. Available at: <https://naacp.org/resources/nuts-bolts-and-pitfalls-carbon-pricing-equity-based-primer-paying-pollute>.



It is broadly accepted and well documented that pollution from power generation disproportionately impacts communities with lower incomes and communities of color.^{23,24} The NAACP found that these communities experience the highest mortality burden from coal plant pollution and that a small number of coal plants are responsible for a large portion of the health impacts in these communities.²⁵

RGGI presents an opportunity, if designed with equity as a priority, to simultaneously reduce pollution and create clean energy jobs in the communities that need it most. Analysis has shown that reduced air pollution resulting from the RGGI program has improved the health of residents in the Northeast who are now experiencing fewer premature deaths, heart attacks, and respiratory illnesses.²⁶ By including critical equity design and investment provisions in the RGGI model rule, the states can ensure these benefits flow to those communities who have suffered the most from polluted air. And by including equity provisions in states' RGGI investment guidelines, the states can ensure those communities most in need of new services and quality jobs stand to benefit from revenues generated by the program.

The states must incorporate feedback from environmental justice and equity-focused groups and frontline communities into the RGGI program design and build safeguards into the program that ensure air quality improvements in overburdened communities. We also strongly encourage the states to direct value from allowance sales to benefit these communities. It is imperative that any climate investment program reserve a significant percentage of investments for disproportionately impacted communities.^{27 28} Those communities should play a central role in directing such investments, which could for example include expanding air quality monitoring focused on areas with the greatest risks from air pollution, programs that advance just transition and workforce development, increased clean transportation options, and many others.

²³ See <https://www.lung.org/clean-air/outdoors/who-is-at-risk/disparities>.

²⁴ See Bell, M. L., & Ebisu, K. 2012. Environmental inequality in exposures to airborne particulate matter components in the United States. *Environmental health perspectives*. Available online at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3546368/>.

²⁵ See NAACP. *Coal Blooded: Putting Profits Before People*. Available at <https://naacp.org/resources/coal-blooded-putting-profits-people>.

²⁶ Abt Associates. 2017. *Analysis of the Public Health Impacts of the Regional Greenhouse Gas Initiative*. <https://www.abtassociates.com/insights/publications/report/analysis-of-the-public-health-impacts-of-the-regional-greenhouse-gas>.

²⁷ Other terms such as “overburdened community” may be used and different policies define environmental justice communities in slightly different ways. In general, this refers to communities that have both socio-economic vulnerability and environmental pollution burdens and these communities tend to be predominantly BIPOC or low-income.

²⁸ The Biden administration recently announced a commitment to deliver 40% of overall benefits from Federal investments in climate and clean energy to disadvantaged communities. See <https://www.whitehouse.gov/omb/briefing-room/2021/07/20/the-path-to-achieving-justice40/>.



Finally, states must seek input from environmental justice and community groups on what analysis is necessary to advance local priorities, and the states should commit to using that input to inform a comprehensive environmental justice analysis of the program.

Adopt Measures to Reduce Emissions Leakage

Emissions leakage has the potential to undermine maximum effectiveness of state and regional policies to reduce carbon pollution. A limit on carbon that applies to a state or group of states presents a concern that emissions will “leak” to emitting sources that are not covered under the program, especially in states served by a multi-state wholesale electricity market.²⁹ For instance, analysis by EDF and M.J. Bradley & Associates³⁰ shows that imports from neighboring states not currently covered under RGGI contributed an additional 15 million tons of CO₂ relative to what they would have emitted were those electricity imports covered under the cap. This analysis shows that **the program delivers significant CO₂ reductions even under the status quo without leakage mitigation, but the program would be even more effective in achieving environmental outcomes with policies in place to reduce emissions leakage.**

Several policy options are available to mitigate the impacts of emissions leakage and enhance the environmental benefits of RGGI, while also increasing investment in in-state clean energy generation and saving consumers on their energy bills. Rapidly scaling up in-state deployment of clean energy resources and energy efficiency measures in the region can help reduce leakage by decreasing reliance on imports. Continued collaboration between the RGGI states and prospective state partners to expand the program’s footprint and bring in new participants can also reduce leakage by ensuring RGGI’s carbon price is applied to additional electricity sources.

We also encourage the states to **develop Model Rule language that would cover emissions associated with electricity from non-RGGI states to serve load in RGGI states under the overall emissions cap. This policy change could drive 75 percent more pollution reduction in the Eastern Interconnect in 2030**

²⁹ See Fell, H. and Maniloff, P. 2017. Leakage in regional environmental policy: The case of the regional greenhouse gas initiative. *Journal of Environmental Economics and Management*. Available online at: <https://www.sciencedirect.com/science/article/pii/S0095069616302984>.

³⁰ The analysis was based on policy specifications, inputs, and assumptions developed by M.J. Bradley & Associates at the direction and on behalf of EDF, with feedback from participating stakeholder companies. See MJB&A. 2019. *Electric Sector Modeling – Summary of Results*. Available online at: <https://www.pjm.com/-/media/committees-groups/task-forces/cpstf/20191024/20191024-item-06-carbon-pricing-modeling.ashx>.



compared to a policy with no leakage mitigation measures.³¹ By putting emissions associated with imports under the cap, RGGI states can ensure that any emissions associated with generation dispatched to serve electric load within their borders will be covered, eliminating the economic incentive for generating units from non-RGGI states serve their load and in turn undermining climate and clean energy commitments and targets. In addition, accounting for carbon emissions associated with imported electricity under the cap could help drive new in-state clean energy investments by reducing the imbalance in operating costs associated with serving their load via facilities not regulated by RGGI.

One key way to address the issue of emissions leakage is for states that participate in regional electricity markets, like PJM, to work with these organizations to acquire the information needed to put emissions associated with imports under the cap. In 2019, PJM convened a Carbon Pricing Senior Task Force that evaluated options to mitigate leakage occurring under RGGI. Among the options evaluated was an approach that would adjust state RGGI allowance caps based on emissions from imports.³² **We encourage the states to work together to advocate collectively for PJM to provide the data they would need to cover emissions from imports under the emissions cap.**

We look forward to working with the states to improve the RGGI program and maximize its benefits through the Program Review process, and we appreciate your consideration of these comments.

Sincerely,

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³¹ MJB&A. 2019. Electric Sector Modeling – Summary of Results. Available online at: <https://www.pjm.com/-/media/committees-groups/task-forces/cpstf/20191024/20191024-item-06-carbon-pricing-modeling.ashx>.

³² See <https://www.pjm.com/-/media/committees-groups/committees/mrc/2021/20211117/20211117-item-01a-carbon-pricing-senior-task-force-presentation.ashx>.