

November 3, 2023

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Submitted via email to info@rggi.org

Re: RGGI Program Review Comment

Environmental Defense Fund (EDF) appreciates the leadership of RGGI Inc. as it works to complete the Third RGGI Program Review. EDF strongly supports the continued leadership of the RGGI states in placing binding limits on carbon dioxide (CO₂) emissions from electricity generation and is grateful for the opportunity to provide comments on RGGI, Inc.'s proposed modeling¹ framework and assumptions. EDF is an international environmental advocacy organization with 2.5 million members nationwide, including nearly 750,000 members in the 11 RGGI member states, dedicated to finding innovative approaches to solving our most difficult environmental challenges. EDF has extensive experience with carbon market design: we respectfully offer the following comments and recommendations for consideration on the latest ICF 2023 draft program review case results. While we understand the limitations of any modeling effort, **there are valuable insights from both RGGI Inc.'s modeling approach and EDF's own work that support high ambition for RGGI's budget trajectory and the need to think creatively to overcome some of these challenges.**

In addition to prior comments on equity and Environmental Justice throughout the program review, EDF also notes that while we recognize and support the need for expedience in the RGGI program review to enable swift implementation and secure greater climate ambition at a crucial moment, we respectfully urge that expedience not come at the expense of fulsome stakeholder engagement. Ensuring ample time for comment periods, greater detail on the anticipated timeline for key milestones (e.g., development of a draft model rule, draft budget release) as much in advance as feasible would help better facilitate greater participation in the review process and ensure a more comprehensive and thoughtful evaluation of the program. **We believe that this thoughtful engagement is possible while facilitating conclusion of the program review with the requisite urgency.**

EDF's core recommendations are as follows:

1. RGGI's emissions cap should align with national and state climate commitments
2. RGGI Inc. should explicitly adopt at least an 80x30 interim target as part of setting an updated cap, particularly to help ensure the states deliver the near-term pollution reductions necessary to minimize cumulative emissions reductions from the power sector consistent with the budget trajectory for a 1.5-degree C pathway
3. RGGI Inc. should incorporate language providing a pathway to cover emissions associated with imported power into the model rule.

¹ RGGI, Inc. Regional Greenhouse Gas Initiative Program Review: Public Meeting. 26 Sept. 2023. https://www.rggi.org/sites/default/files/Uploads/Program-Review/2023-09-26/RGGI_26_Sept_2023_Meeting_Presentation.pdf

Detailed comments discussing these and other issues below.

- **RGGI's Emissions Cap Should Align with National and State Climate Commitments**

National goals necessitate at least an 80% carbon emissions cut (below 2005 emissions levels) by 2030 in the power sector

President Biden pledged² to take comprehensive action across his administration to address the climate crisis, setting an ambitious and credible target to cut U.S. greenhouse gas emissions 50-52% below 2005 levels by 2030. While there are multiple pathways to meeting the target, a wide range of analyses agree that the power sector is a critical linchpin to success. **In order to achieve our goals, the U.S. needs to cut emissions from electricity generation by at least 80% below 2005 levels by 2030.**

Multiple independent analyses scoped out the path to a bold U.S. Nationally Determined Contribution (NDC), including Environmental Defense Fund³, Natural Resources Defense Council⁴, America is All In⁵, the University of Maryland⁶, and others⁷. Despite using different policy assumptions, they consistently underscore that cutting power sector emissions around 80% below 2005 levels by 2030 is an essential step toward reaching the overall target. In fact, reductions in power plant pollution will have to deliver the *majority* of the reductions necessary to achieve the NDC, as shown below in figure 1.

² Environmental Defense Fund. "US Announces Bold New Emissions Target to Push Global Ambition, Grow Stronger Clean Economy.", 22 Apr. 2021, <https://www.edf.org/media/us-announces-bold-new-emissions-target-push-global-ambition-grow-stronger-clean-economy>

³ Environmental Defense Fund. "Recapturing U.S. Climate Leadership with a Bold New Commitment to the Paris Agreement.", 3 Mar. 2021, www.edf.org/climate/recapturing-us-climate-leadership.

⁴ National Resource Defense Council. "The Biden Administration Must Swiftly Commit to Cutting Climate Pollution at Least 50 Percent by 2030.", 30 Mar. 2021, www.nrdc.org/resources/biden-administration-must-swiftly-commit-cutting-climate-pollution-least-50-percent-2030.

⁵ AMERICA IS ALL IN. "An All-in Pathway to 2030: The beyond 50 Scenario.", 8 Nov. 2022, www.americaisallin.com/Beyond50.

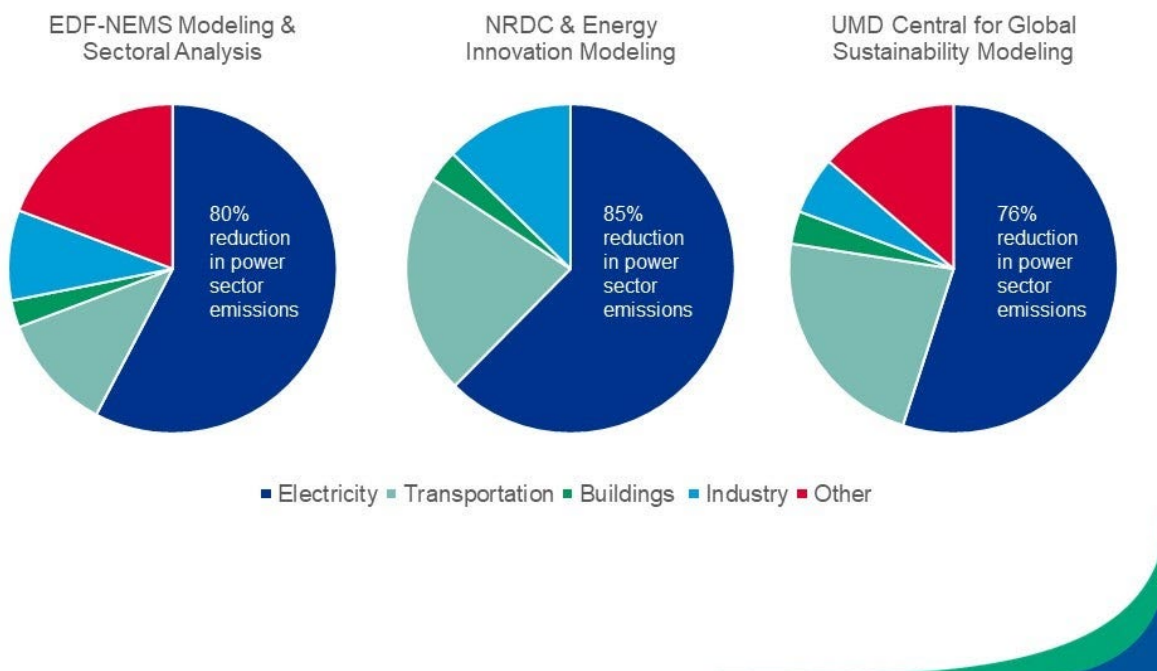
⁶ University of Maryland School of Public Policy, Center for Global Sustainability. "Working Paper: Charting an Ambitious U.S. NDC of 51% Reductions by 2030." Center for Global Sustainability, 1 Mar. 2021, www.cgs.umd.edu/research-impact/publications/working-paper-charting-ambitious-us-ndc-51-reductions-2030.

⁷ Climate Nexus. "US Commitment under Paris Agreement: The NDC Explained.", 8 Apr. 2021, www.climatenexus.org/international/international-cooperation/ndc-nationally-determined-contribution.

Figure 1

Where do reductions need to happen?

Reductions in emissions from 2005 to 2030, by sector, in order to achieve a 50% reduction in economy-wide emissions



This level of emission reduction ambition is not only key for cutting emissions from the power sector to achieve President Biden’s promise⁸ of 100% clean electricity by 2035, but it is *the* essential key that unlocks reductions in other sectors like transportation, buildings, and industry by allowing these sectors to increasingly rely on clean electricity instead of burning fossil fuels. Additionally, this level of ambition is better aligned with many RGGI states’ own individual targets. An ambitious RGGI program will help provide a critical emissions backstop for states as they seek to deliver on power sector and economy-wide emission reduction commitments and implement critical legislative and regulatory policies. In addition, added revenues from RGGI will be used to support complementary state climate initiatives. Accelerated and deep near-term reductions in carbon dioxide are also essential in delivering the cumulative emission reductions we need to align with a 1.5-degree Celsius pathway. In other words, emissions reduced today are more valuable than emissions reduced tomorrow.

⁸ The White House. “FACT SHEET: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies.” 22 Apr. 2021, www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/.

Power companies and states are working towards 80% by 2030 targets

Power companies across the country have made commitments that support an ambitious near-term target for RGGI. Over a dozen power companies have made specific commitments to achieve an 80% reduction in carbon emissions from their operations by 2030 across the nation — from companies serving Washington state to Indiana to West Virginia to Maine⁹. This group includes Xcel Energy, which is slashing emissions across its eight-state midcontinent service territory, including in Colorado where the company is pushing even further and recently filed a plan to achieve an 85% reduction in carbon emissions below 2005 levels by 2030¹⁰. American Electric Power, serving five million customers including throughout Appalachia, has made an 80% reduction commitment as well¹¹.

States are also recognizing the urgency of action. The Oregon legislature passed a clean electricity standard (CES) in 2021 that guarantees an 80% reduction in power sector emissions by 2030¹². Colorado adopted legislation in 2019 that requires an 80% reduction in emissions by 2030 for its largest utility¹³ and expanded that requirement statewide in 2021.

Federal investments make 80x30 even cheaper; a strong RGGI cap will help maximize potential to unlock federal tax incentives

Passage of measures like the Inflation Reduction Act (IRA) and Bipartisan Infrastructure Law (BIL) make it more cost-effective than ever to maximize near-term emission reductions from the power sector. The IRA provides an estimated \$369 billion in clean energy tax credits and other programs to address the climate crisis. The BIL makes additional investments in electric grid infrastructure, energy efficiency, clean energy demonstration hubs, and energy resilience measures³. Around 40% of the total projected IRA funding comes specifically from tax credits for clean electricity. Notably, as discussed below, those clean electricity tax credits drive the majority of the *economy-wide* emissions reductions projected to result from the IRA; accelerated clean electricity deployment driven by the lower technology costs for zero-emission electricity generation accounts for 75% of the projected economy-wide GHG abatement from the IRA in 2030¹⁴.

These investments will also make achieving 80% by 2030 even more cost-effective. The National Renewable Energy Laboratory (NREL) conducted a study using the Regional Energy Deployment System power system planning model to estimate the potential impacts of key provisions of IRA and BIL on power plants through 2030. NREL's analysis evaluated how BIL and IRA impact "investment in and operation of utility-scale generation, storage, and

⁹ Reuters. "Power Companies Urge Biden to Implement Policies to Cut Emissions 80% by 2030." Reuters, 17 Apr. 2021, www.reuters.com/business/energy/power-companies-urge-biden-implement-policies-cut-emissions-80-by-2030-2021-04-17/.

¹⁰ Xcel Energy. "Xcel Energy." co.my.xcelenergy.com/s/our-commitment/carbon-reduction-plan.

¹¹ Cision PR Newswire. "AEP Releases Climate Scenario Analysis." 22 Mar. 2021, www.prnewswire.com/news-releases/aep-releases-climate-scenario-analysis-301252833.html#:~:text=In%20February%2C%20AEP%20announced%20a.

¹² Oregon Department of Environmental Quality. "Department of Environmental Quality: Oregon Clean Energy Targets: Action on Climate Change: State of Oregon." 2021, www.oregon.gov/deq/ghgp/Pages/Clean-Energy-Targets.aspx.

¹³ Colorado General Assembly. "Climate Action Plan to Reduce Pollution." Colorado General Assembly, 2019, www.leg.colorado.gov/bills/hb19-1261.

¹⁴ Rhodium Group. "A Turning Point for US Climate Progress: Assessing the Climate and Clean Energy Provisions in the Inflation Reduction Act." Rhodium Group, Aug. 2022, www.rhg.com/research/climate-clean-energy-inflation-reduction-act/.

transmission, and, in turn, how those changes impact power system costs, emissions, and climate and health damages.” Their modeling was set up to minimize power system costs, but was not constrained with any new emissions caps. This analysis¹⁵ found:

- “Annual power sector CO₂ emissions could decline to 72%–91% below the 2005 level across the range of policy scenarios by 2030. This is equivalent to annual avoided emissions of 600 Mt CO₂ to 900 Mt CO₂ by 2030 relative to the No New Policy case, with cumulative (2023–2030) avoided emissions ranging from 2,700 MtCO₂ to 3,900 MtCO₂. These reductions in emissions, if achieved, are estimated to result in avoided climate damages reaching \$160 billion–\$230 billion per year by 2030. Furthermore, avoided nitrogen oxide (NO_x) and sulfur dioxide (SO₂) emissions—precursors to particulate matter formation—are estimated to reduce human health damages as much as \$20 billion–\$46 billion per year by 2030.”
- “IRA and BIL are estimated to lead to a net decrease in total and average annual bulk power system costs (inclusive of tax credit value). IRA and BIL spur substantial increases in bulk power system investment, but those costs are more than offset by the combination of decreased fuel expenditures and the increased scope and value of tax credits and other programs. Across all policy cases evaluated, clean energy, storage, and transmission investment contribute to an increase in cumulative capital and non-fuel operating expenditures, but the combined value of tax credits and fuel savings lead to net decreases in power system costs of \$8 billion to \$25 billion annually by 2030 and \$50 billion to \$115 billion cumulatively, from 2023 to 2030. These cost reductions translate to approximately a \$3 per MWh to \$6 per MWh (5% to 13%) reduction in average annual bulk system costs by 2030.”

Several groups have also modeled the impact of the IRA and BIL, consistently showing that these two laws have the potential to significantly reduce economy-wide emissions. However, as shown in Figure 2, there is a significant range in projected emission reductions both within and across different modeling efforts.¹⁶ This variation between models is driven by several factors. While all are economically optimizing, the scope and detail of the models vary. Some models, for instance, will account for hurdles related to transmission, or model supply chain and infrastructure constraints. In addition, as guidance on many of the IRA incentives is still being developed, different modeling groups have made varying assumptions as to how particular provisions of the IRA will work in practice. Finally, there is also variation in some of the core assumptions that are inputs to these models. Different groups draw on different sources for

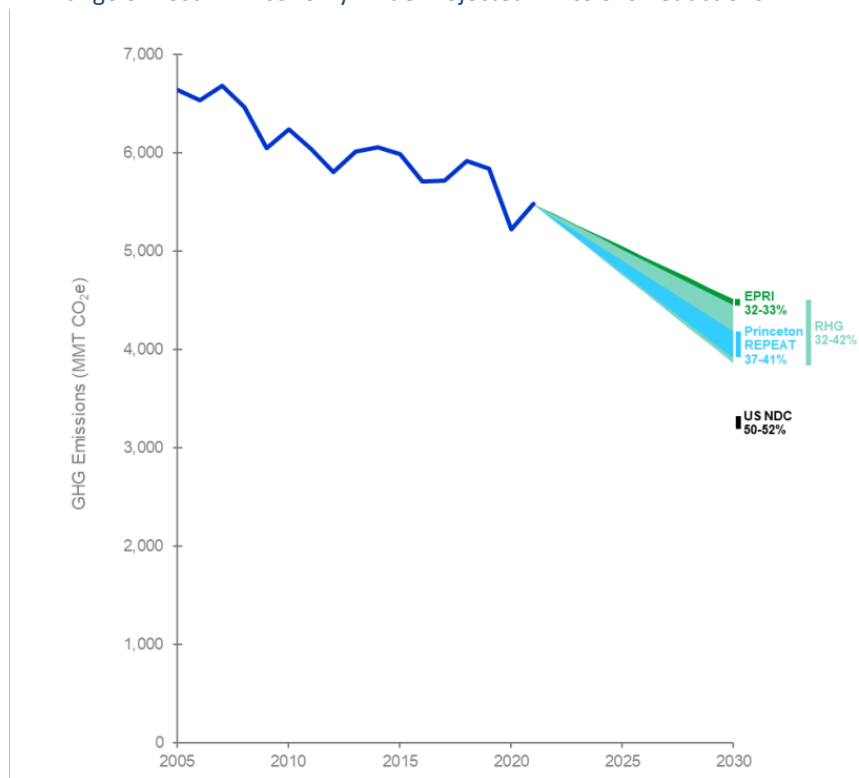
¹⁵ Steinberg, Daniel., et al. *Evaluating Impacts of the Inflation Reduction Act and Bipartisan Infrastructure Law on the U.S. Power System*. National Renewable Energy Lab (NREL), 2023. <https://www.nrel.gov/docs/fy23osti/85242.pdf>.

¹⁶ Electric Power Research Institute (EPRI). “*Impacts of Inflationary Drivers and Updated Policies on U.S. Decarbonization and Technology Transitions.*”, 10 Mar. 2023, www.epri.com/research/products/000000003002026229; REPEAT Project. *Final REPEAT Project Findings on the Emissions Impacts of the Inflation Reduction Act and Infrastructure Investment and Jobs Act*. Apr. 2023. https://repeatproject.org/docs/REPEAT_2023_Preview.pdf; Rhodium Group. “*A Turning Point for US Climate Progress: Assessing the Climate and Clean Energy Provisions in the Inflation Reduction Act.*”, Aug. 2022, www.rhg.com/research/climate-clean-energy-inflation-reduction-act/.

technology cost assumptions or fossil fuel price projections. Rhodium Group’s analysis¹⁷ projects that with the IRA in place, U.S. emissions could fall to 32%-42% below 2005 levels by 2030, compared to a 24%-35% reduction projected before the IRA was passed. EPRI’s modeling finds that the IRA, combined with other policies and technology trends, has the potential to reduce U.S. economy-wide emissions 32%-33% below 2005 levels by 2030. The Princeton-led REPEAT Project estimates that U.S. emissions have the potential to fall 42% below 2005 levels by 2030, 15% lower than before the IRA was in place. Energy Innovation modeling estimates that with the IRA in place, the U.S. is projected to draw down emissions 37-41% below 2005 levels by 2030. The potential impacts of these investments are incorporated into this analysis through Rhodium Group’s updated state-level emissions projections¹⁸. While the projected pollution cuts associated with the IRA and BIL indicate that these investments are a key step toward meeting U.S. goals, it is important to underline the uncertainty around the pollution cuts that can be attributed to these laws. The projected emission reductions are the product of economic models which generally assume a high degree of responsiveness to economic incentives. This means they provide an indication of the emissions trajectories that would result from very effective cost minimization, given a set of fixed assumptions.

Figure 2

Range of Post-IRA Economy-Wide Projected Emissions Reductions



¹⁷ Rhodium Group, “A Turning Point for US Climate Progress: Assessing the Climate and Clean Energy Provisions in the Inflation Reduction Act” August 2022. <https://rhg.com/research/climate-clean-energy-inflation-reduction-act>.

¹⁸ Rhodium Group, “A Turning Point for US Climate Progress: Assessing the Climate and Clean Energy Provisions in the Inflation Reduction Act” August 2022. <https://rhg.com/research/climate-clean-energy-inflation-reduction-act>.

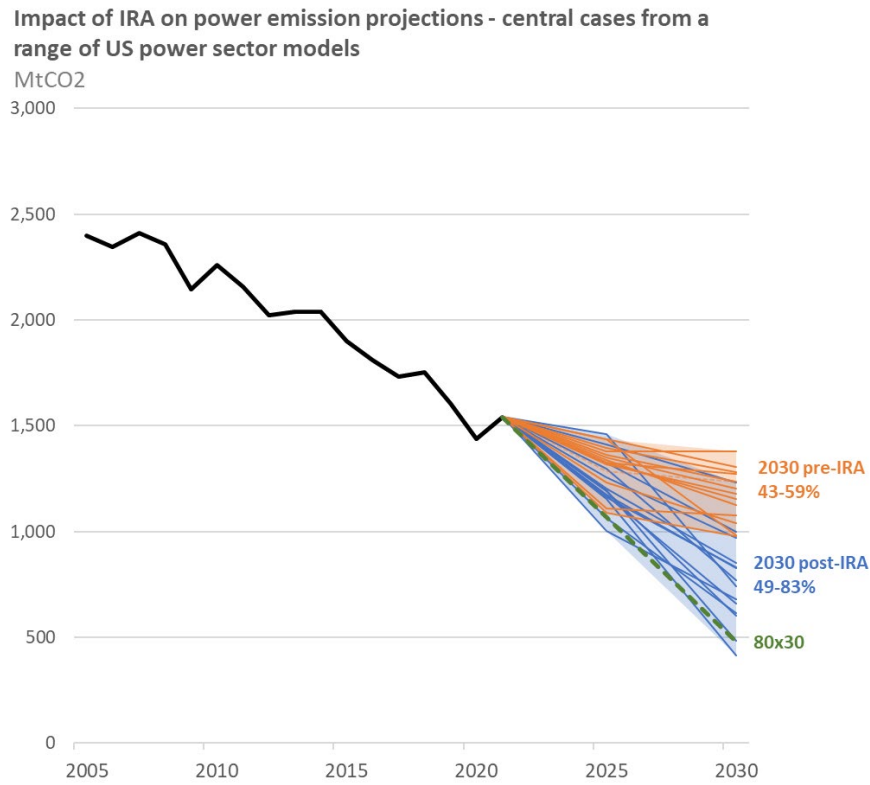
In practice, however, the sectors which account for the greatest potential emission reductions due to IRA incentives are subject to market frictions and constraints that will prevent actors from making cost-optimizing decisions predicted in economic models, absent additional policy intervention.

This is particularly relevant for the electric power sector, which plays a central — and outsized — role in these projections: as noted above, 75% of the projected 2030 economy-wide abatement from the IRA in the Rhodium Group analysis comes directly from anticipated uptake of the clean electricity tax credits. For example, the NREL study referenced above provided the caveat, in relation to central modeled post-IRA GHG emissions scenario (“Mid case”), that it “most closely represents the power sector evolution that would occur if all economically optimal investment and retirement opportunities were executed,”¹⁹ (emphasis added).

Since the IRA and BIL do not guarantee emissions outcomes consistent with the modeled impact, and the U.S. power sector is not uniformly structured in a way that ensures economically optimized behavior, there is a big range in the projected 2030 power sector emissions from different groups (see fig. 3 below). **However, the modeling clearly shows that the IRA and BIL have the potential to drive a significant increase in the rate of decarbonization and that 80x30 can be a cost-effective level of abatement.**

¹⁹ Steinberg, Daniel., et al. *Evaluating Impacts of the Inflation Reduction Act and Bipartisan Infrastructure Law on the U.S. Power System*. National Renewable Energy Lab (NREL), 2023. <https://www.nrel.gov/docs/fy23osti/85242.pdf>.

Figure 3²⁰



While IRA and BIL funding will help defray the cost of decarbonizing the U.S. power sector and the cost of decarbonization born by states is lower than it has ever been, **states will still require complementary policies like RGGI to leverage the opportunities created by federal policy, minimize the uncertainty over emission reduction, and ensure they reach their own targets.**

Ambitious emissions caps in RGGI will ensure more benefits from the IRA are realized than without those caps. In addition to changes outside of the RGGI region, the third program review will need to consider initiatives undertaken by RGGI states that go further than the overall program. For example, Maryland's Climate Solutions Now Act sets a target of net zero emissions by 2045, while New York's Climate Leadership and Community Protection Act sets an economywide net zero target for 2050 and a zero-emissions electricity target for 2040⁴. The third program review will need to consider the evolving policy landscape taking shape in the RGGI region's states, especially those with aggressive climate goals and targets, and underscore the role that an appropriately ambitious emissions cap can play in securing reductions consistent with these targets.

- **Modeling Results and Key Issues**

²⁰ Data from - Environmental Protection Agency. *Electric Sector Emissions Impacts of the Inflation Reduction Act*. Sept. 2023, www.epa.gov/inflation-reduction-act/electric-sector-emissions-impacts-inflation-reduction-act.

As discussed at length above, *at least* an 80% reduction in power sector emissions from 2005 levels by 2030 is the national benchmark that states should use in determining whether the caps adopted by RGGI are consistent with the U.S. NDC. If anything, 80x30 should be viewed as the floor in the ambition level. For the U.S. to achieve 80x30 nationally, many states will need to go beyond 80x30. If states consistently aim below 80x30, the target will remain perpetually out of reach.

RGGI should adopt an interim 2030 target of at least 80x30

The modeling of a 0x35 cap that ICF has carried out on behalf of RGGI is a very welcome addition to the program review. A linear trajectory to 0x35 is likely to secure reductions roughly consistent with the reductions from a budget calibrated to an 80x30 target. **But RGGI should explicitly adopt at least an 80x30 interim target as part of setting an updated cap, particularly to help ensure the states deliver the near-term pollution reductions necessary to minimize cumulative emissions reductions from the power sector consistent with the budget trajectory for a 1.5-degree C pathway.** The ICF modeling using IPM provides strong evidence that this level of ambition is consistent with a cost-effective pathway to full decarbonization for the RGGI region. Modeling that EDF commissioned from ERM using the FACETS model (explained below) provides further support to this conclusion and shows that the low allowance prices that ICF found are likely to be consistent across a wide range of scenarios.

- Under all of the ICF 0x35 scenarios, 2030 emissions are projected to be below a level consistent with an 80x30 target. While this is likely to be a result of the use of banking to achieve the 0x35 goal, **the fact that in many of the 0x40 scenarios 2030 emissions are also at or below the 80x30 level demonstrates that 80x30 is an important milestone on the cost-effective pathway to zero emissions**

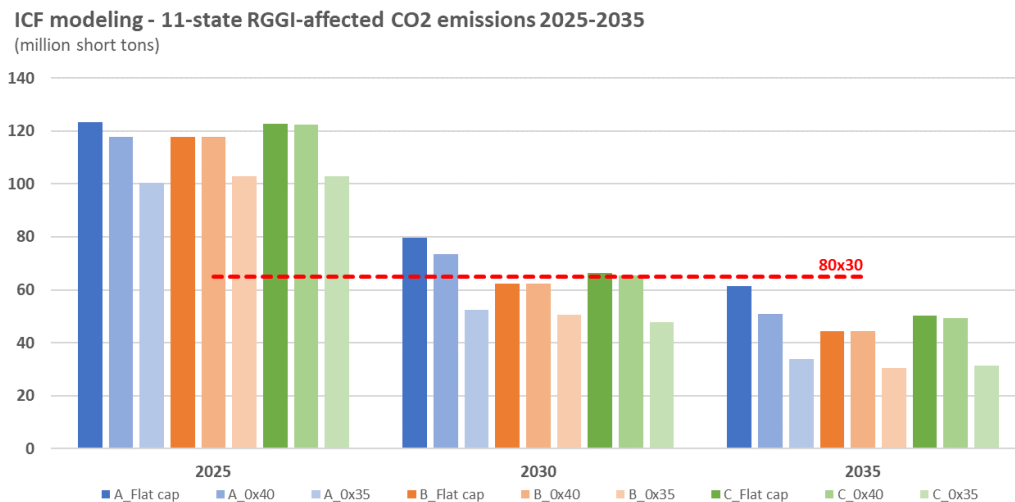


Image source²¹

²¹ RGGI, Inc. *Regional Greenhouse Gas Initiative Program Review: Public Meeting*. 26 Sept. 2023. https://www.rggi.org/sites/default/files/Uploads/Program-Review/2023-09-26/RGGI_26_Sept_2023_Meeting_Presentation.pdf.

- ICF’s modeling also shows that the emission reductions required to achieve 80x30 would not translate to high allowance prices. Though not the ECR was not modeled by ICF, the allowance prices in the 0x40 scenarios are well below the level of the current ECR trigger and the allowance prices in the 0x35 scenarios (where emissions go below the 80x30 level) are still well below the current CCR trigger level. This is strong evidence that not only is an 80x30 cap consistent with the U.S. NDC **and** on the cost-effective pathway to zero, **but it is also not costly to achieve**. This conclusion is further supported by the limited impact on power pricing of the 0x35 cap that the ICF modeling found.
- EDF analysis using the FACETS²² model further supports the conclusions from ICF modeling. The EDF analysis explored different scenarios from ICF and different assumptions have been used prior to running the models. Therefore, direct comparisons on the level of emissions and costs cannot be made between the two. However, viewed side-side, the headline conclusions are the same:
 - **Strong (“steep”) near-term (out to 2030) reductions are a cost-effective route to deeper reductions by 2035 or 2040.**
 - **Despite ambitious targets, allowance prices remain low in the period to 2035.**

EDF’s analysis is focused on exploring 80x30 scenarios with a subsequent target of 95x40 and has modeled the impact of a number of variables, including:

- Different gas prices – taken from AEO 2022
- RGGI membership – focused on RGGI with the current 12 member states, but tested variations on inclusion
- Existence of caps in neighboring states
- Tradability of allowances with other capped states

EDF’s analysis also incorporated a representation of the current CCR and ECR mechanisms but did not model banking. Other differences to highlight include EDF’s use of load forecasts based on the EIA’s AEO 2022 and technology cost inputs from NREL ATB 2021 (ICF used NREL ATB 2023).

Although not directly comparable with the ICF modeling, in EDF’s analysis of an 80x30 and 95x40 cap, allowance prices for the period 2025-35 remain below the CCR threshold and within the range of allowance prices coming from ICF’s analysis. Because the EDF analysis tested high and low gas prices as well as different combinations of RGGI membership and trading of allowances with other (potentially) capped states, **the conclusion that 80x30 can be achieved with low allowance prices holds across a wide variety of scenarios**. For example, low gas prices will tend to push allowance prices up, but in EDF’s analysis the allowance prices remain below the CCR over the period 2025-35 even with low gas prices.

Allowance prices do exceed the CCR in EDF’s analysis when emission reductions reach 90% below 2005 levels. However, this is not until 2040 in the cap that EDF has modeled. The extent of any post 2035 increase in allowance prices is likely to be very sensitive to how the power

²² Framework For Analysis Of Climate-Energy-Technology Systems. “Overview.” FACETS, www.facets-model.com/overview.

sector evolves over the next 15 years and a large range of policy design options, such as banking, are available between now and then to mitigate any increase.

- **RGGI Inc. Should Incorporate a Measure to Cover Emissions Associated with Imported Power in the Model Rule**

As the stringency of the cap increases, ongoing assessments of leakage mitigation by RGGI, Inc. will be even more critical. However, modeling analysis consistently shows that even when leakage is occurring outside the RGGI region, the net emissions benefits of the program remain significant. An analysis²³ earlier this year by Resources for the Future found²⁴ that there is 12–22% leakage, which means the vast majority of the benefits of RGGI are maintained. Additionally, their results show that even in the case of an ambitious zero-emissions cap in RGGI, there are sizeable net emissions benefits nationally.

If major state suppliers of electricity to the RGGI region are not participants in RGGI going forward, leakage mitigation will be even more essential because of regional electricity import/export dynamics. Leakage mitigation will help prevent GHG-intensive imports from undercutting RGGI goals and disadvantaging generation in the RGGI region. Allowance price and affordability impacts may result, however, and it will be important to consider measures that could be adopted to address cost impacts that result from instituting a leakage mitigation measure (e.g. state revenue investment strategies focused on benefiting electricity consumers).

Leakage may also increase as the regional cap tightens or prices change for natural gas over the coming years, and this is an opportune time for the model rule to be updated to address the issue. As noted in prior EDF comments²⁵, one method for states within the RGGI region to address leakage mitigation is to cover emissions associated with electricity imports from outside the RGGI region in its cap. This policy will enhance the ambition of the RGGI program, ensure its emission outcomes are not lessened and even enhanced, and help RGGI states avoid displacing their in-state generation for generation in uncapped states. By putting emissions associated with imported power 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 to 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.

Other localities with emissions caps have included mechanisms to address leakage. For example, the California Air Resource Board (CARB) has established requirements under its cap-and-trade program²⁶ for electricity companies that import power:

²³ Resources for the Future. “*The Prospects for Pennsylvania as a RGGI Member.*” Resources for the Future, 9 May 2023, www.rff.org/publications/reports/the-prospects-for-pennsylvania-as-a-rggi-member/.

²⁴ Resources for the Future examined a case where Pennsylvania is participating in RGGI.

²⁵ Environmental Defense Fund. *Comments on RGGI Program Review Topics for Public Consideration.* 29 Nov. 2021, [www.rrgi.org/sites/default/files/Uploads/Program-Review/2021 Comments/Session2/EDF Public Comment 2021-11-29.pdf](http://www.rrgi.org/sites/default/files/Uploads/Program-Review/2021%20Comments/Session2/EDF_Public_Comment_2021-11-29.pdf).

²⁶ California Public Utilities Commission. “*Greenhouse Gas Cap-And-Trade Program.*”, www.cpuc.ca.gov/industries-and-topics/natural-gas/greenhouse-gas-cap-and-trade-program.

“Under CARB's regulations, electricity companies that import or supply electricity from non-renewable sources must purchase permits (known as allowances or offsets) for the greenhouse gas emissions that come from burning fuel to make this electricity. These pollution costs are reflected in all customers' electricity rates - specifically in the portion of electricity bills that represents the costs to generate electricity. When natural gas utilities sell to customers, they must pay for emissions associated with customer burning of these fuels and pass these costs on through customers' bills in their gas transportation rates.”

California utilities also get free allocation which they consign to auction for the benefit of ratepayers and then most of the utilities give bi-annual climate credit on utility bills to help mitigate ratepayer impacts.

Draft language that could be incorporated into a model rule:

- **Imported electricity distributed by RGGI STATE's [electric distribution companies].** The portion of electricity distributed by [electric distribution companies] to retail customers in RGGI STATE determined to be generated neither within RGGI STATE nor within another participating RGGI state shall also be subject to the requirements of this section.
- To ensure electricity that is generated neither within RGGI STATE nor within a RGGI participating state does not undermine the efficacy of this program, an [electric distribution company] serving retail customers in RGGI STATE shall be required to hold CO₂ allowances for CO₂ emissions that IMPLEMENTING AGENCY finds attributable to electricity imported into RGGI STATE from generators located in a state outside of RGGI STATE and not from another participating state for compliance deductions.
- This section does not take effect for an electric distribution company until:
 - i) IMPLEMENTING AGENCY has made a determination of the applicable portion of electricity distributed to retail customers in RGGI STATE by the [electric distribution company] that is considered to be imported electricity from a generator not located within RGGI STATE or a participating state; and
 - ii) not earlier than six months after publication of a final compliance obligation for EGUs.

EDF provided comments to the Commonwealth of Pennsylvania on leakage in 2021 that provide further detail on how such a program could be incorporated into regulatory text and information on ways to consider partnering with PJM for data and other needs.²⁷

CONCLUSION

RGGI states are facing both a period of great ambition and several uncertainties during this program review. Given the modeling results to date, and the need to reach near-term climate commitments, a “no regrets” pathway for RGGI is to set an ambitious cap of at least 80%

²⁷ Environmental Defense Fund. *Attachment A: Environmental Defense Fund Supplemental Comments on CO₂ Budget Trading Program and Emissions Leakage*. Pennsylvania Independent Regulatory Review Commission, 14 Jan. 2021, www.irrc.state.pa.us/docs/3274/COMMENTS_PUBLIC/3274%2001-15-21%20Environmental%20Defense%20Fund%20Att.pdf.

emissions reductions by 2030. Thereafter, other policy considerations such as state membership, banking, leakage, CCR, ECR, etc. can be considered and modeled to update the model rule. Foundational to all those considerations is setting an ambitious cap of at least 80 x 2030. The power sector has ample runway to make deep emissions reductions quickly before 2030, providing important immediate, cumulative emission benefits that can help us collectively meet near- and long-term climate targets. Fortunately, we can reach at least 80x30, if not significantly beyond, very cost-effectively and by deploying currently available, proven technologies.

Thank you for your consideration of these comments. We are happy to answer any questions and share additional details as appropriate.