



**VIA ELECTRONIC MAIL**

February 20, 2019

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

**RE: Comments on New Jersey Participation in RGGI and Ensuring the Continued Strength of the RGGI Program**

Dear Mr. McKeon and Members of the RGGI Board:

Thank you for the opportunity to provide comments on New Jersey's proposal to rejoin RGGI. As set forth in prior comments by our organization and others, the Natural Resources Defense Council (NRDC) supports expanding RGGI to include other states, including New Jersey's reentry into RGGI of which it was a founding member, subject to appropriate conditions.<sup>1</sup>

Below, we discuss conditions under which RGGI expansion is appropriate; discuss New Jersey's proposed implementation of RGGI, including its proposed allowance allocation, or cap level; and raise broader concerns about RGGI's trajectory based on recent modeling. NRDC urges both the current RGGI states and anticipated new entrants New Jersey and Virginia to work to address these issues by committing to begin RGGI's next program review in early 2020, with the aim of ensuring that RGGI's post-2020 trajectory will lead to meaningful carbon pollution reductions.

**Principles for RGGI Expansion**

In expanding RGGI, it is critical that the current states ensure new entrants adopt consistent program designs; avoid market distortions; provide benefits to consumers and environmental justice communities; and preserve RGGI's high standards of environmental performance, including continued progress in and commitment to cutting power sector carbon pollution, both under the current RGGI framework and in future program reviews.

---

<sup>1</sup> See Joint Comments (9 Organizations) (Feb. 9, 2018), [www.rrgi.org/sites/default/files/Uploads/Participation/2018-01-26-Meeting/Comments/Joint\\_Comments\\_VA\\_Participation.pdf](http://www.rrgi.org/sites/default/files/Uploads/Participation/2018-01-26-Meeting/Comments/Joint_Comments_VA_Participation.pdf); Joint Comments (45 Environment and Health Organizations) (July 11, 2017), [www.rrgi.org/sites/default/files/Uploads/Program-Review/6-27-2017/Comments/Joint\\_Environment\\_Health\\_Comments.pdf](http://www.rrgi.org/sites/default/files/Uploads/Program-Review/6-27-2017/Comments/Joint_Environment_Health_Comments.pdf); Joint Comments (17 Environmental and Health Organizations) (May 9, 2016), [www.rrgi.org/sites/default/files/Uploads/Program-Review/4-29-2016/Comments/Joint\\_Comments\\_Environmental\\_and\\_Health\\_Advocates.pdf](http://www.rrgi.org/sites/default/files/Uploads/Program-Review/4-29-2016/Comments/Joint_Comments_Environmental_and_Health_Advocates.pdf); Joint Comments (26 non-profit organizations) (Dec. 4, 2015), [www.rrgi.org/sites/default/files/Uploads/Program-Review/11-17-2015/Comments/Joint\\_Stakeholder\\_Comments.pdf](http://www.rrgi.org/sites/default/files/Uploads/Program-Review/11-17-2015/Comments/Joint_Stakeholder_Comments.pdf).

As we have previously stated, the most straightforward way to expand RGGI would be for new states to adopt the current RGGI model rule, which we are pleased to see New Jersey proposes to do. In particular, NRDC strongly supports New Jersey's proposal to adopt the Emissions Containment Reserve (ECR); to participate fully in the post-2020 adjustment for excess banked allowances, to be implemented from 2021-2025; and to auction its share of RGGI allowances to capture their value for consumers.

In addition to adopting these program designs, it is critical that new participants enter the market with emissions cap levels (represented by the states' allowance allocations) and trajectories that are comparably stringent to the existing RGGI program. Such cap levels should be based on rigorous and defensible analysis, including modeling of state emissions baselines using assumptions that reflect best available data.

Getting these allowance allocations right is one of the most important decisions in admitting new states. Admitting a new participant at an allowance allocation that is too high, would undermine the environmental performance of the RGGI program by inflating the RGGI cap and weakening the emissions reduction commitments of the current RGGI states. As modeling during the last program review showed, a cap level that is too high will also reduce total anticipated RGGI revenues across the region, undermining the states' abilities to reinvest RGGI revenues in clean energy programs that grow the economy, create jobs, and save consumers money.<sup>2</sup>

### **New Jersey's Proposed Cap Level**

NRDC has separately filed comments with the New Jersey Department of Environmental Protection (NJDEP), attached to our comments here, on the state's proposed CO<sub>2</sub> Budget Trading Program Rule, which would implement the 2017 RGGI Model Rule in New Jersey and establish New Jersey's allowance levels for 2020-2030. As noted in those comments, we support New Jersey's decision to match current states' commitment to cut emissions by 3 percent a year over this period.

With respect to New Jersey's proposal to enter RGGI with an 18-million-ton allocation in 2020, we raised several concerns, including the possibility, based on previous modeling performed by NRDC that projected New Jersey's actual power sector emissions could be significantly lower than 18 million tons in 2020. Ultimately, NRDC will not oppose New Jersey's proposed starting cap level *provided that* NJDEP commits to strengthening the state's cap if actual emissions are lower than what the agency has modeled.

We also provided other recommendations in our comments to NJDEP on addressing the potential for allowance oversupply, such as increasing the size of New Jersey's ECR.

### **RGGI's Trajectory and the Next Program Review**

In addition to ensuring New Jersey enters RGGI at a reasonable level, however, we have broader concerns that the RGGI cap as a whole appears to be on a trajectory that is insufficiently ambitious, which could undermine the program. NJDEP's modeling, based on more recent data

---

<sup>2</sup> NRDC, "Tighter Pollution Cap Could Get RGGI States \$3.2B Extra" (July 31, 2017), <https://www.nrdc.org/experts/jackson-morris/tighter-pollution-cap-could-get-rggi-states-32b-extra>.

and assumptions than the current states had available during the last program review, projects low future allowance prices, leading to the ECR being triggered in every year from 2021-2030 both *with* and *without* New Jersey in the program. This is projected to occur even with the planned 2021-2025 adjustment for the large bank of excess allowances that is expected to continue building in the region through 2020.<sup>3</sup>

The ECR provides a mechanism to remove a portion of unnecessary, surplus allowances from the market and automatically strengthen RGGI between program reviews. However, as with the CCR, the goal of RGGI's ECR program design should not be to trigger this mechanism in every year, but rather to capture additional low-cost emissions reduction opportunities when available due to market performance or conditions that differ from expected conditions.

If the ECR is triggered in every year, these conditions cannot be described as unexpected. Rather, it provides a strong signal that RGGI's cap trajectory is insufficiently ambitious, that the cap continues to be overallocated, and that the program is not driving the carbon pollution reductions that were intended. Moreover, the number of ECR allowances withheld in NJDEP's modeling appears to be the full number of ECR allowances available from 2021-2030. This suggests that even with the ECR, the RGGI states will continue to leave low-cost emissions reduction opportunities on the table unless the states act, in the near-term, to correct RGGI's future cap trajectory and strengthen the program.

Given these results, NRDC strongly urges the RGGI states, including prospective new participants New Jersey and Virginia, to commit to beginning the next RGGI program review in early 2020. We also strongly urge the states to commit to adjust the RGGI cap downward, if needed, to ensure RGGI drives emissions reductions—beyond “business-as-usual” gains due to external market and policy forces—in the region over the coming years.

Much is at stake here: setting RGGI's cap over the next decade at too high a level would undermine climate progress across the entire region. A cap that is too high will also suppress allowance prices and lower RGGI revenues, which will threaten and reduce the investments that states are able to make in clean energy and other programs that benefit consumers. Through the program review process, the RGGI states have ensured not only that the program continues to provide benefits to its participants but also that RGGI continues to grow and adapt to create a stronger and more effective program. In 2020, with two new states at the table, it is critical that the RGGI states come together to address the persistent overallocation in the cap.

\* \* \*

---

<sup>3</sup> NJDEP's posted modeling results do not include individual year results for all years from 2021-2030, but the ECR is triggered in all years provided (2022, 2025, 2028, and 2030). Additionally, the results include the total number of ECR allowances withheld from 2021-2030, which, based on their large number, suggests the model is showing the ECR would be triggered in every year during this period. See “CO2 Budget Trading Reference Case Modeling Results,” [www.state.nj.us/dep/aqes/docs/NJ\\_Reference\\_Case\\_IPM\\_Model.xlsx](http://www.state.nj.us/dep/aqes/docs/NJ_Reference_Case_IPM_Model.xlsx) (accessed Feb. 15, 2019); “CO2 Budget Trading Policy Modeling Results,” [www.state.nj.us/dep/aqes/docs/NJ\\_Policy\\_Case\\_IPM\\_Model.xlsx](http://www.state.nj.us/dep/aqes/docs/NJ_Policy_Case_IPM_Model.xlsx) (accessed Feb. 15, 2019).

Thank you for the opportunity to provide these comments.

Sincerely,

/s/ Bruce Ho

Bruce Ho  
Senior Advocate  
Natural Resources Defense Council  
40 W. 20<sup>th</sup> Street  
New York, NY 10011  
212-727-4513  
bho@nrdc.org

Attachment: Comments filed by NRDC and others with NJDEP on New Jersey's proposed CO<sub>2</sub> Budget Trading Program Rules

VIA ELECTRONIC FILING

February 15, 2019

Catherine R. McCabe, Commissioner  
New Jersey Department of Environmental Protection  
401 E. State St.  
7th Floor, East Wing  
P.O. Box 402  
Trenton, NJ 08625-0402

**RE: DEP Docket No. 05-18-11 – Comments on Proposed CO<sub>2</sub> Budget Trading Program Rules (Proposed Amendments: N.J.A.C. 7:27-22.1 and 22.16 and 7:27A-3.2, 3.5, and 3.10; Proposed New Rules: N.J.A.C. 7:27-2.28 and 7:27C)**

Dear Commissioner McCabe:

Acadia Center, Appalachian Mountain Club, Environmental Entrepreneurs (E2), Natural Resources Defense Council (NRDC), New Jersey Sustainable Business Council, and Union of Concerned Scientists (UCS) respectfully submit the following comments on the New Jersey Department of Environmental Protection's (DEP) proposed CO<sub>2</sub> Budget Trading Program Rules to rejoin the Regional Greenhouse Gas Initiative (RGGI). We strongly support Governor Murphy's commitment in Executive Order No. 7 to rejoin RGGI,<sup>1</sup> and we support DEP's proposal to follow through on this commitment under the proposed rules.

For more than a decade, RGGI has helped states in the region<sup>2</sup> tackle climate change while cleaning up the air, improving public health, growing the economy, creating jobs, and saving consumers money through cost-effective investments in energy efficiency and renewable energy.<sup>3</sup> As a founding member of RGGI and participant from 2009-2011, New Jersey saw both economic and environmental benefits from the program, including more than \$150 million in growth and 1,700 job-years added to the state's economy.<sup>4</sup> Unfortunately, the Christie Administration's decision to withdraw New Jersey from RGGI in 2012 turned a blind eye to these benefits and to the dangers of climate change already harming New Jersey's residents and

---

<sup>1</sup> Governor Philip D. Murphy, Executive Order No. 7 (Jan. 29, 2018), [www.nj.gov/infobank/eo/056murphy/pdf/EO-7.pdf](http://www.nj.gov/infobank/eo/056murphy/pdf/EO-7.pdf).

<sup>2</sup> The current RGGI states are Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. New Jersey was a RGGI participant from 2009-2011, and under the proposed rules would rejoin in 2020. Virginia is also currently in the process of joining the RGGI market.

<sup>3</sup> See, e.g., Analysis Group (2018), *The Economic Impacts of the Regional Greenhouse Gas Initiative on Nine Northeast and Mid-Atlantic States: Review of RGGI's Third Three-Year Compliance Period (2015-2017)*, [www.analysisgroup.com/globalassets/uploadedfiles/content/insights/publishing/analysis\\_group\\_rggi\\_report\\_april\\_2018.pdf](http://www.analysisgroup.com/globalassets/uploadedfiles/content/insights/publishing/analysis_group_rggi_report_april_2018.pdf); Abt Associates (2017), *Analysis of the Public Health Impacts of the Regional Greenhouse Gas Initiative, 2009–2014*, [abtassociates.com/getattachment/Reports/2017/RGGI/RGGI-Public-Health-Impacts\\_final4.pdf.aspx](http://abtassociates.com/getattachment/Reports/2017/RGGI/RGGI-Public-Health-Impacts_final4.pdf.aspx); RGGI, Inc. (2018), *Investment of RGGI Proceeds in 2016*, [www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI\\_Proceeds\\_Report\\_2016.pdf](http://www.rggi.org/sites/default/files/Uploads/Proceeds/RGGI_Proceeds_Report_2016.pdf)

<sup>4</sup> Analysis Group (2011), *The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States: Review of the Use of RGGI Auction Proceeds from the First Three-Year Compliance Period*, [www.analysisgroup.com/globalassets/uploadedfiles/content/insights/publishing/economic\\_impact\\_rggi\\_report.pdf](http://www.analysisgroup.com/globalassets/uploadedfiles/content/insights/publishing/economic_impact_rggi_report.pdf).

## ATTACHMENT – Comments Filed with NJDEP

natural resources. This misguided decision slowed climate progress in New Jersey while denying the state nearly \$300 million in revenue that could have accelerated the clean energy transition.<sup>5</sup>

Rejoining RGGI will help New Jersey get back on track on climate change and help secure the benefits of a clean economy for the state's current residents and future generations. This is an important step, but more is also needed. It will be critical for New Jersey to not just rejoin RGGI, but to be a leader in the program that works to strengthen it in the coming years. We further urge DEP to take additional steps to tackle climate change, including in transportation, which is responsible for the largest share of New Jersey's greenhouse gas emissions. Importantly, DEP's climate change mitigation efforts must be coupled with significant and meaningful measures to address the needs and concerns of environmental justice communities who face disproportionate pollution burdens and are among the most vulnerable to the effects of climate change.

Our comments below address the following:

- The impacts of climate change on New Jersey, and the need for state leadership, both under RGGI and other programs;
- The 2020 base budget and pollution reduction trajectory for the state's power plants under DEP's proposed rules;
- DEP's proposal to adopt the key provisions of the 2017 RGGI Model Rule, as required to participate in RGGI's multistate market to cut power plant carbon pollution; and
- Ensuring the RGGI proposal and other efforts address environmental justice concerns.

Separately, we are also submitting comments on DEP's proposed Global Warming Solutions Fund Rule, which addresses how DEP and other agencies will invest CO<sub>2</sub> allowance revenues generated under RGGI, a critical part of the state's implementation of the RGGI program.

### **I. The Need to Address Climate Change**

Governor Murphy's Executive Order No. 7 rightly recognizes the dangers of climate change to New Jersey and the need to act.

There is a clear economic and environmental impact of sea level rise on coastal communities around New Jersey from Money Island to Mystic Island from Moonachie to Margate. The direct link to increased carbon emissions is irrefutable. What has been less documented are the economic impacts in the nearer term for coastal communities—for example, over the next 15-30 years versus economic and environmental impacts over the course of the century. Recent research released by UCS provides predictions of sea level rise and its anticipated economic

---

<sup>5</sup> Governor Philip D. Murphy, Executive Order No. 7, *supra* note 1.

## ATTACHMENT – Comments Filed with NJDEP

impacts on coastal property using Zillow real estate data.<sup>6</sup> The report is clear to note that the worst impacts are preventable over the course of this century if we start to reduce our carbon emissions aggressively in the coming years. In UCS’s words, “The results for New Jersey are quite sobering.”<sup>7</sup> For example, the report finds that:

- “New Jersey is second in the nation for most homes at risk both in 2045 and by the end of the century. By 2045, more than 62,000 of today’s residential properties, currently home to about 80,000 people, are at risk of chronic inundation. Of New Jersey’s beach towns, 10 are projected to have at least 1,500 homes at risk by 2045, with Ocean City topping the list at more than 7,200. The total number of at-risk residential properties jumps to about 251,000—currently home to roughly 376,000 people—by 2100.”<sup>8</sup>; and
- “The total value, in today’s dollars, of New Jersey’s at-risk properties is the second largest of any coastal state. By 2045, about \$27 billion-worth of residential properties (based on today’s values) are at risk of chronic flooding. The quarter of a million homes that would face this flooding at the end of the century are currently worth more than \$107 billion collectively.”<sup>9</sup>

The report also finds, however, that if we act now, there is still hope: “If nations adhere to the primary goal of the Paris Agreement—capping warming to below 2 degrees Celsius—and there is limited loss of land-based ice, about 70 percent of New Jersey’s at-risk homes would avoid chronic flooding by the end of the century, thus safeguarding the vast majority of property values and annual property tax revenue.”<sup>10</sup>

Unmitigated climate change will also have impacts beyond sea level rise. According to the most recent National Climate Assessment, which included contributions from Rutgers climate scientist Robert Kopp, New Jersey will see a wetter, wilder world of extreme weather, with more precipitation, more state-wide flooding, and more temperature extremes.<sup>11</sup> New Jersey’s current inability to meet the federal EPA ozone standards for a majority of the state’s counties will be further exacerbated by rising temperatures, especially in peak heat seasons for ozone alerts during the summer.<sup>12</sup>

---

<sup>6</sup> Union of Concerned Scientists (2018) *Underwater: Rising Seas, Chronic Floods, and the Implications for US Coastal Real Estate*, [www.ucsusa.org/sites/default/files/attach/2018/06/underwater-analysis-full-report.pdf](http://www.ucsusa.org/sites/default/files/attach/2018/06/underwater-analysis-full-report.pdf) (hereinafter, “Underwater Report”).

<sup>7</sup> Union of Concerned Scientists, “New Study Finds 251,000 New Jersey Homes Worth \$107 Billion will be at Risk from Tidal Flooding” (press release) (June 18, 2018), [www.ucsusa.org/press/2018/new-study-finds-251000-new-jersey-homes-worth-107-billion-will-be-risk-tidal-flooding](http://www.ucsusa.org/press/2018/new-study-finds-251000-new-jersey-homes-worth-107-billion-will-be-risk-tidal-flooding).

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *U.S. Global Change Research Program (2018), Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II*, [nca2018.globalchange.gov/downloads/NCA4\\_2018\\_FullReport.pdf](https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf), at 671, 672, 675-76, 698.

<sup>12</sup> *Id.* at 700.

Rejoining RGGI alone will not solve all these risks, but as part of a larger program on climate action, an expanded RGGI that includes New Jersey can help mitigate the impacts of climate change on the New Jersey Shore and inland communities, while providing a model for other states and for national action to reduce carbon pollution.

## II. New Jersey’s 2020 Base Budget and Emissions Reduction Trajectory

The foundation of RGGI and of DEP’s proposed rules is the adoption of an enforceable power sector CO<sub>2</sub> emissions cap that declines over time, thereby limiting the amount of CO<sub>2</sub> pollution power plants can emit and leading to significant reductions in this pollution over time. In 2014, the nine current RGGI states agreed to a regional cap on power sector CO<sub>2</sub> that will continue to decline through 2020. In 2017, the same states agreed to further reduce pollution under RGGI from 2021-2030. In the proposed rules, DEP seeks to establish a cap on New Jersey’s power plant CO<sub>2</sub> that would reduce pollution from 2020-2030. New Jersey’s cap would work with the existing RGGI program, such that RGGI’s cap would expand to include New Jersey, with the newly expanded RGGI program aiming to achieve emissions reductions over the larger region.

In addition to establishing a declining cap on CO<sub>2</sub> emissions, RGGI—and DEP’s proposed rules to implement the program in New Jersey—creates a CO<sub>2</sub> emissions market that puts a price on emissions that helps incentivize and achieve the required emissions reductions cost-effectively. RGGI is the United States’ first market designed to reduce CO<sub>2</sub> emissions, though emissions markets have also been used successfully to tackle other air pollution problems, such as nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>).<sup>13</sup> California has also implemented a similar program to cut the state’s greenhouse gas emissions from electricity generation and other sectors.<sup>14</sup>

To be successful, it is critical that DEP establish a CO<sub>2</sub> emissions cap that is both reasonable and ambitious. This cap should start at a level *no higher than* New Jersey’s projected power sector CO<sub>2</sub> emissions in the first year of the policy, and the cap should decline at a rate that will lead to significant emissions reductions. We address DEP’s proposed starting cap level for New Jersey in 2020—referred to in the proposed rule as the state’s 2020 “base budget”—and the rate of reduction in the state’s emissions budget in future years below. We also urge New Jersey, once it joins RGGI, to work with the other RGGI states to further strengthen RGGI’s regional emissions cap.

### A. Proposed 2020 Base Budget

In the rules, DEP proposes a 2020 base budget for New Jersey of 18 million short tons of CO<sub>2</sub>. We previously raised concerns that an 18-million-ton budget would be too high. In spring 2018, for example, NRDC proposed a 2020 base budget for New Jersey of 12.6 million tons—i.e., 5.4 million tons, or 30 percent, lower than DEP’s proposed level.

---

<sup>13</sup> See, e.g., U.S. Environmental Protection Agency, “Acid Rain Program,” [www.epa.gov/airmarkets/acid-rain-program](http://www.epa.gov/airmarkets/acid-rain-program) (accessed Feb, 11, 2019).

<sup>14</sup> See California Air Resources Board, “Cap-and-Trade Program,” [www.arb.ca.gov/cc/capandtrade/capandtrade.htm](http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm) (accessed Feb, 11, 2019).



## ATTACHMENT – Comments Filed with NJDEP

As discussed below, based on updated analysis using newly available data, as well as additional information released by DEP, we will not oppose an 18-million-ton base budget for 2020, *provided that* DEP commits to working with the other RGGI states in the next RGGI program review in 2020—and actively leading in these discussions—to tighten RGGI’s overall emissions cap, including New Jersey’s future emissions budget levels, based on the best available data and modeling, to ensure RGGI will drive meaningful carbon pollution reductions in future years.

### 1. NRDC’s original analysis

NRDC’s original assessment was based on a two-stage modeling process. First, NRDC utilized S&P Global Market Intelligence’s PowerForecast model (based on AuroraXMP) to estimate expected pollution from the state’s fossil-fired facilities in 2020 based on unit-by-unit financial modeling conducted by and based upon S&P’s market assumptions as of December 2017. This unit-by-unit assessment, adjusted for the state’s revised renewable portfolio standard (RPS) and energy efficiency targets, as passed in April of 2018, estimated that emissions would decline to around 12.6 million tons by 2020, driven by coal closures between 2017 and 2020 and reduced utilization of New Jersey’s existing natural gas fleet in the near-term.

From this first step, NRDC then conducted power sector modeling in May 2018 of a proposed 12.6-million-ton base budget for New Jersey in 2020 using ICF’s Integrated Planning Model (IPM). This is the same model that DEP used for its own analysis. This modeling was done by ICF on behalf of NRDC using assumptions developed by NRDC, which reflected the latest available information at the time the analysis was conducted. Assumptions specified by NRDC included gas and demand forecasts from the U.S. Energy Information Administration’s (EIA) *Annual Energy Outlook 2018* (AEO 2018), as well as recent state-level policies and firm capacity changes across the Eastern Interconnection. NRDC’s IPM modeling included model runs analyzing a New Jersey base budget of 12.6 million tons, as well as a higher potential base budget of 18.9 million tons in 2020 (which had been ICF’s default emissions cap for the state as set in January 2018). The purpose of this second step modeling effort was to understand the technical feasibility of the lower 2020 base budget figure, and the associated impacts on in-state generation and capacity, emissions, power prices, and retail bills. NRDC’s IPM modeling found:

- A 2020 base budget of 12.6 million tons for New Jersey, with Virginia entering at 28 million tons in 2020 (as that state has proposed) and the existing nine-state region following the cap the states have already agreed to through 2030, resulted in allowance prices that are lower than current prices. Allowance prices were \$3.05 per ton (in 2018\$) in 2020 for the expanded 11-state RGGI region, rising to \$3.57 per ton (2018\$) in 2030.
- New Jersey’s recently strengthened RPS (50 percent by 2030, including specific targets for offshore wind and battery storage) and new energy efficiency targets (achieving 2 percent incremental electricity savings annually by 2025) allowed the state to achieve significant reductions in emissions by 2030 without deleteriously impacting the state’s net imports or customer bills:

## ATTACHMENT – Comments Filed with NJDEP

- Retail bills were the same under both the 12.6-million-ton starting base budget and a higher 18.9-million-ton budget, indicating that a lower emissions budget in New Jersey did not result in additional costs for end-use consumers.
- Under both the 12.6-million-ton budget and 18.9-million-ton budget scenarios, the state's net imports of electricity *decreased* over the next decade due to increased energy savings and the development of in-state renewable capacity, most notably offshore wind. In both cases, the state was a net exporter of power by 2030.
- Further, given AEO 2018 demand and gas price projections, NRDC's modeling analysis indicated that New Jersey's expected 2020 emissions, even under ICF's January 2018 default emissions cap of 18.9 million tons, would be around 12.5 million tons (i.e., below the cap).

For these reasons, NRDC recommended that New Jersey set its 2020 base budget at 12.6 million tons. NRDC's analysis, using publicly available assumptions and the same model that DEP relied on, showed significant emissions reductions were likely to occur over the next two years due to both market forces and recent state policy developments around the region. Modeling also supported that this starting base budget would result in modest prices throughout the 2020-2030 period—without harming New Jersey's energy balance or customer bills—while reducing emissions more significantly across the RGGI region, as compared to a higher starting base budget.

### 2. Subsequent analysis

In the last few weeks, DEP has posted additional details on its own modeling and assumptions. We thank DEP for supplying these supplemental materials, which provided greater transparency on DEP's modeling, allowing us to better understand the difference in outcomes between NRDC's and DEP's IPM modeling runs. It appears that much of the difference in outcomes was driven by two factors: (1) DEP's lower gas forecast/NRDC's higher gas forecast and (2) DEP's higher demand forecast/NRDC's lower demand forecast. In NRDC's modeling, the state's natural gas fleet was utilized less due to market forces: higher gas price forecasts resulted in New Jersey's gas fleet being less economic compared to out-of-state fossil generation, particularly in Pennsylvania; and lower demand projections further depressed utilization of the state's fleet by reducing total demand for all resources in the PJM market region.

Both DEP's and NRDC's assumptions were based upon publicly available data sources. NRDC relied upon EIA's AEO 2018 reference case (the most recent forecast at the time) for both fuel and demand curves; DEP followed the approach utilized by the current RGGI states during their most recent program review, using a mix of AEO 2018 reference and high resource fuel curves for gas prices and PJM's forecasts for demand.

At the end of January 2019, EIA released new long-term forecasts in its *Annual Energy Outlook 2019* (AEO 2019). Forecasted total electricity demand was about 1 percent higher on average in AEO 2019, as compared to AEO 2018, between 2020 and 2030 nationwide. Henry Hub natural gas prices were about 17 percent lower in AEO 2019, as compared to AEO 2018, on average,

between 2020 and 2030. NRDC has completed some preliminary updates to reflect these new forecasts from EIA, as well as capacity changes and state policies as of Q1 2019. Preliminary runs project higher emissions than NRDC's 2018 modeling runs given these changes to fuel costs and total demand, with emissions more in-line with DEP's proposed 2020 base budget.

Given this new information and our ability to more fully review and understand DEP's modeling over the last month, we will not oppose a starting base budget of 18 million tons in the proposed rules. However, we remain concerned that, if the current modeling assumptions do not materialize and load and/or natural gas prices are more similar to the projections NRDC relied on last spring, New Jersey's 2020 base budget could be too high. This would raise RGGI's cap above the level it should be and undermine the strength of the program. As discussed further below, it is critical that New Jersey and the other RGGI states monitor how actual emissions trajectories develop between now and 2020, and in future years, and make adjustments to RGGI's cap as necessary.

### **B. Emissions Reduction Trajectory**

In addition to setting New Jersey's base budget for 2020 at 18 million tons, DEP has proposed to reduce the state's CO<sub>2</sub> emissions budget in future years, out through 2030, by 3 percent per year relative to the 2020 base budget (i.e., by 540,000 tons of CO<sub>2</sub> per year, based on an 18-million-ton base budget). This rate of reduction is consistent with the 3 percent annual reduction in RGGI's overall cap through 2030 that was recently agreed to by the current RGGI states. We support DEP's proposal in the rules to achieve an annual level of reduction in line with the rest of the RGGI region.

### **C. Strengthening RGGI's Overall Cap**

While we will not oppose New Jersey's proposed 2020 base budget, as discussed above, we remain concerned about the overall stringency of the RGGI cap post-2020, due to the potential that New Jersey's power plant emissions will end up lower than recent modeling suggests, as well as what appears to be an insufficiently stringent RGGI cap adopted in the current RGGI region, even before New Jersey has joined. Accordingly, following adoption of the proposed rules, we urge DEP, other state agencies, and Governor Murphy to use New Jersey's position as a RGGI participant to push the program further. New Jersey must not only be a participant in RGGI—it should be a leader. This includes working with the other states to strengthen RGGI's emissions cap and improve other program elements as further outlined below.

As shown in DEP's modeling, the RGGI region, both with New Jersey joining in 2020 and without New Jersey joining the program, is expected to trigger RGGI's Emissions Containment Reserve (ECR) in all years between 2021 and 2030. The ECR, which we discuss further below, is a mechanism that withholds additional RGGI allowances when prices are low—an indication that the total supply of allowances in the market is too high and that the level of cap ambition is too low. DEP's modeling indicates that the RGGI cap as a whole is already and will continue to be overallocated in the coming years. If New Jersey's 2020 base budget ends up being too high, this overallocation problem will be exacerbated. Because the state's initial base budget is used to

determine emissions budgets in future years, a base budget that is too high in 2020 will also inflate New Jersey’s emissions budgets in future years, further undermining the program.

Preliminary 2019 IPM modeling by ICF on behalf of NRDC has projected lower allowance prices than were projected in NRDC’s 2018 modeling, which suggests that the overallocation problem in RGGI is growing worse as state policies, technological development, and economic trends widen the gap between the region’s anticipated emissions trajectory and RGGI’s cap level.

RGGI’s overallocated cap is a regional issue; New Jersey cannot solve this overallocation problem on its own. However, New Jersey has a key role to play in regional discussions and has a responsibility to lead. We urge New Jersey to work with the other RGGI states to ensure that RGGI will continue to drive emissions reductions—beyond “business-as-usual” gains due to external market and policy forces—in the region over the coming years. Since RGGI launched, the participating states have conducted regular reviews of the program, every three to four years, which have resulted in additional commitments to reduce emissions, strengthen RGGI’s cap, and make other program improvements. Based on this schedule, the next RGGI program review should begin in early 2020. We urge DEP, other state agencies, and Governor Murphy to ensure this review begins on schedule and to take a leading role in ensuring that the RGGI program continues to be ambitious and to achieve the critical goal of reducing CO<sub>2</sub> emissions.

Much is at stake here: setting RGGI’s cap over the next decade at too high a level would undermine climate progress across the entire region. A cap that is too high will also suppress allowance prices and lower RGGI revenues, which will threaten and reduce the investments that New Jersey proposes to make under the proposed Global Warming Solutions Fund Rule and similar programs in other states. Through the review process, the RGGI states have ensured not only that the program continues to provide benefits to its participants but also that RGGI continues to grow and adapt to create a stronger and more effective program. New Jersey must play an active and positive role in the program’s next steps.

If New Jersey’s power sector emissions in 2020 wind up below its adopted base budget, we further urge New Jersey to take additional corrective action to bring its state-specific emissions budget in line with observed emissions levels (followed by continued emissions reductions in future years). One option, discussed further below, would be for New Jersey to increase the size of its ECR budget, such that if New Jersey’s emissions are lower than anticipated, suppressing allowance prices, at least some portion of the state’s allowance overallocation would be automatically removed.

### **III. Adopting the RGGI Model Rule**

In addition to adopting an enforceable emissions cap, New Jersey must adopt several additional state rules, reflected in the RGGI Model Rule,<sup>15</sup> to participate in RGGI. In 2017, the nine current RGGI states concluded a nearly two-year program review that resulted in several improvements

---

<sup>15</sup> RGGI, *2017 Model Rule (revised)* (December 14, 2018), [www.rggi.org/sites/default/files/Uploads/Design-Archive/Model-Rule/2017-Program-Review-Update/2017\\_Model\\_Rule\\_revised.pdf](http://www.rggi.org/sites/default/files/Uploads/Design-Archive/Model-Rule/2017-Program-Review-Update/2017_Model_Rule_revised.pdf).

to the RGGI Model Rule intended to strengthen the program and enable RGGI states to continue making progress on climate change over the next decade.

We support DEP’s proposal to adopt the overall framework of the 2017 RGGI Model Rule in its proposed CO<sub>2</sub> Budget Trading Program Rules, including provisions related to:

- CO<sub>2</sub> emissions monitoring, compliance requirements for RGGI-covered sources, state enforcement of these requirements, and allowance tracking;
- Auctioning New Jersey’s CO<sub>2</sub> allowances through RGGI’s quarterly allowance auctions to capture the value of these allowances for the benefit of consumers;
- Implementing the ECR and, with caveats, the “minimum reserve price” and Cost Containment Reserve (CCR); and
- An adjustment for pre-2021 excess banked allowances between 2021 and 2025.

We address several of these provisions further below.

#### **A. Auctioning Allowances**

Consistent with the broader RGGI program, DEP proposes to require owners of emitting power plants in New Jersey to hold and surrender (at the end of RGGI’s three-year compliance periods) enough CO<sub>2</sub> allowances, each equivalent to one ton of CO<sub>2</sub>, to account for their plants’ emissions. By reducing the number of allowances made available each year, New Jersey and its partners will require the power sector to continue to reduce its carbon pollution over time.

These allowances have monetary value. If they are given away for free to emitting generators, that value will be captured by generation owners. If instead allowances are sold at auction, their value can be captured and reinvested to benefit consumers. The RGGI states’ pioneering decision to auction most CO<sub>2</sub> allowances and reinvest the proceeds in clean energy programs is one of the hallmarks of the program that has contributed to RGGI’s many benefits, while minimizing its costs.<sup>16</sup> We strongly support New Jersey’s decision to likewise auction its share of allowances.

As we address in separate comments on DEP’s proposed Global Warming Solutions Fund Rule, we further urge New Jersey to learn from the experiences of other RGGI states in determining how to invest its share of the revenues from RGGI’s allowance auctions to maximize their benefits to consumers, while ensuring that these benefits are distributed equitably.

#### **B. Cost Containment Reserve**

---

<sup>16</sup> M.J. Bradley & Associates (2017), *A Pioneering Approach to Carbon Markets: How the Northeast States Redefined Cap and Trade for the Benefit of Consumers*, [static1.squarespace.com/static/5ab0544a9d5abb6d42468691/t/5b2841d670a6ad07780f8b03/1529364967119/rggimarkets02-15-2017.pdf](http://static1.squarespace.com/static/5ab0544a9d5abb6d42468691/t/5b2841d670a6ad07780f8b03/1529364967119/rggimarkets02-15-2017.pdf).



The RGGI Model Rule contains a CCR, which was originally adopted by the RGGI states as part of their 2012 program review to mitigate potential price spikes during unexpected and exceptional circumstances. If allowance prices exceed predetermined price triggers in RGGI's auctions, the CCR releases additional allowances into the market to lower prices. These allowances are *in addition* to the RGGI cap, which means they increase allowable emissions in the region above the limits states have agreed to, which could undermine climate goals.

In the 2017 RGGI Model Rule, the current RGGI states made improvements to the CCR, including reducing the number of extra allowances that can be released, to reduce its emissions impact, and raising its price triggers, to reduce the likelihood the CCR could be triggered during normal market conditions when allowance supply is sufficient and prices are still relatively low, as it was in both 2014 and 2015. DEP's proposal includes a CCR consistent with these reforms.

We support these reforms to the CCR; however, we remain concerned that this mechanism could undermine New Jersey and other states' climate commitments under RGGI. As New Jersey re-enters RGGI, we encourage DEP to monitor the CCR closely and to work with the other states to continue to improve it in future program reviews. In particular, we urge DEP to work with the other RGGI states to modify the CCR so that its allowances are drawn from *underneath* the RGGI cap rather than created outside of and on top of the cap. This can be achieved by borrowing CCR allowances from future years—that is, reducing future supply to account for allowances released under the CCR. This approach, which would better ensure the CCR provides price containment without undermining RGGI's overall emissions goals, is currently used in California's greenhouse gas emissions trading program, where prices have been stable.<sup>17</sup>

### C. Emissions Containment Reserve

In the 2017 RGGI Model Rule, the current RGGI states also adopted the ECR, a new mechanism that will automatically capture additional low-cost emissions reduction opportunities when they are available. Throughout RGGI's history, reducing emissions has consistently been cheaper than anticipated. While this has helped reduce compliance costs, it has also represented a missed opportunity to increase RGGI's ambition. Leaving low-cost emissions reductions on the table is problematic given the urgent need to cut greenhouse gas emissions further and faster to avoid the worst effects of climate change. The ECR provides a new mechanism in RGGI to share the benefits of cheaper reductions between the economy and the environment.<sup>18</sup>

We strongly support DEP's adoption of the ECR in the proposed rules. As DEP's emissions modeling shows, RGGI allowance prices are projected to remain low from 2020-2030. While this modeling suggests that New Jersey and its RGGI partners must also focus in the near-term on strengthening the RGGI cap as part of their next program review, the ECR will nevertheless provide a mechanism to remove a portion of unnecessary, surplus allowances from the program and automatically strengthen RGGI between program reviews. As with the CCR, we encourage

---

<sup>17</sup> EDF, 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](http://www.edf.org/sites/default/files/content/carbon-market-california-year_two.pdf).

<sup>18</sup> Resources for the Future, *Expanding the Toolkit: The Potential Role for an Emissions Containment Reserve in RGGI* (Aug. 2017), available at [http://www.rff.org/files/document/file/RFF-Rpt-RGGI\\_ECR.pdf](http://www.rff.org/files/document/file/RFF-Rpt-RGGI_ECR.pdf).

DEP to monitor the ECR and explore ways to improve this mechanism, such as by increasing the number of allowances that may be withheld under the ECR to capture additional benefits.

DEP proposes to set the size of the ECR at 10 percent of the state’s annual emissions budget, beginning in 2021.<sup>19</sup> This potential ECR size is consistent with what most other RGGI states have adopted. However, given the uncertainty in New Jersey’s 2020 emissions trajectory, we encourage DEP to adopt an ECR that is larger than 10 percent of the state’s annual emissions budget. As noted above, previous NRDC modeling found that a substantially lower 2020 base budget for New Jersey than DEP’s proposed 18-million-ton level might be appropriate. If the state’s 2020 emissions are lower than the proposed base budget due to, for example, higher gas prices or lower PJM demand than assumed in DEP’s own modeling, then entering New Jersey into RGGI with an 18-million-ton budget could substantially weaken the program by inflating RGGI’s cap by potentially millions of tons of excess allowances per year.

While the ECR is designed to help correct for such problems, at only 10 percent of the base budget, as proposed, it may be too small to fully correct for a New Jersey overallocation. We recommend that New Jersey adopt a larger ECR to address the potential of a larger than 10 percent error in the 2020 base budget calculation. An ECR sized at 30 percent of New Jersey’s annual emissions budget, for example, would fully account for the difference between DEP’s proposed 18-million-ton starting budget and the 12.6-million-ton level from NRDC’s May 2018 modeling.<sup>20</sup> If New Jersey and the other states subsequently agree to adjust RGGI’s cap in the next program review, the size of New Jersey’s ECR could also be reconsidered at that time.

#### **D. Minimum Reserve Price**

We also encourage DEP to work with the other RGGI states to raise the “minimum reserve price” in RGGI, which establishes a floor price in RGGI’s quarterly allowance auctions, to better reflect the costs of carbon pollution. We support RGGI’s inclusion of a minimum price and DEP’s adoption of such a price in the proposed rules. However, the current minimum price, which is just over \$2 per ton, is too low. While the ECR can help bolster allowance value, raising RGGI’s minimum price would provide greater certainty for the clean energy investments needed to reduce power plant pollution in New Jersey and the region.

#### **E. Adjustment for Excess Allowances**

Historically, power plant CO<sub>2</sub> emissions have fallen much faster in the RGGI region than the program’s cap has required. This has resulted in an oversupply of carbon allowances in the region that has depressed allowance prices, which reduces the incentive to pursue additional

---

<sup>19</sup> For example, if New Jersey’s emissions budget is 17,460,000 tons in 2021, as currently proposed, then up to 10 percent of that, or 1,746,000 could be withheld under the ECR if allowances prices are low.

<sup>20</sup> Because the ECR will not kick-in until 2021, this mechanism will not be able to address a New Jersey base budget that is too high in 2020, even if New Jersey were to increase the size of its ECR—i.e., the ECR will only be able to help correct for allowance oversupply in future years. However, the adjustment for excess banked allowances that New Jersey and other states will make from 2021-2025 may help address the 2020 problem, since it will be based on the size of the bank at the end of 2020, which may include excess allowances from New Jersey’s 2020 allocation.

emissions reductions while also putting future emissions progress at risk, because excess allowances in the market could be used to emit at higher levels in future years.

During the 2012 program review, the RGGI states devised and implemented the novel practice of adjustments for banked allowances—by agreeing to reduce the number of allowances released in future years—as a solution to the program’s allowance oversupply problem. This solution elegantly addresses the undesirable impacts of an oversupplied market, while preserving the value of investments for parties that have already purchased RGGI allowances. In the 2017 RGGI Model Rule, the states committed to a further adjustment for excess banked allowances, to be calculated through the end of 2020, which will be implemented in the region from 2021-2025.

We strongly support DEP’s proposal to participate in and fully implement this 2021-2025 adjustment for banked allowances, consistent with the commitments by the other RGGI states, in proportion to New Jersey’s allowance allocation. As emissions have continued to fall in the region, a new surplus of allowances has accumulated, and it is important that all states participating in RGGI take action. These adjustments, which will be carried out over a five-year period, are sufficiently gradual to avoid shocking the market. In future program reviews, we also urge New Jersey to support further adjustments for excess banked allowances as needed to ensure the continued strength of the RGGI program.

#### **IV. Addressing Environmental Justice**

In addition to CO<sub>2</sub>, fossil fuel-fired generation emits air pollutants with localized adverse public health impacts, such as fine particulate matter, nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), and hazardous air pollutants. If a stringent carbon pollution cap is adopted, participation in RGGI can be expected to reduce emissions of other harmful air pollutants from power plants as well. An independent comprehensive analysis of RGGI’s health impacts found that over its first six years the program improved air quality in the region and generated significant public health benefits.<sup>21</sup> Specifically, “RGGI resulted in net reductions of both [SO<sub>2</sub> and NO<sub>x</sub>] in each year of RGGI’s first two compliance periods” as well as “incremental improvements in air quality in every year of the program’s first six years.”<sup>22</sup>

By reducing power plant CO<sub>2</sub> emissions, rejoining RGGI will also help New Jersey reduce emissions of these harmful air pollutants in the state. However, even an ambitious CO<sub>2</sub> emissions cap is unlikely to fully address the long-standing air pollution concerns caused by New Jersey’s fossil power plant emissions, because a statewide CO<sub>2</sub> emissions limit will not guarantee reductions of locally-harmful co-pollutants in any particular location.

Accordingly, as New Jersey looks to re-enter RGGI, we urge the state to work with environmental justice communities—communities of color and low-income communities who

---

<sup>21</sup> Abt Associates (2017), *Analysis of the Public Health Impacts of the Regional Greenhouse Gas Initiative, 2009-2014*, [www.abtassociates.com/insights/publications/report/analysis-of-the-public-health-impacts-of-the-regional-greenhouse-gas-0](http://www.abtassociates.com/insights/publications/report/analysis-of-the-public-health-impacts-of-the-regional-greenhouse-gas-0).

<sup>22</sup> *Id.* at 22, 27. In addition, the Abt Associates modeling results “show substantial air quality benefits in the non-RGGI states of Pennsylvania and New Jersey due to emission reductions from plants located in RGGI states.” *Id.* at 29.



ATTACHMENT – Comments Filed with NJDEP

have historically borne higher pollution burdens and face disproportionate risks from climate change—to identify policies and programs that will further reduce air pollution and improve public health. New Jersey should perform an environmental justice analysis to assess potential localized impacts on pollution-overburdened communities, and conduct ongoing monitoring to evaluate the emissions impacts of RGGI implementation. Once specific communities of concern are identified, New Jersey should take action to address the sources of localized air pollution that contribute to the harm in these communities—for example, the state should strengthen enforcement of existing Title V operating permits for power plants and other industrial sources of air pollution and issue more stringent limits when those permits are renewed.

Additionally, we urge New Jersey to ensure that environmental justice communities are able to meaningfully participate in the process of determining how the state implements RGGI and addresses air pollution. New Jersey must also ensure that these communities have access to the energy efficiency and renewable energy benefits generated by the RGGI program, as we discuss further in our separate comments on the proposed Global Warming Solutions Fund Rule.

We look forward to working with Governor Murphy, DEP, and other state agencies on these efforts to ensure that all communities in New Jersey can breathe clean air and benefit equitably from the implementation of RGGI.

\* \* \*

Thank you for the opportunity to provide these comments.

Sincerely,

Jordan Stutt  
Carbon Programs Director  
Acadia Center

Georgia Murray  
Staff Scientist  
Appalachian Mountain Club

Noah Dubin  
Eastern States Advocate  
Environmental Entrepreneurs (E2)

Bruce Ho  
Senior Advocate  
Natural Resources Defense Council

Richard Lawton  
Executive Director  
New Jersey Sustainable Business Council

John Rogers  
Senior Analyst, Climate and Energy  
Union of Concerned Scientists