STATE OF NEW YORK

State of Vermont

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VIA EMAIL

Environmental Protection Agency
EPA Docket Center (EPA/DC), Mail code 28221T
Attn: Docket ID No. EPA-HQ-OAR-2013-0602
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Washington, DC 20460
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Re: Docket ID No. EPA-HQ-OAR-2013-0602 – *RGGI States' Supplemental Comments on Proposed Clean Power Plan*

The nine states participating in the Regional Greenhouse Gas Initiative ("RGGI")[1] submit these supplemental comments on the U.S. Environmental Protection Agency's ("EPA's") proposed Clean Power Plan ("CPP"), which are respectfully submitted in addition to the comments offered by the RGGI states on November 5, 2014[2] ("November 5 Comments"). We once again take this opportunity to commend the EPA for its unprecedented stakeholder outreach, which has culminated in the release of additional information since the drafting of our initial comments. As such, in these comments we focus on issues raised by the EPA in three recently released documents: (1) *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, Notice of Data Availability*[3] ("NODA"); (2) *Technical Support Document: Translation of the Clean Power Plan Emission Rate-based CO_2 Goals to Mass-based Equivalents*[4] ("RTM TSD"); and (3) *Carbon Pollution Emission Guidelines for Existing Stationary Sources: EGUs in Indian Country and U.S. Territories; Multi-Jurisdictional Partnerships*[5] ("Supplemental Notice").

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[1] Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island and Vermont (collectively referred to as the "RGGI states").
[2] RGGI States CPP Joint Comments (Nov. 5, 2014) http://www.rggi.org/docs/PressReleases/PR110714_CPP_Joint_Comments.pdf.
[3] 79 FR 64543 (Oct. 30, 2014).
[4] November 6, 2014 and 79 FR 67406 (Nov. 13, 2014).
[5] 79 FR 65482 (Nov. 4, 2014).

The RGGI states continue to support the EPA's efforts to reduce the greenhouse gas ("GHG") emissions that cause climate change, especially given that the RGGI states are already feeling its effects. We commend the EPA for its continued efforts to improve and clarify the proposed CPP by considering the issues discussed in the NODA, RTM TSD, and Supplemental Notice. With the recommendations included in these comments, the EPA can further strengthen the final CPP rule.

1) **The RGGI States Reiterate Their Support for the Inclusion of the Potential for New Natural Gas Combined Cycle ("NGCC") in Building Block Two**

The RGGI states respectfully reiterate their support for consideration of the potential for new NGCC plants in Building Block Two. The significant increase in NGCC generation in the RGGI region in recent years is illustrative of the potential on a nationwide scale. In New York alone, 18 new NGCC units came on-line between 2004 and 2011, increasing the State's natural gas-fired nameplate capacity by approximately 150 percent in a seven-year period. This experience is typical of the RGGI region, which added more than 21 gigawatts of natural gas-fired generation capacity between 1997 and 2011.

As the EPA acknowledges in the NODA, including new NGCC in the goal computation methodology would reduce disparities in the proposed state targets, and would help to ensure that the potential for additional cost-effective emission reduction measures are reasonably reflected in states' targets. As discussed in our November 5 Comments, the RGGI states support consistency between target-setting and compliance tools in order to maintain the integrity and effectiveness of the overall program, and therefore recommend that the EPA strengthen Building Block Two by incorporating the potential for re-dispatch from existing coal-fired EGUs to new NGCC plants in the goal computation methodology for Building Block Two. The RGGI states respectfully observe that this methodological adjustment is particularly important for states that are not currently subject to the application of Building Block Two due to a lack of existing NGCC capacity, because absent this consistency the current structure of the CPP may create perverse incentives to build unnecessary new NGCC units. Including the potential for new NGCC capacity can reduce the cost of compliance attributable to the CPP, as well as the potential for shifts in generation from existing sources to new fossil fuel-fired electric generating units ("EGUs") that do not result in net carbon dioxide ("CO_2") emission reductions.

While the RGGI states support the inclusion of new NGCC in Building Block Two, the NODA's proposed 12 percent floor for re-dispatch in states with low or no existing NGCC capacity would have limited impact. Our analysis indicates that the proposed 12 percent floor would only apply to nine states and add a small amount of additional NGCC generation – 30,000 GWh nationwide. The RGGI states believe that more can be done to ensure that the effectiveness of the CPP is not diluted by the construction of new NGCC units.

In lieu of a floor, EPA should consider the approach suggested by the RGGI states in our November 5 Comments to derive new state NGCC capacity targets using the national compound average growth rate for natural gas projected by the U.S. Energy Information Administration's

Annual Energy Outlook. Other considerations could include the production capacity and construction plans for new natural gas pipelines, as well as the potential to re-power existing coal EGUs.

2) **The RGGI States Support Additional Flexibilities Around the "Glide Path" and Early Reductions, Provided Overall Stringency of the CPP is Maintained**

The RGGI states support the inclusion of flexibility throughout the CPP, including the potential for additional flexibility outlined in the NODA with respect to the timing of measures relied on as part of state compliance demonstrations. If the EPA were to recognize actions taken during the period from January 1, 2014 through the beginning of the proposed 2020 compliance period, greater recognition would be given to the substantial progress already achieved by early action states to reduce GHG emissions; such a provision could also provide incentives for additional early action. At the same time, the RGGI states urge the EPA to ensure that any recognition of action undertaken prior to the compliance period does not reduce the overall stringency of the rule on a national level. In the event that the EPA chooses to provide states with greater interim flexibility in a way that diminishes the emission reductions that would have otherwise been achieved in the interim period, the EPA should implement other changes such as those identified by the RGGI states that would achieve additional cost-effective reductions, such that the overall level of national stringency is maintained or increased.

3) **The RGGI States Comment on the Potential of EE and RE to Displace Fossil Generation**

Drawing from the demonstrated experience of the RGGI states as early adopters of climate change mitigation efforts, in our November 5 Comments, the RGGI states offered suggested modifications to the Building Block Three and Four methodologies to maintain, and ideally increase, the overall nationwide level of emission reductions required by the final rule.

Through implementation of energy efficiency ("EE") and renewable energy ("RE") measures, the RGGI states observe that EE and RE can displace a combination of existing and new fossil generation, as well as electricity imports and other sources of electricity. For purposes of computing state targets under the CPP, the NODA proposes to assume the displacement of existing fossil generation by incremental RE and EE generation. The RGGI states recognize that, were the EPA to move ahead with the NODA proposal, all states' proposed rates would become more stringent, particularly those states with greater Building Block Three and Four targets.

If the EPA were to move forward with the proposal to displace fossil fuel generation, we respectfully recommend modifications to the displacement assumption so that the final targets reflect what is reasonably achievable by the states. Specifically, while the displacement concept is contemplated by both the NODA and by the RTM TSD, we strongly recommend that the EPA adopt the displacement methodology in only one context so as to prevent a duplicative impact. In order to maintain consistency across rate-based and mass-based approaches, the displacement adjustment should apply only to the computation of the target rates. However, the EPA should

provide states opting to pursue a mass-based approach with the opportunity to justify the appropriate amount of existing and new fossil generation that should be displaced (rather than apply an assumption that all incremental RE and EE will displace existing fossil fuel-fired generation).

4) **The RGGI States Comment on the Alternative RE Approach for Building Block Three with the Flexibility to Reapportion the Technically and Economically Feasible Renewable Generation Targets Among States Involved in a Cooperative Regional Program**

While the RGGI states strongly support regional compliance approaches that are closely aligned with the regional nature of the electricity grids as the most cost-effective way for states to reduce power sector CO_2 emissions, we note that the EPA structured its building block methodologies to express the best system of emission reductions on an individual state basis.

The RGGI states note that while the derivation of a renewable generation target may be appropriately based on in-state technical and economic potential, the opportunities for *developing* renewable energy are regional in nature. Consistent with this observation, the NODA outlined an approach to computing Building Block Three state targets that, while derived using in-state technical and economic potential analysis, proposes a subsequent regional reallocation of the renewable generation goals.

The RGGI states observe that a regional reapportionment of appropriately derived renewable generation targets may reduce disparities between state targets. Specifically, given that the electricity produced by renewable resources will be utilized regionally, a resource-intensive state should not bear the full burden of developing these resources. A regional reapportionment, especially one that aligns with the regional nature of the grid or the existing (or likely) renewable energy standard markets of the states may reduce this disparity. Furthermore, in some instances, the technical potential of a renewable resource may exceed what a host state can develop. At the same time, to the extent that a state lacking substantial in-state renewable resource potential is required to rely on out-of-state renewable generation to comply with a regionalized target, such compliance will be subject to siting, permitting, and other regulatory actions of another jurisdiction that are beyond the state's ability to control. The EPA must provide clear guidance about how these contingencies affect compliance obligations.

5) **The RGGI States Support Mass-Based Compliance Approaches and Recommend that the Final Rule Maintain Flexibility with respect to the Rate-to-Mass Translation Methodology**

We have reviewed EPA's illustrative example of a Rate-to-Mass translation (*Projecting EGU CO_2 Emission Performance in State Plans*), the recently released computational methodology in the RTM TSD, and considered the RGGI states' own experience in developing and updating a mass-based emissions cap. The experience of the RGGI states demonstrates that a correctly determined mass-based target is the most cost-effective, transparent, and reliable

means of achieving the desired emission reductions, and we encourage EPA to continue to provide the opportunity, guidance, and resources that will enable other states to pursue this approach to compliance. In general, the RGGI states recommend that EPA develop rate-to-mass translation approaches that maintain flexibility on the methodology and data used to determine the translation, recognize the complexity and geographic connectedness of the electric grid, and provide enough oversight to ensure a meaningful equivalency of stringency between the rate-based and mass-based approaches.

In conducting the translation between the rate-based targets and a mass-based emissions cap, the RGGI states recognize the potential value of providing a simple calculation-based methodology, as has been requested by many stakeholders. As previously stated, the RGGI states firmly believe that a mass-based approach represents the most cost-effective method to demonstrate compliance with the CPP, and a simple translation methodology could facilitate this outcome by lessening administrative costs and uncertainties associated with the conversion process. Because of this potential, we suggest that EPA continue to analyze options for developing a simple translation approach, or at least streamlining aspects of the process.

However, because of the complexity of this nation's interdependent electricity grids and the dynamic nature of our energy markets, we are uncertain whether historically-based generation and capacity data can serve as the most reliable basis for building projections necessary to complete the translation process. A simple conversion process could yield results that do not account for the dynamics that result directly from the complexity and interconnectedness of the electric grid.[2]

Electricity system modeling offers crucial insights pertaining to how the system will respond to changes in policy or market forces, especially related to the type and location of generation among states. In fact, the RGGI states have found such modeling to be essential when analyzing environmental policies that may affect the electric sector. While a modeling-based approach would add cost and complexity to the translation process, EPA could address these issues by leveraging the large body of modeling experience and expertise that exists within EPA and the various state and regional organizations that routinely model the electric sector to support planning efforts, and by providing resources and technical assistance to states completing the rate-to-mass conversion process.

Whatever methodology is used, the EPA should work with individual states and regions to ensure adequate consideration is given to the states' information on assumptions and policy decisions that affect the outcome of the translation. States will need to have input on factors such as growth rate, as well as how the addition of incremental renewable energy and energy efficiency affect existing and new fossil generation and net imports based on the market

[2] In these comments, the RGGI states have outlined several concerns with the proposed rate to mass TSD calculation-based methodology. Maryland and Maine assert that these issues cannot be resolved solely with changes to the proposed calculation; rather, that dispatch modeling is necessary for the effective translation from rate-based targets to mass-based targets.

dynamics of their individual electricity systems. For example, the EPA should allow states to justify reliable growth rates, based on projections such as those developed by ISOs for planning purposes. In this dialogue, the EPA's consideration of state assumptions should rely on credible evidence (such as electricity system modeling and ISO projections) so that a meaningful translation of stringency is achieved.

The EPA should also avoid including projected energy efficiency programs in the calculation of a state's growth rate, or in modeling assumptions, if doing so would constitute double counting with the energy efficiency already included in setting the state's rate-based target. The EPA should also work with states to ensure that the growth factor accounts for an individual state's projected increase in electricity use resulting from policies to reduce GHG emissions from other sectors through electrification, such as electric vehicles and heat pumps.

6) <u>The RGGI States Support Participation of Jurisdictions Without Affected EGUs in Multi-Jurisdictional Plans</u>

The RGGI states strongly advocate that the EPA permit jurisdictions without existing fossil fuel-fired EGUs subject to the CPP guidelines to partner with jurisdictions that are subject to the CPP for purposes of developing a multi-jurisdictional plan. This provision, contemplated by the Supplemental Notice, is appropriate given the interconnectivity of the U.S. electricity grid and the participation of non-affected jurisdictions in our regional markets. A decision to the contrary would unnecessarily hamper multi-jurisdictional cooperation and may artificially preclude reliance on some cost-effective regional emission reduction strategies.

As discussed in our November 5 Comments, the RGGI states are proponents of inclusive multi-jurisdictional approaches to reduce GHG emissions, as we recognize that state boundaries do not always parallel the reality of regional, national and international energy production, distribution, and usage. Multi-jurisdictional approaches, such as but not limited to regional mass-based allowance trading programs like RGGI, foster greater innovation opportunities and provide additional flexibility for compliance as compared to a single state plan. Allowing for the participation of jurisdictions without affected EGUs, as discussed in the Supplemental Notice, will help to facilitate the use of these multi-jurisdictional partnerships.

Moreover, we note that the success of the RGGI program demonstrates that, by working together, groups of states can achieve greater emissions reductions more efficiently and cost effectively than by working separately. To build upon this historic success, the RGGI states anticipate that the development of a multi-state plan intended for compliance with the CPP will leverage the existing RGGI program and will encompass all RGGI participating states – including Vermont. While Vermont does not have any affected EGUs under the proposed CPP, Vermont does have two units that are subject to the RGGI program. Furthermore, its geographic and topologic location within the Independent Systems Operator ("ISO") New England region and bordering the New York ISO region renders Vermont a logical addition to the RGGI region's multi-jurisdictional compliance plan. Finally, while generation and emissions produced in-state comprise only a small share of the overall RGGI region, Vermont is in the process of developing

and implementing an ambitious program to source 90% of all energy (not just electricity) from renewable sources by 2050, an effort that complements other initiatives in the neighboring states and contributes to the expansion of renewable energy generation within the region.

The RGGI states support the EPA's position in the proposed rule that, assuming states successfully make an equivalency demonstration to the EPA as part of their regional plan submission, compliance and enforceability under this type of regional mass-based approach is straightforward[3]. We note that this position naturally extends to the inclusion of a jurisdiction without affected EGUs as part of a multi-jurisdictional compliance plan. Renewable energy, energy efficiency, and other lower non-emitting generation in any jurisdiction in the region would therefore facilitate overall regional compliance with the approved mass-based cap, and in turn, the CPP.

Finally, the RGGI states recommend that the EPA provide additional clarity in the final rule to avoid potential double counting of renewable energy and energy efficiency measures in CPP compliance demonstrations. This could be, for example, in the form of a prohibition of rate-based states taking credit for renewable energy or energy efficiency that is already accounted for under a mass-based program in another state or multi-state group. We recommend, however, that renewable energy and energy efficiency measures in a jurisdiction without any affected EGUs – where those measures have not otherwise been accounted for – should be able to be credited to another state, likely through a multi-state plan or other agreement.

7) <u>The RGGI States Support Regional Mass-Based Compliance Flexibility</u>

In our November 5 Comments, the RGGI states strongly support the EPA's inclusion of a mass-based compliance option in the CPP. The RGGI states have demonstrated that a regional mass-based approach is a cost-effective way to achieve substantial CO_2 emission reductions. Given these advantages, the RGGI states provided recommendations to the EPA to facilitate the use of regional mass-based approaches as a means of compliance with state targets. In addition, the EPA should clarify that if a group of states, like the RGGI states, translate the regional rate target to a mass-based target those states have the option of re-allocating the mass-based target.

[3] Proposed rule Section VIII(B)(1)(c) – Obligations on Affected EGUs: "A state plan that imposes a mass limit on affected EGUs that is sufficiently stringent to achieve the emission performance level would not need to include RE or demand-side EE measures as an enforceable component of the plan to assure the achievement of that performance level. The mass limit itself would suffice. However, the state may wish to implement RE and demand-side EE measures as a complement to the plan to support achievement of the mass limit at lesser cost."

Sincerely,

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