STATE OF NEW YORK

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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
1200 Pennsylvania Ave. NW
Washington, DC 20460
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Re: Docket ID No. EPA-HQ-OAR-2013-0602 – *New York State Comments on Proposed Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 FR 34830 (June 18, 2014)*

Dear Administrator McCarthy:

The New York State Department of Environmental Conservation (DEC), New York State Department of Public Service (DPS), and New York State Energy Research and Development Authority (NYSERDA; collectively "the State" or "New York") submit these comments on the U.S. Environmental Protection Agency's (EPA's) proposed Clean Power Plan (CPP), which would establish carbon dioxide (CO_2) emission guidelines for existing electric generating units.

New York supports strong federal action to reduce the greenhouse gas (GHG) emissions that cause climate change, and commend EPA for proposing a rule under Section 111(d) of the Clean Air Act (CAA) to address CO_2 emissions from the electric sector. New York State is already feeling the effects of climate change. Heat waves, coastal flooding, and riparian flooding will threaten the State's environmental, social, and economic systems. Indeed, the Northeast has recently been subjected to a greater increase in extreme precipitation than any other region in the nation: a 70-percent increase in the amount of precipitation falling in the heaviest one percent of events between 1958 and 2010. Sea-level rise along New York's Atlantic coast has exceeded 18 inches since 1850. In 2011, Hurricane Irene and Tropical Storm Lee ravaged New York. A year later, Hurricane Sandy killed at least 48 New Yorkers and caused approximately $50 billion in damage.

Significant emissions reductions offer the best hope of avoiding, to the extent possible, similar and worsening climatic events. Over the last decade, New York has already achieved substantial CO_2 emission reductions from its electric sector through various programs and policies. Our experience is that such programs and policies to reduce GHG emissions can also result in economic growth and job creation. Although New York has already reduced power sector emissions 40% below 2005 levels, it is prepared to continue demonstrating leadership by reducing emissions further as part of a strong and equitable national effort.

We also support the general approach and framework used by EPA in the CPP. In particular, especially due to the interconnected nature of the electricity system, we agree that the "best system of emission reduction" (BSER) for CO_2 from power plants incorporates multiple strategies as reflected in the proposal's so-called "building blocks." Furthermore, the State appreciates that, while EPA has proposed specific CO_2 emission rate targets that states must meet, EPA has provided appropriate flexibility for the manner in which states plan to meet such targets. This is consistent with key principles of cooperative federalism and the successful history of the CAA. Finally, as a participating state in the Regional Greenhouse Gas Initiative (RGGI), New York welcomes the proposal's explicit recognition and acceptance of mass-based regional market-trading programs like RGGI as a means of compliance with a state's target.

While we applaud EPA for its proposal, we also believe there are at least two primary opportunities for EPA to make the final CPP rule stronger and more durable. First, the overall level of nationwide GHG emission reductions projected to be achieved by the proposal is inadequate to put the nation on a trajectory to achieve the 80% reduction in GHG emissions by 2050 that scientists say is necessary to avoid the worst impacts of climate change. We believe that EPA's proposal leaves cost-effective emission reduction opportunities on the table in many states. Particularly given the experience and leadership of early-acting states like New York in reducing emissions, the final CPP should ensure that all states apply cost effective measures that have already been adequately demonstrated to reduce CO_2 emissions.

Second, largely because of the structure of some the building blocks and the methodology used to calculate states' targets, the proposal results in unintended outcomes regarding the required amount of emission reductions for each state. Refinements to three of EPA's proposed building blocks, as described below, would help to address these issues. In particular, the changes suggested here would: (1) achieve additional cost-effective emission reductions nationwide; (2) reflect more accurately the achievable improvements in proactive states like New York; and (3) better achieve intended outcomes amongst states.

As a guiding principle, state targets that reflect their individual potential emissions reductions, based on sources of emissions, energy resources, transmission and other infrastructure, density, building stock, level and path reduction that has taken place to date, among other factors, will inform an approach to emissions reductions that will effectively meet the national goals of the program.

Given this principle, the improvements we suggest would also help the final rule to be more forward-looking in nature. In many ways, the current proposal is focused on looking backwards at what has already occurred in each state. For example, the CPP proposal considers the level of Renewable Portfolio Standards (RPS) that a state has already established, and the amount of existing natural gas combined cycle (NGCC) capacity that has already been built. The structure of the CPP's building blocks and state target calculations is largely tied to each state's leadership, or lack thereof, in reducing emissions to date. In other words, the proposal incorporates measures that leadership states like New York have already taken, but does not consider what all states are capable of doing in the future. The final CPP should focus instead on prospective developments in each state, such as the technical and economic potential for new renewable energy, and the potential to add new NGCC capacity. Such a forward-looking approach is necessary to truly address GHG emissions and minimize climate change.

New York State has consistently supported EPA's efforts to regulate GHG emissions under the CAA. The State agrees with EPA that taking action to reduce CO_2 emissions is critical given the urgent nature of the climate challenge, and believes that EPA has clear authority under CAA Section 111(d) to issue guidelines for states to address GHG emissions from existing power plants. EPA should, however, make the modifications described below so that the CPP achieves greater overall nationwide emission reductions in a way that accounts for the early action of states like New York and ensures equity amongst the states.

1) <u>New York State's Target Is Ambitious Compared to the Targets of Other States</u>

New York has shown sustained leadership in GHG emission reduction policies and programs, including by investing in emission reductions across all sectors and fuels. In the electricity generation sector, CO_2 emissions from New York State power plants have decreased over 40% (on a mass-basis) between 2005 and 2012. This merits acknowledgment, as even before the proposed rule was issued, New York had already achieved a greater percentage of emission reductions than the 30% national reductions sought by the proposal from the same year baseline (2005). For context, nearly half of the states will not be required by the CPP proposal to achieve a 2030 emissions reduction target that equals New York's adjusted 2012 baseline. The current proposal will further require New York to achieve an additional 44% reduction in the State electricity sector's CO_2 emission rate by 2030; by comparison, other states will only be required to achieve an average emission rate reduction of 33% in the same time frame.

Requiring New York to seek dramatic reductions in the electricity generation sector may also have unintended consequences in broader GHG emission reduction policy and strategy. New York's draft 2014 State Energy Plan identifies a goal of reducing the carbon intensity of its energy economy 50% by 2030. This intensity reduction equates to an approximately 40% reduction by 2030 on a mass basis. New York, like many other cold-weather states, has a large space heating (or "thermal") load, the vast majority of which is met through fossil fuel combustion. Unique to New York is the significantly large portion of this thermal load that is

met through petroleum distillate (i.e., "heating oil"); in the residential sector this distillate thermal load approaches 30% of all housing units in the State. When compared to New York's electricity sector, the thermal load sector is considerably more GHG-intense. To meet the State's overall GHG reduction policy, New York will be looking to make more "productive" investment in the thermal load sector, achieving greater levels of GHG reduction per dollar of investment. One potential undesired consequence of EPA's proposal is that, if New York is asked to dedicate a disproportionate amount of its limited investment resources in seeking less productive emissions reduction in the electricity sector, this is likely to sacrifice a level of investment in the more intensive thermal load sector, eroding progress towards overall GHG emission reductions. In addition, New York is initiating new policies and strategies that are designed to look at all fuel inputs to a building or industrial facility, and provide energy efficiency or renewable energy alternatives that will improve the emissions profile of the entire structure without isolating electric energy efficiency. It is anticipated that these initiatives will provide a model for other states on how to achieve greater levels of scale for all-fuels energy efficiency and renewable energy alternatives, in the pursuit of realizing emission reduction levels that create a path to an 80% reduction by 2050 across the entire economy.

For these reasons, particularly given the progress the State has already made in reducing emissions from its electric sector, the proposal's 2030 target CO_2 emission rate of 549 lbs/MWh for New York's power sector is unduly ambitious and does not account for State-specific electric system constraints. Because of the unintended implications of the proposal and the potential for economic and competitive disadvantages to result for the State, EPA should revise the proposal as described in Sections 2 through 4 below to create more equity in the CPP while simultaneously increasing emission reductions overall.

a. New York Has Already Achieved Significant Emission Reductions

As currently constructed, the proposal results in extremely uneven targets across the states. In general, the proposal requires substantial reductions from states like New York that have already reduced emissions from prior benchmarks, while requiring a relatively small level of reductions in many states that have yet to make any progress. While EPA is correct to acknowledge differences in the states' existing electricity infrastructure and fuel mix as justifying some divergence in the required levels of reduction, the proposal does not distribute the CO_2 emission reduction requirements equitably. Instead, EPA's proposal may have the effect of disadvantaging states like New York for taking early action to reduce power plant emissions, while seemingly benefitting many other states that have delayed action. Moreover, while the structure of the building blocks seems designed to recognize perceived challenges in other states – particularly those that are heavily coal-dependent – the proposal does not similarly recognize the limitations that may apply in states like New York that have already begun to restructure their electric systems to reduce GHGs and taken advantage of the most readily available emission reduction opportunities.

Since the early 2000s, New York has implemented a variety of programs and policies to help achieve its GHG emission reduction and other environmental goals. For example, by opening its electric markets to competition, New York incentivized fossil generators to seek greater efficiencies in their operations, resulting in both the retirement of older, less efficient plants and construction of new state-of-the-art facilities. Furthermore, DEC adopted a CO_2 performance standard for new power plants, establishing a CO_2 emission rate limit for most new plants that is more protective than the rate recently proposed by EPA in its CO_2 new source performance standard.[1] The State has also implemented innovative programs to support new renewable power, the repowering of existing coal-fired facilities, and energy efficiency measures. Most recently, the New York State Public Service Commission (PSC) initiated a ground-breaking proceeding to realign the state's utilities to focus on demand reduction at the distribution level.[2] The State's participation in RGGI provides an overarching cap on the level of CO_2 emissions from the power sector, and reflects and accounts for the complementary benefits of the State's variety of programs. New York's multifaceted approach to reducing GHG emissions from its electric sector has shown significant success and is an available and adequately demonstrated system of emission reduction that other states can and should implement. As has been demonstrated by New York's success, additional reductions are achievable in other states in a shorter time period than anticipated by EPA's proposal.

Despite the significant progress New York has already made, and the considerable investment New York's ratepayers have borne, EPA's proposal would require an additional 44% reduction in the State's already-low CO_2 emission rate. While the State believes that the proposal should require at least some amount of emission reductions from current levels in each state, the proposal's methodology for calculating states' emission rate targets ignores the progress – or lack thereof – states have made prior to 2012. As currently proposed, the rule requires little of many states that have yet to take action and that typically have more "low hanging fruit" opportunities to reduce emissions, and more of states like New York that would have to work even harder to realize even more emission reductions from their electricity sectors.

Potential ways to resolve this would be for EPA to use an earlier baseline, such as 2005, that recognizes early action taken by states like New York, or consider a mechanism whereby appropriate credit is given to reflect emission reductions already achieved. If EPA makes the changes to the building blocks described below, however, then the final rule could address the proposal's shortcomings without modifying the 2012 baseline or creating any crediting mechanism.

b. New York State-Specific Constraints Are Not Reflected in the Building Blocks

Largely because the proposal does not recognize the impact of the changes that New York has already made to reduce emissions, the CPP also does not reflect State-specific

[1] See 6 NYCRR Part 251, CO_2 Performance Standards for Major Electric Generating Facilities.
[2] See Reforming the Energy Vision (REV) Proceeding, PSC Case 14-M-0101.

constraints and the operational realities of New York's electric system. As a result, the CPP poses difficult challenges for New York in achieving the target CO_2 emission rate required by EPA's proposal. These challenges arise, in part, because the State's prior efforts in reducing emissions have exhausted almost all of the emission reduction potential of one of the building blocks. Thus, while we understand that EPA is not requiring that the State implement each building block at the level contemplated in the proposal, New York has less flexibility and fewer strategies to deploy in meeting its target than many other states.

First, as explained in more detail below, Building Block Two's anticipated level of re-dispatch to existing NGCC plants is unattainable given reliability requirements that necessitate the operation of oil/gas steam units in New York City and Long Island, as well as other factors. Generation owners are subject to market and reliability rules that are approved by the Federal Energy Regulatory Commission (FERC). The consequence of these FERC rules is that re-dispatch to NGCC units from other fossil fuel units, especially oil/gas steam units, is limited by an electric transmission and/or a gas supply constraint. As a result, it is virtually impossible for New York to achieve the 70% capacity utilization assumed by EPA in Building Block Two.

Second, because it relies on Northeastern states' relatively ambitious renewable energy policy targets, Building Block Three sets an extremely challenging goal for the amount of renewable energy generation assumed to be achievable in New York. This difficulty is exacerbated by EPA's disallowance of existing hydroelectric power to meet EPA's target even though it has included existing hydroelectric power in establishing the State's emission reduction target. It has been New York's policy to promote the development of new renewable energy resources since at least 2004, when the PSC instituted the State's 2015 renewable portfolio standard (RPS) target to support over 14,000 GWh of renewable electricity purchases made through a variety of initiatives including the Main Tier, Customer-Sited Tier, Voluntary Market activity, Executive Order 111, and Long Island Power Authority (LIPA) contributions.[3] Specifically, NYSERDA has been pursuing an RPS Main Tier and Customer Sited Tier 2015 program target of 10,400 GWh; through the end of 2013, New York had procured 5100 GWh of renewable energy generation through these programs, at a committed cost of approximately $1.4 billion in ratepayer funds.

Concurrently with these RPS initiatives, the New York Power Authority (NYPA) has invested $115 million in programs supporting renewable supply. Through 2013, these NYPA investments have resulted in projects associated with 108 GWh of annual renewable generation. Similarly, LIPA has invested approximately $122 million in programs supporting renewable supply. Through 2013, these LIPA investments have resulted in projects associated with

[3] See Proceeding on Motion of the Commission Regarding a Retail Renewable Portfolio Standard, PSC Case 03-E-0188, "Order Authorizing Customer-Sited Tier Program Through 2015 and Resolving Geographic Balance and Other Issues Pertaining to the RPS," issued and effective April 2, 2010. The State's RPS has two primary components, the Main Tier and the Customer-Sited Tier. The Main Tier is designed to promote the development of new large scale, grid-tied renewable generation. The Customer-Sited Tier allows customers to participate directly in the promotion of certain technologies using self-generation, "behind-the-meter" facilities.

approximately 62.5 GWh of annual renewable generation. Additionally, New York has taken steps to encourage further development of renewable energy resources. For example, in April 2014, the PSC authorized $960.5 million in funding for the NY-Sun initiative, with a goal of installing 3,000 MW of new solar capacity by 2023. Also, NYSERDA recently filed a proposal regarding a Clean Energy Fund to accelerate clean energy development in the State.[4]

New York's leadership on this front has given the State a practical perspective on EPA's approach to Building Block Three. While ambitious targets are necessary to communicate to the public and the market the scale of response that a state may seek, implementation issues will affect the rate of deployment and the success of any program. Factors affecting implementation success include local opposition, supply chain limitations, access to capital markets, and the lack of consistent Federal policy on renewable incentives such as tax credits. Typically, developers initially seek "low hanging fruit" opportunities, leaving more expensive resources unexploited due to uncertainties. Thus, while a target provides a goal, it is not necessarily a reliable indicator of what is actually achievable in any specific time frame.

While the State understands EPA's proposal does not require states to implement each particular building block at the assumed levels, this apparent flexibility is limited in practice for a state like New York. That is, EPA's proposal offers a state flexibility to deviate from a particular building block only to the extent emission reductions may be made up through other building blocks or other means. Because of the ambitious level of EPA's proposed target and the fact the State has already achieved substantial emission reductions using the same strategies EPA incorporates in the building blocks, such "flexibility" is in reality limited. As EPA explains in its proposal, the application of a building block to a state may be limited if a state demonstrates that it cannot achieve the anticipated level of emission reductions from the building block and cannot make up the emissions through application of other building blocks.[5] As described below, this is precisely the situation for New York. Having already driven substantial change in the generation dispatch and the supply portfolio, the State would have to leverage additional reductions using a smaller tool box than that available to the less-advanced states.

For these reasons, EPA should make adjustments to three of the proposed building blocks. The refinements described below to Building Blocks Two, Three, and Four would more accurately reflect achievable and adequately demonstrated opportunities for emission reductions across the country.

2) <u>Building Block Two (Change in Dispatch from Oil/Gas Steam and Coal to Gas)</u>

New York has made substantial strides in the past decade to reduce the carbon-intensity of its fossil fuel-fired electricity generation. For example, in the seven years from 2005 to 2012, generation from the combustion of oil in New York decreased by 98%, from about 24,000 GWh in 2005 to only 580 GWh in 2012. Over the same period, generation from coal-fired units

[4] <u>See</u> Proceeding on Motion of the Commission to Consider a Clean Energy Fund, PSC Case 14-M-0094.
[5] 79 FR 34,893.

decreased by 78%, from about 20,600 GWh in 2005 to about 4,550 GWh, or around 3% of New York's generation, in 2012. Over the same time period, the amount of electricity produced by natural gas in New York nearly doubled, increasing from 19% of New York's generation in 2005 to 37% in 2012.

Therefore, we agree that Building Block Two is a critical part of EPA's proposal, but it can be further strengthened in two ways. First, to address constraints that make the re-dispatch contemplated by this building block extremely challenging to achieve in New York, we recommend a mechanism to account for demonstrated electricity system constraints and ongoing fuel diversity needs. Second, additions to this building block to incorporate the potential for new NGCC plants, and co-firing or repowering of existing coal- or oil-fired plants, would strengthen the overall proposal.

a. New York State-Specific Constraints Regarding Natural Gas Dispatch

New York's existing gas and electric infrastructure does not enable achievement of this building block as structured by EPA. While we understand that EPA's intent under the CPP is to apply all building blocks equally to all states, New York presents a special case, as Congress recognized in the Energy Policy Act of 2005. In particular, Congress recognized the unique nature of New York's reliability issues by singling out New York and specifically allowing the State to go beyond federal reliability standards. See 16 U.S.C. § 824o. EPA previously recognized many of these constraints unique to the New York City and Long Island regions of the State when it revised the State's emission budgets under the Cross-State Air Pollution Rule (CSAPR) to account for the State's reliability issues.[6] Consistent with the Clean Air Act's requirement that standards of performance consider "energy requirements," 42 U.S.C. § 7411(a)(1), EPA should modify the CPP to similarly account for these New York-specific constraints and reliability requirements. In this way, this building block will require re-dispatch of existing coal and oil/gas steam units to the maximum extent that is realistically achievable.

EPA's proposal assumes that the output of NGCC across the country could be increased to displace the output of the more carbon-intense coal and oil and/or gas fired steam units. Its basis is that the nation's average NGCC fleet utilization rate or capacity factor using nameplate ratings is between 44% - 46%, while the NGCC's fleet's availability factor is between 87% - 92%. The NGCC output increase envisioned in this building block is not realistic for New York, however, because it does not adequately consider the State's existing physical gas and electric system constraints. In short, New York cannot use this building block to obtain the operating output of NGCC units envisioned by EPA.

[6] See Revisions to Federal Implementation Plans To Reduce Interstate Transport of Fine Particulate Matter and Ozone, 77 FR 34,830 (June 12, 2012); Technical Support Document (TSD) for the Final Revisions to the Transport Rule, Docket ID No. EPA-HQ-OAR-2009-049, Final June Revisions Rule, State Budgets and New Unit Set-Asides TSD, U.S Environmental Protection Agency Office of Air and Radiation (June 2012), p. 18-26.

Reliability requirements

To ensure electric system reliability, certain generators located in New York City and Long Island are required to comply with rules of the New York State Reliability Council (NYSRC) as implemented by the New York Independent System Operator, Inc. (NYISO).[7] These rules require, for example, that, under high load constraints, some higher-emitting oil/gas steam generating units be dispatched on oil to guard against potential interruption in gas supply to ensure electric reliability in these metropolitan areas. As a result, specific units that would generally be uneconomic to dispatch are required to operate. Moreover, because of the NYSRC Minimum Oil Burn requirements, some oil/gas steam units in New York City must operate using oil at certain times of the year, in order to be able to immediately switch operation and be prepared for a natural gas supply disruption.

There are also other circumstances which cause these units to run to ensure reliability, including storm watches (approaching thunder storms) and when the transmission owner requests that certain units be required to operate because of system constraints (Day Ahead Market Local Reliability Rules and Day Ahead Reliability commitments). NYISO independently verifies that these requests meet tariff and reliability rules prior to contacting the unit owner and designating the resource as a Day Ahead Reliability Unit.

One governing reliability requirement unique to downstate New York is that the electricity system must be dispatched to maintain reliability under an "N-1-1 contingency," which means the loss of key transmission and a major operating unit. This requirement, established by NYSRC to address the unique reliability needs of downstate New York as recognized by Congress in the Energy Policy Act of 2005, requires that the capacity zones that include New York City and Long Island must meet most of local electricity demand with local generation.

The reliability requirements described above are triggered on at least 90% of the days in a year. In 2012, for New York City, there were 139 days when a Minimum Oil Burn requirement was called and 36 days when a Storm Watch event was called. In addition, New York City units were committed on 178 days based on Day Ahead Market Local Reliability Rules, and on 213 days a New York City unit received a Day Ahead Reliability commitment. The union of these sets yielded 347 unique days when at least one of these reliability rules was invoked. As a result, there were 161 days when a large oil/gas steam unit in the New York City area burned oil.

[7] The NYSRC develops and enforces rules to address unique New York reliability issues, as recognized in the Federal Power Act at § 215(i) (3); 16 U.S.C. § 824o. See http://www.nysrc.org/pdf/Reliability%20Rules%20Manuals/RR%20Manual%2033%20April%2010%202014%20Final%20v.2.pdf for Rule I-R3 and http://www.nyiso.com/public/webdocs/markets_operations/market_data/reports_info/TO_Application_of_Reliability_Rules.pdf for the application (ARR 69).

Oil/gas steam units, which are generally more expensive to operate than NGCC units, operate when required by reliability considerations and rules. As demonstrated by Table 1 below, oil/gas steam units operate year-round as required by the reliability requirements described above. The way to back down the operation of these units would be to replace their capacity with new NGCC capacity in the downstate area and develop new natural gas supply infrastructure. But EPA should not assume this construction of new natural gas capacity in New York, especially considering the proposal does not require a similar level of new natural gas construction in other states.

Table 1: New York Generation on a Monthly Basis (2012)[8]

	Coal Gross Load (MWh)	OG Steam Load (MWh)	Gross NGCC Load (MWh)	Gross CT Load (MWh)	Fossil Load (MWh)	% Coal of Fossil	% OG Steam of Fossil	% NGCC of Fossil	% CT of Fossil
January	579,027	556,283	3,178,273	76,889	4,390,472	13.19	12.67	72.39	1.75
February	358,078	492,881	3,076,530	58,428	3,985,917	8.98	12.37	77.18	1.47
March	54,795	852,000	2,753,233	78,575	3,738,603	1.47	22.79	73.64	2.10
April	20,167	975,901	2,997,183	74,861	4,068,112	0.50	23.99	73.68	1.84
May	127,483	986,133	3,756,374	112,415	4,982,405	2.56	19.79	75.39	2.26
June	235,862	1,442,403	3,960,185	236,400	5,874,850	4.01	24.55	67.41	4.02
July	838,719	2,613,910	4,539,195	445,795	8,437,619	9.94	30.98	53.80	5.28
August	688,933	1,973,099	4,237,232	331,954	7,231,218	9.53	27.29	58.60	4.59
September	295,479	1,024,768	3,648,371	164,909	5,133,527	5.76	19.96	71.07	3.21
October	359,241	1,060,608	3,315,773	134,752	4,870,374	7.38	21.78	68.08	2.77
November	450,717	1,380,412	2,909,439	179,538	4,920,106	9.16	28.06	59.13	3.65
December	418,739	627,910	3,320,590	83,897	4,451,136	9.41	14.11	74.60	1.88
	4,427,240	**13,986,308**	**41,692,378**	**1,978,413**	**62,084,339**	**7.13**	**22.53**	**67.15**	**3.19**

Taken together, these unique New York City and Long Island requirements constrain the NYISO's ability to dispatch NGCC units. EPA has apparently neglected to take any of these limitations into account when evaluating the potential reduction in New York achievable under Building Block Two, despite previously recognizing these constraints in its final CSAPR revisions.

(i) Geographic and temporal limitations

EPA also apparently did not consider transmission constraints unique to New York, which limit the system's ability to transmit NGCC capacity located upstate to high load areas in and around New York City. Rather, the proposal appears to assume that both gas delivery and electric transmission infrastructure will be in place to support that NGCC capacity without adequately considering economic, reliability, and technical concerns. EPA also does not acknowledge that weather is critical factor affecting how much interruptible natural gas pipeline capacity is available for electric generation, as was demonstrated over the winter of 2013-14,

[8] Derived from USEPA CAMD database. http://ampd.epa.gov/ampd/

when limited natural gas supplies were needed for space heating in the downstate area. This approach overlooks real and important operating limitations and reliability considerations, such as fuel diversity.

Southeast New York, which includes New York City and Long Island, a metropolitan area that is home to over 11 million people,[9] has specific electric constraints that preclude the transfer of the increased output of NGCC units located "above" the constraint. One major electric system constraint is referred to as the Upstate New York/ Southeast New York or "UPNY/SENY" interface. Approximately 62% of New York's NGCC fleet is located in UPNY with the remainder in SENY.[10] Because of this constraint, it is simply not possible to access all the installed NGCC capability that is located in UPNY.

In addition, in New York, there may not be sufficient demand or load to be served at certain times of the year for NGCC units in New York to operate at 70% of nameplate capacity year-round, which is anticipated by the application of this building block to New York. For example, natural gas-fired plants have generally been dispatched ahead of coal recently in New York, in the absence of transmission constraints. On the other hand, coal-fired plants generally operate at times of heavy demand when gas-fired plants are often already operating in excess of 70% capacity, unless the operation of gas-fired plants is constrained by the reliability rules described above.

As demonstrated by Table 2 below, there were eight months in which total fossil load is less than 70% of NGCC generation capacity. Therefore on those eight months, fully re-dispatching all oil/gas and coal generation to NGCC would leave the NGCC units operating at less than 70% of load.[11] On the other hand, Table 2 also demonstrates that total fossil load in each of the four months from June to September exceeds 70% of EPA's NGCC capacity. In those four months alone, re-dispatching coal and oil/gas steam generation to NGCC will leave a total of 6.55 million MWh of non-NGCC fossil generation, even in the absence of reliability rules and constraints. Thus, even ignoring the reliability rules discussed above and transmission limitations, the only way to re-dispatch existing coal and oil/gas generation fully to NGCC would be to meet electricity load currently met by oil/gas and coal in the summer months with underutilized natural gas capacity the other eight months of the year. Yet, EPA's application of this building block assumes that 99.3% of the state's oil/gas and coal generation can be re-dispatched to natural gas and that 99.8% of the State's fossil electricity load can be met by natural gas.

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[9] http://quickfacts.census.gov/qfd/states/36000.html

[10] See, e.g., NYISO's 2014 Reliability Needs Assessment at pp. 24 and 28, available at http://www.nyiso.com/public/webdocs/markets_operations/services/planning/Planning_Studies/Reliability_Planning_Studies/Reliability_Assessment_Documents/2014%20RNA_final_09162014.pdf.

[11] In March 2012, for example, 2,753,233 MWh or 74 % of fossil generation was from NGCC, yet it only represented up to 38% of EPA's nameplate capacity. Seventy percent of nameplate capacity is 5,114,621 MWh. The State's fossil load in March was only 3,738,603 MWh.

Table 2: Capacity Analysis						
	State Gross NGCC Load (MWh)	**70% of Nameplate (MWh)**	**State Fossil Load (MWh)**	**EPA NGCC Nameplate Capacity (MWh)**	**NGCC Load % of EPA NGCC Nameplate**	**Fossil Load compared to 70% of EPA NGCC Nameplate**
January	3,178,273	5,114,621	4,390,472	7,306,601	**43.50%**	85.84%
February	3,076,530	4,784,645	3,985,917	6,835,207	**45.01%**	83.31%
March	2,753,233	5,114,621	3,738,603	7,306,601	**37.68%**	73.10%
April	2,997,183	4,949,633	4,068,112	7,070,904	**42.39%**	82.19%
May	3,756,374	5,114,621	4,982,405	7,306,601	**51.41%**	97.41%
June	3,960,185	4,949,633	5,874,850	7,070,904	**56.01%**	**118.69%**
July	4,539,195	5,114,621	8,437,619	7,306,601	**62.12%**	**164.97%**
August	4,237,232	5,114,621	7,231,218	7,306,601	**57.99%**	**141.38%**
September	3,648,371	4,949,633	5,133,527	7,070,904	**51.60%**	**103.72%**
October	3,315,773	5,114,621	4,870,374	7,306,601	**45.38%**	95.22%
November	2,909,439	4,949,633	4,920,106	7,070,904	**41.15%**	99.40%
December	3,320,590	5,114,621	4,451,136	7,306,601	**45.45%**	87.03%

(ii) Other limitations

Other limitations prevent full utilization of NGCC capacity. Natural gas demand in downstate New York for space heating will increase due to a recent New York City local law that requires the phase-out of residential and commercial boilers that currently use heavy fuel oil, and other factors. This increase in natural gas demand is, in turn, expected to require additional natural gas supply infrastructure, such as new pipelines and local distribution improvements. This raises concern about how gas infrastructure investments that are required to meet electric load requirements may be financed, and when such financing is needed. Given the relative size of New York City and its overall impact on the State's electricity system, EPA should consider future projections of natural gas supply and demand, and uncertainties associated with gas infrastructure development, when evaluating the State's ability to achieve 70% NGCC re-dispatch.

Finally, EPA apparently did not take into account that the use of nameplate capacity rather than net generating capacity may overestimate the ability to re-dispatch NGCC in New York. NGCC plants are comprised of, in part, combustion turbine(s) that compress large volumes of air as part of their power production cycle. Because of this, their output is affected by ambient air conditions. For example, during summer ambient conditions, their demonstrated maximum net capability (DMNC) in New York is approximately 80% of their nameplate capacity rating,

with the summer period producing the highest peak demands in New York; in the winter their DMNC is approximately 90% of the nameplate capacity rating.[12]

EPA's application of Building Block Two to New York requires a 99.3% reduction in coal and oil-fired generation as a result of re-dispatch to natural gas. But, as explained by EPA, a "state's NGCC generation is only adjusted up to [the 70%] ceiling if its historic fossil sources support such a level."[13] Because of the constraints discussed above, New York's fossil sources do not support this level. Although New York supports switching from coal or oil to NGCC where feasible, New York's electricity system simply cannot accommodate this level of re-dispatch. Therefore, the final CPP rule should address New York's unique circumstances and constraints regarding natural gas dispatch.

b. Recommended Changes to Reflect On-the-Ground Realities in New York

In order to address the on-the-ground realities in New York, EPA should limit the amount of anticipated NGCC re-dispatch under Building Block Two for New York (and any other similarly-situated states). One way of recognizing the various constraints that limit the ability of states like New York to implement this building block would be for EPA to establish a floor for coal and oil/gas steam units, based on a percent of total in-state generation after the application of the building block. For example, EPA could establish a collective floor of 12% coal and oil/gas steam units based on total generation, and then not apply the NGCC re-dispatch component of Building Block Two beyond that level.[14] EPA could limit this provision to those states that demonstrate that system constraints or reliability requirements prevent them from achieving the level of re-dispatch initially anticipated by this building block, as is the case for New York. This approach would achieve the greatest level of dispatch realistically supported by existing fossil sources while allowing states the flexibility to meet their legitimate reliability and gas and electric system constraints and maintain some amount of ongoing fuel diversity. Consistent with EPA's proposal in the October 28, 2014 Notice of Demand Availability (NODA), the reduction in re-dispatch from this adjustment could be made up by requiring a minimum level of natural gas dispatch from all states, as recommended below. In the alternative, EPA could limit the application of this building block to New York in recognition of the geographic and system topology constraints of New York's electricity system. *See* 79 FR 34,893.

In addition to this adjustment to Building Block Two, EPA should also consider using annual average net generating capacity rather than nameplate capacity, at least for states like New York in which the use of nameplate capacity may overstate technical ability. In the GHG Abatement Measures Technical Support Document (Abatement TSD), EPA indicated that

[12] Based on NYISO 2013 Load and Capacity Data "Gold Book."
[13] Technical Support Document (TSD): Goal Computation, pp. 10-11.
[14] For example, a state that produces 15% of its generation from coal or oil/gas would have to re-dispatch one-third of that amount, reducing the amount generated by oil/gas or coal units to 12% of its total generation.

nameplate capacity was utilized in the calculation of the BSER for Building Block Two. The Abatement TSD notes that re-dispatch would require one net mega-watt hour (MWh) of lower emitting technology replacing one net MWh of higher emitting technology. EPA further stated that it is interested in the relationship of a unit's total net generation relative to its net generating capacity (i.e., capacity factor), but that it relied on nameplate capacity because net generating capacity is not reported. The State recommends that minimum net generating capacity should be used in the development of Building Block Two. As described above, using nameplate capacity may overstate the amount of NGCC to re-dispatch.

As described above, for New York, net generating capacity is defined as DMNC, or the sustained maximum net output of a Generator, as demonstrated by the performance of a test or through actual operation, averaged over a continuous time period as defined in the procedures of the NYISO. Because of the weather's effects on DMNC, New York estimates the annual average for the State's NGCC units (Summer Capacity and Winter Capacity) to be approximately 85% of nameplate capacity. EPA should therefore consider using DMNC instead of nameplate capacity for any application of the NGCC re-dispatch contemplated by Building Block Two.[15]

c. Other Additions to Increase the Reductions Achievable Under This Building Block

In addition to making the changes described above to Building Block Two, including taking into account New York's constraints regarding re-dispatch to existing NGCC plants, EPA should also incorporate other opportunities for emission reductions through this building block. Including these additional opportunities in the calculation of states' targets would better reflect the BSER available nationwide. First, given that the proposal allows a state to use new natural gas-fired plants for compliance purposes, EPA should also incorporate the potential for new natural gas plants in calculating a state's target. Second, many existing coal-fired plants may be able to co-fire less carbon intensive fuels, or convert to firing natural gas. EPA should also incorporate these available and adequately demonstrated options as part of the BSER and calculation of a state's target.

As currently constructed, Building Block Two requires little to no reductions from states that have limited or no existing natural gas capacity. In contrast, the CPP requires a state like New York – with a fossil portfolio that has already largely shifted to gas – to increase its dependence on that one fuel, without regard to infrastructure limitations or reliability concerns. This approach does not reflect emission reductions that are achievable in states with little existing NGCC capacity. For example, a state that currently obtains all of its electricity from coal-fired generation – and thus has the greatest potential to reduce emissions by switching from coal to gas – is not required to achieve any emission reduction under Building Block Two. This

[15] As stated in the comments jointly submitted with the RGGI states on November 5, 2014, EPA could increase the NGCC capacity target if it switches to the use of annual average capacity, subject to existing system topology constraints in a given state.

is despite the fact that new NGCC in heavily coal-dependent states would result in significant reductions in state CO_2 emission rates.

Moreover, although EPA does not include the potential for new NGCC plants in a state's target rate calculation, the proposal does allow a state the option to count new NGCC capacity towards compliance with its target. This results in an inconsistency between target-setting and compliance, as well as an effective dual penalty for states like New York in which the proposed target CO_2 emission rate is already lower than that of a typical new NGCC power plant. In other words, although the proposal allows new NGCC to be used for compliance purposes, this opportunity is not actually available for New York and other states with relatively low CO_2 emission targets. Because substantial new natural gas capacity has been constructed in numerous states over the past several years, EPA should incorporate at least some potential for re-dispatch from existing coal or oil/gas steam units to new NGCC plants into Building Block Two. For example, 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% in a seven-year period. By contrast, given that the CPP's state targets are for 2030, a state has a sixteen year period to increase its NGCC capacity. Therefore, including some potential for re-dispatch to new NGCC capacity into Building Block Two would achieve additional emission reductions nationwide and more accurately reflect demonstrated emission reduction measures, and result in greater equity in states' targets. When incorporating the potential for new NGCC capacity into Building Block Two, EPA could consider technical and economic feasibility, just as it does through the alternative approach to renewable energy in Building Block Three as described below in Section 3(a).[16]

EPA should also modify Building Block Two to include additional opportunities for emission reductions at coal- or oil-fired plants through co-firing or repowering. Many existing coal-fired plants may already be capable of co-firing gas or other less carbon intensive fuels, and increased co-firing is often a way to achieve overall emission reductions across the electric system. Furthermore, existing coal-fired plants can be repowered or converted to fire primarily natural gas, which also results in emission reductions. In New York, for example, at least two coal-fired plants have recently shifted from primarily coal-fired to primarily natural gas-fired, thereby reducing overall CO_2 emissions.[17] Because the potential for co-firing or repowering is an adequately demonstrated means of reducing CO_2 emissions from the overall electric system, EPA should incorporate these mechanisms as part of Building Block Two.

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[16] The NODA's proposed 12 percent floor for re-dispatch for states with low or no existing NGCC capacity would have limited impact. Analysis indicates that the proposed 12 percent floor would only apply to nine states and add an additional 30,000 GWh nationwide for NGCC generation. The EPA should consider alternative approaches to including more new NGCC in Building Block Two, including the application of a floor that is higher than 12 percent or through other approaches including those identified in the November 5 submission of the RGGI states.

[17] The Dunkirk plant in Dunkirk, NY is being converted from coal-fired to primarily natural gas-fired. The Danskammer plant in Newburgh, NY, which was capable of burning coal or natural gas, will no longer burn any coal.

3) Building Block Three (Renewables and Nuclear)

EPA should make several modifications to Building Block Three in order to better reflect emission reductions available nationwide, base renewables determinations on technical and economic potential, and ensure that all components of BSER are within a state's control. First, the State supports a methodology for the renewable energy portion of Building Block Three that is based on technical and economic potential, rather than the primary proposed approach that calculates potential emission reductions based on states' policy decisions. Second, if EPA does decide to utilize the primary approach, it must at least make the technical correction regarding existing hydroelectric generation that is described below. Finally, the State recommends removing any provisions regarding existing nuclear generation from the final CPP rule.

a. Alternative Approach to Renewable Energy

An RPS is a mechanism to drive investment in renewable energy but is not, on its own, a reliable indicator of renewable energy penetration. Multiple factors affect the potential outcomes. These include transmission system constraints, technological limitations, local community preferences, financial market acceptance, and ratepayer impacts. Therefore, reliance on the RPS mechanism to derive the Building Block Three potential for states, as is the case in EPA's primary approach, is not consistent with the purpose of an RPS. Further, EPA's reliance on the RPS mechanism has the effect of penalizing early actors who are out in front with renewable energy targets, particularly if the achievement trajectories are lower than the aggressive goal.

An approach to the renewable energy building block that is based on the technical feasibility and market potential of renewable energy in the 2020-30 timeframe, like EPA's proposed alternative approach for Building Block Three's renewable component, is preferable to basing the renewable energy targets on each state's own determination of renewable performance standards. EPA's proposed alternative approach provides a solid foundation, if adjustments are made to address shortcomings in the proposal, as described below. In particular, New York supports the regional variation described in the October 28, 2014 NODA.

First, the alternative proposal is a relatively conservative approach to developing state-specific targets for some states, and it can be strengthened. For example, as the renewable energy alternative is currently constructed, twelve states would be assigned projected renewable energy development targets (in megawatt-hours) for 2030 that are less than their current renewable energy generation.

One source of conservatism is the derivation of best practice *development rates* based on the percentage development of the technical potential of each type of renewable energy. To produce the target development rate for each type of renewable resource in 2030, EPA takes the average rate of historic development in the top one-third of states, without considering any potential increase in that development rate between now and 2030. The following two improvements are offered for consideration:

- Increase the *benchmark development rate* applied to each type of resource to account for the continuing improvement in the rate of development among the best performing states. For instance, EPA could modify its approach of using historic development in the top one-third of states to using a rate observed in the top 5 states, a modification that would more closely reflect the potential future growth.
- Include a floor for each state that is based on its current non-hydropower renewable generation, increased at a minimum but achievable growth rate (*e.g.* 3% annual growth) to account for additional development of renewable energy sources between now and 2030. The minimum growth rate could be conservatively established based on recent growth trajectories as reported by the U.S. Energy Information Administration [18]

Under EPA's alternative approach, two states would have renewable energy development targets that exceed their 2012 generation from all sources. This anomaly would be eliminated by application of the regional approach described in the October 28, 2014 NODA. If EPA does not pursue a regional application, it could consider a ceiling for each state's renewable energy target, such as limiting it to a state's 2012 generation from all sources, which will allow for existing progress to be reflected in the targets.

These modifications would better reflect readily available opportunities for renewable energy growth in every state, resulting in greater overall emission reduction than either the proposed or alternative approaches. In addition, these two suggested revisions would help to ensure that readily available opportunities for renewable energy development are included in each state's building block and result in a more equitable allocation of responsibility among the states. [19]

b. Technical Correction for Existing Hydroelectric Power

While the State supports a variation on the alternative approach to the renewable portion of Building Block Three, as described above, if EPA instead adheres in the final rules to the primary proposed approach, based on average RPS levels in each region, EPA must at least fix an apparent error regarding existing hydroelectric generation. Specifically, it should resolve the inconsistency between including existing hydroelectric generation in developing the target for New York and the other states in the northeast region and disallowing the use of existing hydropower in complying with that target. In establishing the BSER, EPA assumed that RPSs are implemented to stimulate the development of new renewable energy generation and that existing hydroelectric generating facilities are often excluded from RPS accounting. EPA further noted

[18] Source: Electricity generation by fuel in the Reference case, 1990-2040: History: U.S. Energy Information Administration, *Monthly Energy Review*, September 2013, DOE/EIA-0035(2013/09) (Washington, DC, September 2013). Projections: AEO2014 National Energy Modeling System, run REF2014.D102413A. The compound annual growth rate in renewable generation from 2004 through 2014 was over 4%. This rate has increased in recent years. Based on these trends, a 3% floor is proposed as a conservative yet achievable rate for all states based on this data.
[19] New York is evaluating the potential regional approach to evaluating potential emission reductions from renewable energy described in the October 28, 2014 NODA and may submit supplemental comments on that approach.

that, since no states are expected to develop any new large hydroelectric facilities, the renewable energy target-setting method included only non-hydropower renewable energy in the target-setting method.[20]

In order to take into account the varied availability of different renewable resources across regions of the United States, EPA used the state-level effective renewable energy levels derived from RPS requirements to quantify regional targets consistent with states' reasonable level of RPS development. In doing this for the northeast region (Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island and Vermont), EPA inadvertently included existing hydroelectric generating facilities when establishing the region's RPS goals, because those resources are included as available resources in each state's RPS target. By contrast, for other states with relatively large amounts of existing hydroelectric generation, EPA based the states' target on RPS levels that do not include hydroelectricity. For example, EPA used 15% as the RPS for the State of Washington; if existing hydropower was included in Washington's RPS, the renewable target for Washington would be in excess of 75%. Since existing hydroelectric generating sources are not eligible for compliance purposes, the calculation of the renewable energy portion of Building Block Three for the northeast is technically incorrect.

To make the technical correction for renewable energy for the northeast region, EPA can reduce each state's effective renewable energy target level to subtract out the amount of existing hydro that is accounted for in each state's RPS goal. As part of our review, we have identified the appropriate renewable energy level for each state in the northeast region by subtracting existing hydropower generation from the RPS target level. Those levels are 22%, 18%, 19%, 23%, 10.7%, and 13% for Connecticut, Maine, Massachusetts, New Hampshire, New York, and Rhode Island, respectively.

If EPA makes these necessary adjustments across the northeast region, the renewable target for the states in the Northeast region would decrease from 25% to 18%. (EPA currently derives a state's target by using the average of the RPS targets within a region.) This modification would properly adjust New York's renewable energy building block target from 24,262 GWh to 17,043 GWh.

In the alternative, EPA could also correct its apparent error by allowing existing hydroelectric resources to be used for compliance purposes, rather than removing such resources from a state's goal computation. That is, for states that have RPS programs that were used to set

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[20] See Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 FR 34,830 (June 18, 2014); Technical Support Document (TSD) for Carbon Pollution Guidelines for Existing Power Plants: Emission Guidelines for Greenhouse Gas Emissions from Existing Stationary Sources: Electric Utility Generating Units. Docket ID No. EPA-HQ-OAR-2013-0602, GHG Abatement Measures, U.S. Environmental Protection Agency, Office of Air and Radiation (June 10, 2014) p. 4-5.

state targets, any non-emitting renewable energy eligible to comply with the relevant RPS regulations could be counted toward compliance, including generation from currently-eligible existing hydroelectric generation. Counting all currently-eligible technologies going forward would be consistent with the concept that state RPS targets are reflective of state expectations for future generation from technologies included in the programs.

c. Exclude Consideration of Existing "At Risk" Nuclear Capacity

New York recommends that EPA remove "at risk" nuclear from the building block calculations. In the proposal, EPA characterizes approximately six percent of existing nuclear capacity nationwide as "at risk" of retirement. Because EPA states that preserving such "at risk" nuclear that might otherwise be retired would result in CO_2 emission reductions from fossil fuel-fired power plants, the proposal incorporates the six percent of nuclear capacity in both the calculation of a state's target emission rate and in a state's compliance with the target. The final rule should altogether remove consideration of a state's existing nuclear capacity – whether "at risk" or otherwise – from both the calculation of a state's target and from compliance.

New York recommends this modification to the proposal primarily because the ultimate determination regarding whether an existing nuclear power plant continues to operate or retires is largely a business and/or Nuclear Regulatory Commission (NRC) licensing decision and beyond a state's control. While EPA ostensibly included the "at risk" nuclear provision as a means of encouraging states to incentivize the preservation of existing nuclear capacity, the reality is that a state has limited ability to provide such incentives. Instead, under the Atomic Energy Act of 1954, the federal government, through the NRC, has primary responsibility for ensuring the safety of nuclear power plants and licensing their operation. While there are a number of possible circumstances in which a nuclear plant may be forced to retire, these would generally include safety, radioactive leaks, or other issues associated with NRC relicensing, or economic conditions that make a plant too costly to continue to operate. On the other hand, a state may regulate various aspects of operation of a nuclear power plant, including those that relate to compliance with environmental laws, mitigating environmental impact, and protecting water quality, but generally cannot dictate whether a plant continues to operate altogether.

In other words, the dispositive factors in whether a nuclear plant continues to operate are generally the NRC licensing process and economic considerations, not state programs or policies. Even beyond the six percent of "at risk" plants, a nuclear plant may end up retiring despite a state's best efforts to preserve the plant's operation. Given the dominant role of the federal government through NRC licensing, and of economic factors, EPA's proposal should not account for actions by states that may be impossible for states to implement. Therefore, especially given the leadership role EPA envisions for states under the proposal, New York strongly supports the removal of the "at risk" nuclear provision from the final rule.

Furthermore, while the State recommends removing the "at risk" nuclear provision, it is also important to note that many of EPA's apparent objectives regarding existing nuclear can still

be realized within a mass-based system. In a mass-based system such as RGGI, nuclear plants need not bear the cost of emission allowances. Therefore, they realize an economic advantage over fossil fuel-fired plants. In addition, in a mass-based system, any increase in CO_2 emissions resulting from the retirement of nuclear plants is automatically accounted for under the emissions cap. Because all CO_2 emissions from affected fossil fuel-fired plants must be under the mass-based cap, assuming the cap is federally enforceable, any increase in emissions resulting from nuclear retirements could not cause a state or region to exceed the cap. Instead, such increases in emissions would correspondingly increase pressure on the cap and thereby the cost of compliance. In New York, for example, several existing nuclear plants may retire prior to 2030, due to NRC relicensing, economic considerations, or market forces. If this occurs and the State is complying with the proposed rule through RGGI or another mass-based program, then compliance costs could increase for regulated entities within the State, but emissions would have to remain below the cap.

4) <u>Building Block Four (Energy Efficiency)</u>

Energy efficiency measures are among the most cost-effective means of reducing CO_2 emissions from the electric sector. EPA's proposed Building Block Four is therefore an important part of the CPP that has already been demonstrated to achieve meaningful emission reductions. New York recommends modest improvements to EPA's anticipated ramp-up rate methodology, as described below, to achieve even greater emission reductions from Building Block Four. The current methodology in EPA's energy efficiency building block assumes that each state reaches a point where incremental annual energy efficiency additions are 1.5% of retail sales. States are anticipated to grow from their 2012 annual incremental baseline performance at the rate of 0.2%/year.

This approach does not give credit to states that have a long established track record of energy efficiency implementation. Early acting states have made substantial investments to accumulate significant energy efficiency resources over several years. For instance, New York has invested over $4.5 billion during the past 15 years (1999-2013) to support the installation of 9,272 cumulative annual GWh of energy efficiency and it is now developing additional strategies that are intended to stimulate private development of energy efficiency resources such as the NYS Green Bank and the PSC's Reforming the Energy Vision proceeding.

States that have shown sustained leadership on energy efficiency are likely to continue to do so; however, the installation of additional measures may come at a higher cost since many of the lower cost measures ("low hanging fruit") have been "picked." An improved building block methodology should be developed to give credit to early acting states while encouraging other states that have not yet implemented robust energy efficiency programs to take advantage of their opportunity to "pick the low hanging fruit" more rapidly in order to achieve greater emissions reductions and economic benefits such as energy bill savings. New York's experience is that every $1 invested in energy efficiency improvements yields $3 in energy bill savings to consumers participating in the efficiency programs.

One mechanism to maximize the potential emission reductions contemplated by Building Block Four would be to assign an increased ramp-up rate to those states which by year-end 2012 had not met or exceeded either the average U.S. total incremental savings as a percentage of retail sales (2012) or the average U.S. total cumulative savings as a percentage of retail sales (2012). Specifically, the goal computation for these states should reflect a targeted 0.38% rate of improvement of incremental annual savings per year, as opposed to the 0.20% per year ramp-up schedule identified by EPA in the current proposed goal computation. This heightened ramp-up rate of 0.38% per year is supported by data and analysis included in EPA's technical support documents, and is consistent with the demonstrated concept that "lower-hanging fruit" is ripe for the picking. This increased ramp-up recognizes that states have many strategies available to them other than direct financial support, including codes and standards, green banks, and programs to stimulate clean energy markets. The endeavors of states already exceeding the national average for incremental or cumulative savings (calculated as a percentage of 2012 retail sales) should be recognized by maintaining the 0.20% ramp-up rate as proposed by EPA.

5) EPA Should Signal That Further Emissions Reductions Will Be Required After 2030

The consensus among climate scientists is that emission reductions of at least 80% are required by 2050 in order to prevent the worst impacts of a changing climate. While the emissions from electricity sector in New York and the other RGGI states have declined at a pace that would surpass that reduction target, EPA's projection that this rule will achieve a nationwide 30% reduction by 2030 is inadequate to place the nation's power sector on a trajectory to achieve the reductions needed by 2050. The recommendations made above to strengthen Building Blocks Two, Three, and Four will help by increasing national emission reductions.

In the longer term, EPA should make clear that additional reductions will be required after 2030. Such long term market signals are needed to provide the incentive for industry – and the states – to make the transformative investments in a highly efficient, low carbon electricity sector needed to achieve the emission reductions required by 2050. New York therefore recommends that EPA signal its intention to establish more ambitious state targets for existing sources in future years, as part of the eight year reviews required under section 111(b)(1)(B) of the CAA.

6) Other Issues

The State appreciates the opportunity to comment on EPA's CPP proposal. Additional recommendations for improving the proposal are contained in separate comments submitted by the RGGI participating states, including comments being submitted on the October 28, 2014 NODA. Most notably, EPA should clarify methodologies for translating the rate-based targets to mass-based targets and simplify the use of regional programs like RGGI for compliance. In addition, as part of the rate-to-mass conversion process, EPA should allow states

to consider the potential impact of the electrification of the transportation sector on emissions from affected sources under the CPP.

We support EPA's efforts to reduce GHG emissions, including by using its authority under Section 111(d) of the CAA. While the CPP proposal is an important step, EPA and the federal government should continue to take action to reduce emissions across all sectors of the economy and minimize the impacts of climate change. Our recommendations to improve the proposal would result in greater levels of nationwide emission reductions while ensuring that all states incorporate achievable emission reduction measures. EPA should finalize the CPP by June 2015, as planned, and incorporate the various improvements we have suggested to strengthen the final rule.

We look forward to continuing to work with EPA on the implementation of the CPP.

Sincerely,

Joseph J. Martens
Commissioner
New York Department of Environmental
Conservation

John Rhodes
President
New York State Energy Research
and Development Authority

Audrey Zibelman
Chair
New York Public Service Commission