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MEMORANDUM

October 5, 2011

To: RGGI State Commissioners and Staff (electronic submission via: info@rggi.org)

From: Peter Shattuck, Carbon Markets Policy Analyst
Derek K. Murrow, Energy & Climate Policy Director

RE: Comments on September 19th, 2011 Stakeholder Meeting and Related Materials

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The Regional Greenhouse Gas Initiative (RGGI) is presently the only mandatory carbon cap and trade program in the United States, and we thank and congratulate you for your ongoing leadership in developing and implementing a successful program. RGGI has shown that bipartisan efforts by diverse states can deliver a reasonable and transparent market-based environmental policy that guides investment towards cleaner sources of energy. We hope that policy makers in other regions and at the federal level can and will build on RGGI's successes, and we support ongoing efforts to build on RGGI's forward-thinking energy and climate policy in the rest of the nation.

We commend RGGI states for continuing with the review process to capitalize on RGGI's success and to strengthen the program going forward. We believe that accurate modeling and scenario development will help inform the 2012 modeling review and promote the development of sound climate policy.

As states approach RGGI's second compliance period, it is important to recognize that the emissions decline in the first few years of RGGI is an excellent outcome, and is consistent with other cap and trade programs where the environmental outcome is delivered more rapidly and at lower cost than anticipated. In order to take advantage of the emissions decline, policy makers must account for structural changes in the regional electric sector, specifically the decrease in the relative price of natural gas in relation to other fuels, the increase in non-emitting generation, and increased investments in energy efficiency across the region.[1] These structural changes show no sign of reversing in the near term, and in order to adopt appropriate policy choices during the upcoming program review it is imperative that the reference case and sensitivities, as well as any policy scenarios, reflect these new circumstances accurately.

General Comments

Emissions modeling and potential RGGI revisions should start with the program as it stands now, incorporating new energy market realities, the impact of RGGI itself on regional emissions, and anticipated regulations for the power sector. Relevant information on important topics such as state efficiency plans and projected allowance surpluses should be more broadly disseminated to increase transparency and policy engagement from stakeholders. Additionally, it is important to recognize that large-scale planning models like IPM cannot capture on-the-ground realities with complete accuracy, but

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[1] We are encouraged that NYSERDA's analysis of emissions from RGGI-regulated plants from 2005-2009 attributes 63.8% of the decline to fuel-switching, increased non-emitting generation and energy efficiency (available at http://rggi.org/docs/Retrospective_Analysis_Draft_White_Paper.pdf), which conforms to ENE's 2010 RGGI Emissions Trends Report, available at: http://env-ne.org/resources/open/p/id/1072/from/331

electric sector and economic impacts should be modeled for time horizons sufficient to support robust and defensible policymaking.

In terms of process, we believe that the program review be strengthened by providing at least six weeks advance notice of meetings and at least two weeks advance release of materials in all comment cycles. Providing greater opportunity for analysis and transparency will maximize stakeholder engagement and utilize the full expertise of interested parties.

We are encouraged that RGGI will undertake economic analysis akin to the REMI modeling conducted during the 2005 policy design process, which estimated macroeconomic impacts associated with the implementation of RGGI. An assessment of related public health benefits could also be helpful in assessing the full impacts of program modifications.

Many of the topics covered in these comments were previously addressed in joint comments developed by environmental organizations and industry stakeholders and submitted to RGGI, Inc. Board members earlier this year,[2] and where relevant the joint comments are specifically referenced.

RGGI Market Fundamentals

The independent perspectives on RGGI market fundamentals provided by Point Carbon and Bloomberg New Energy Finance confirm that the discrepancy between the current RGGI emissions limit and actual emissions is undermining the effectiveness of the program, and that states need to reduce the cap substantially and remove surplus allowances in order to fulfill the program's objectives.

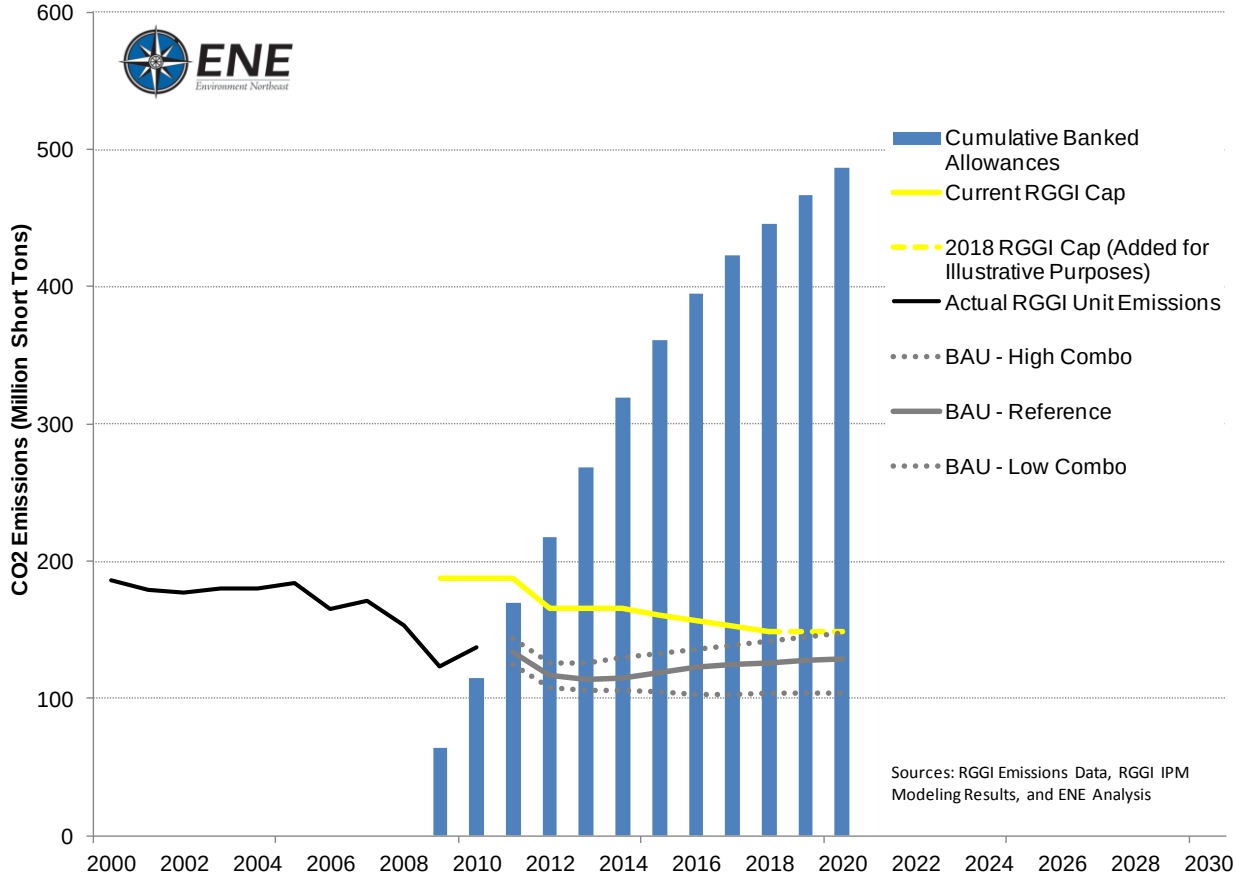
When considering RGGI market fundamentals, it is important to recognize that the factors that led to the decline in regional emissions are significant and enduring. Emissions from RGGI facilities fell 34% below the regional cap in 2009 and 27% below the cap in 2011, due primarily to reduced generation from fuel oil and coal and increased generation from non-emitting sources and natural gas, as well as growing investments in energy efficiency. [3] The impact of these trends on regional emissions is supported by NYSERDA's white paper *Relative Effects of Various Factors on RGGI Electric Sector CO2 Emissions: 2009 Compared to 2005*.[4] Weighing the relative effects, NYSERDA found that fuel switching, available capacity mix (increased renewable and nuclear generation), and energy efficiency accounted for 63.8% of the emissions decline, whereas weather (24.2%) and the economy (4.4%) had far less significant impacts on emissions. With natural gas prices projected to stay low in the foreseeable future and investments in renewables and efficiency steadily ramping up in response to state policies, overall electric emissions are likely to remain at lower levels, even when the economy recovers. Therefore, it is crucial to take into account the current market realities and substantially reduce the emissions baseline during the 2012 program review.

Given the enduring structural changes in the RGGI region electric sector and related emissions declines, states must adjust the regional emissions cap to current levels and remove surplus allowances that would exacerbate the current over-allocation. More detail is provided below on cap level revisions and potential means of reducing the accumulating surplus. These steps are supported by analysis of RGGI market fundamentals, particularly analysis by Point Carbon[5] showing that adjusting the cap to 2009 emissions levels would not constrain emissions so long as the current allowance surplus remains in the system. The figure below (Figure 1) provides additional graphical illustration of the accumulation of

[2] Available at: http://rggi.org/docs/Joint_Modeling_Comments.pdf
[3] See ENE's 2010 RGGI Emissions Trends Report, available at: http://env-ne.org/resources/open/p/id/1072/from/331
[4] Available at: http://rggi.org/docs/Retrospective_Analysis_Draft_White_Paper.pdf
[5] Available at: http://rggi.org/docs/RGGI_Stakeholder_Presentation_Thomas_Reuters_Point_Carbon.pdf

banked allowances in contrast to actual and projected RGGI facility emissions (adjusted for NJ withdrawal after 2011 and revised modeling results).

Figure 1: Actual and projected RGGI facility emissions and accumulated allowance surplus



Comments on IPM Modeling Reference Case & Sensitivities

Modeling Timeframe

The adjustment of the emissions modeling timeframe from an end date of 2030 to 2020 may help provide results "that are more consistent with market participant decision making time horizons,"[6] but this objective must be balanced against providing sufficient results to support comprehensive analysis of policy options and longer term changes to the RGGI program. With respect to supporting comprehensive policymaking, a modeling horizon that only runs until 2020 is problematic for two reasons. First, policymakers will only be able to rely on eight years of prospective data to make decisions with significant environmental and economic impacts, potentially constraining decisions. Second, the majority of RGGI states have legislative or executively mandated emission reduction targets that stretch well beyond 2020 (see Table 1), and while RGGI can and should be a cornerstone of emissions reduction policies, establishing long-term emissions limits to match statutory requirements could be

[6] See updated RGGI Reference Case Assumptions, September 12, 2011, slide 11, available at: http://rggi.org/docs/RGGI_Reference_Case_Assumptions_091211.pdf

inhibited by a lack of data beyond 2020. In light of the competing analytic and policy rationales for establishing a time horizon for modeling, we suggest that the modeling horizon be extended until at least 2025.

Table 1: Emissions reduction goals for RGGI states[7]

Connecticut	10 % below 1990 levels by 2020; 80 % by 2050
Maine	10 % below 1990 levels by 2020; 75-80% below 2003 long term
Maryland	25 % below 2006 levels by 2020
Massachusetts	25 % below 1990 levels by 2020; 80 % by 2050
New Hampshire	20% below 1990 levels by 2025
New Jersey	1990 levels by 2020, 80% below 2006 levels by 2050
New York	80 % below 1990 levels by 2050
Rhode Island	10% below 1990 levels by 2020
Vermont	25 percent from 1990 levels by 2012; 50 percent by 2028; and, if practical, 75 percent by 2050

Regional Energy and Peak Demand

Electricity demand is one of the most important drivers of RGGI region emissions, and it is essential that the model incorporate up-to-date information increasing energy efficiency investments that are reducing electricity consumption and emissions across the region. While ISO forecasts may provide an adequate starting point for demand assessments, such forecasts do not adequately capture existing and new legal requirements at the state level that are significantly increasing investments in all cost-effective energy efficiency.

We believe that efficiency can be incorporated into the model most accurately by using ISO forecasts that are focused on economic trends, and layering additional efficiency requirements and investments on top of ISO forecasts. The importance of accounting for efficiency investments cannot be understated, as states ramping up to procure all cost-effective energy efficiency will achieve first year annual savings in excess of 2%. (This process is underway in ME, MA, RI and VT, and is mandated and proposed by utilities in CT.) NY has also made significant new commitments to expand efficiency investments. We are encouraged by the incorporation of detailed, up-to-date information on MA's efficiency requirements and strongly recommend the incorporation of similar detailed inputs for all RGGI states.[8] Savings goals for CT[9], ME[10], MA[11] and RI[12] are provided in Table 2.

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[7] Legislative and regulatory sources available at: http://www.pewclimate.org/what_s_being_done/targets

[8] In the first round of stakeholder comments (http://rggi.org/docs/ENE_RGGI_PR_Modeling_Comments_Supplement.pdf) ENE provided reference to efficiency mandates that should be incorporated into the model for ME, RI and CT, and we believe that comparable information should be included for all RGGI states.

[9] CT savings projections based on Energy Conservation Management Board Electric Plan Filings (http://www.ctsavesenergy.org/ecmb/documents.php?section=16), with percentage savings calculated based on ISO-NE forecast data (http://www.iso-ne.com/trans/celt/fsct_detail/2010/isone_fcst_data_2010.xls)

[10] ME savings figures based on Triennial Plan of the Efficiency Maine Trust 2011-2013 (http://efficiencymainetrust.org/docs/EMT_Final_Tri_Plan.pdf). We note however that the Legislature did not support an increase to the system benefits charge to fully fund the Triennial Plan.

Table 2: Energy efficiency savings goals for CT, MA, ME and RI

ENE	2010			2011			2012			2013		2014
	CT	MA	RI	MA	ME	RI	MA	ME	RI	ME	RI	RI
Savings Target *(% 2009 Retail Sales)*	1.03%	1.40%	1.33%	2.00%	1.13%	1.36%	2.40%	1.45%	1.70%	1.56%	2.10%	2.50%
Annual Energy Savings *(MWh)*	325,267	624,427	88,546	897,232	129,000	102,566	1,103,423	165,000	128,570	178,000	158,820	189,068
Summer Demand *(kW)*	37,361	100,277	15,154	145,098	22,000	18,512	179,139	27,000	23,204	29,000	28,664	32,759

Assumptions for the Low Load sensitivity[13] provided as a supplement to the November 12th, 2010 stakeholder meeting indicate that not all states are using up-to-date inputs, and in order to ensure an appropriate emissions cap is established we strongly recommend that states use the most current energy savings targets in order to accurately capture requirements. Based on approved plans, constant savings rates of 1.03% for CT, 1.56% for ME, and 2.50% for RI should be incorporated into the reference case and the annual savings target for the final plan year should be assumed for all subsequent years, as is assumed for MA. Additional up-to-date savings figures should be used for all other RGGI states.

While the Connecticut efficiency plan currently extends only through 2010, the CT legislature mandated[14] that utilities procure all cost-effective efficiency, and as such we believe that it is reasonable to project aggressive savings targets for CT over the medium to long term.

If states are unable to incorporate latest efficiency savings targets, an annual 2% savings rate should be assumed across the RGGI region, as recommended in joint environmental-industry comments.[15]

Flexibility Mechanisms

As RGGI states consider opportunities for flexibility mechanisms as part of the program review, it is important to recognize that RGGI already includes a significant degree of flexibility. A market-based program such as RGGI is in itself a flexible mechanism, as the market determines where to deliver the lowest cost emissions reductions. In addition to the fundamental flexibility that is the hallmark of a market-based program, RGGI contains additional flexibility through specific design components, such as 3 year compliance periods, use of offsets, and allowance banking.

If RGGI states choose to consider additional flexibility mechanisms in order to promote certainty and facilitate linkage with other climate programs, we recommend consideration of an allowance reserve mechanism in line with the reserve proposed in California's draft cap and trade regulations. Under such a mechanism a finite supply of allowances is set aside and offered for sale at prices above anticipated market prices in order to mitigate high price volatility. So long as the quantity of allowances in the reserve is fixed (a "soft" price collar) and prices are set adequately high to avoid depleting the reserve prematurely, the reserve can safeguard environmental integrity and promote planning clarity on the part of compliance entities. Environmental integrity should be ensured by foreclosing on the opportunity to use unlimited quantities of additional allowances or offsets (as would presently occur at high prices under the RGGI price-based offset triggers). Planning clarity derives from the buffer that reserve allowances provide at high prices, thus mitigating the risk of volatility and providing known price bands.

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[11] MA savings figures based on approved statewide electric efficiency plan (http://www.ma-eeac.org/docs/DPU-filing/1-28-10%20DPU%20Order%20Electric%20PAs.pdf)

[12] RI savings figures for 2010-2011 based on the RI PUC approved statewide electric efficiency plan, available at http://www.ripuc.org/eventsactions/docket/3931-NGrid-ComplianceProcurePlan(9-3-08).pdf
RI savings figures for 2012-2014 based on the Energy Efficiency Resource Management Council's filing in Docket number 4202 subsequently approved by the RI PUC, available at http://www.ripuc.org/eventsactions/docket/4202-EERMC-EST-Filing(9-1-10).pdf)

[13] Available at: http://rggi.org/docs/Low_Load_Sensitivity_Supplement.pdf

[14] See House Bill 7432 (http://www.cga.ct.gov/2007/AMD/H/2007HB-07432-R00HA-AMD.htm)

[15] Available at: http://rggi.org/docs/Joint_Modeling_Comments.pdf

In terms of price points, we believe initial consideration should be given to prices established in California's program in order to build on established planning and in order to promote market integration. ENE believes consistent price controls will be essential to linking and harmonizing programs over time. If states were to transition to a reserve mechanism it should replace the current offset triggers.

Other Topics for the Program Review Including Policy Scenarios for 2012

Joint Industry-Environmental Policy Options to Reduce the Allowance Surplus

As identified in the analysis of RGGI market fundamentals, the current cap is unlikely to constrain emissions without significant revision. In joint comments with industry stakeholders,[16] three main policy scenarios were proposed for modeling (adjusted for NJ withdrawal after 2011):

1) Low Cap Scenario – Adjust the cap level to reflect actual 2009 emissions levels (~107 million tons CO2e)

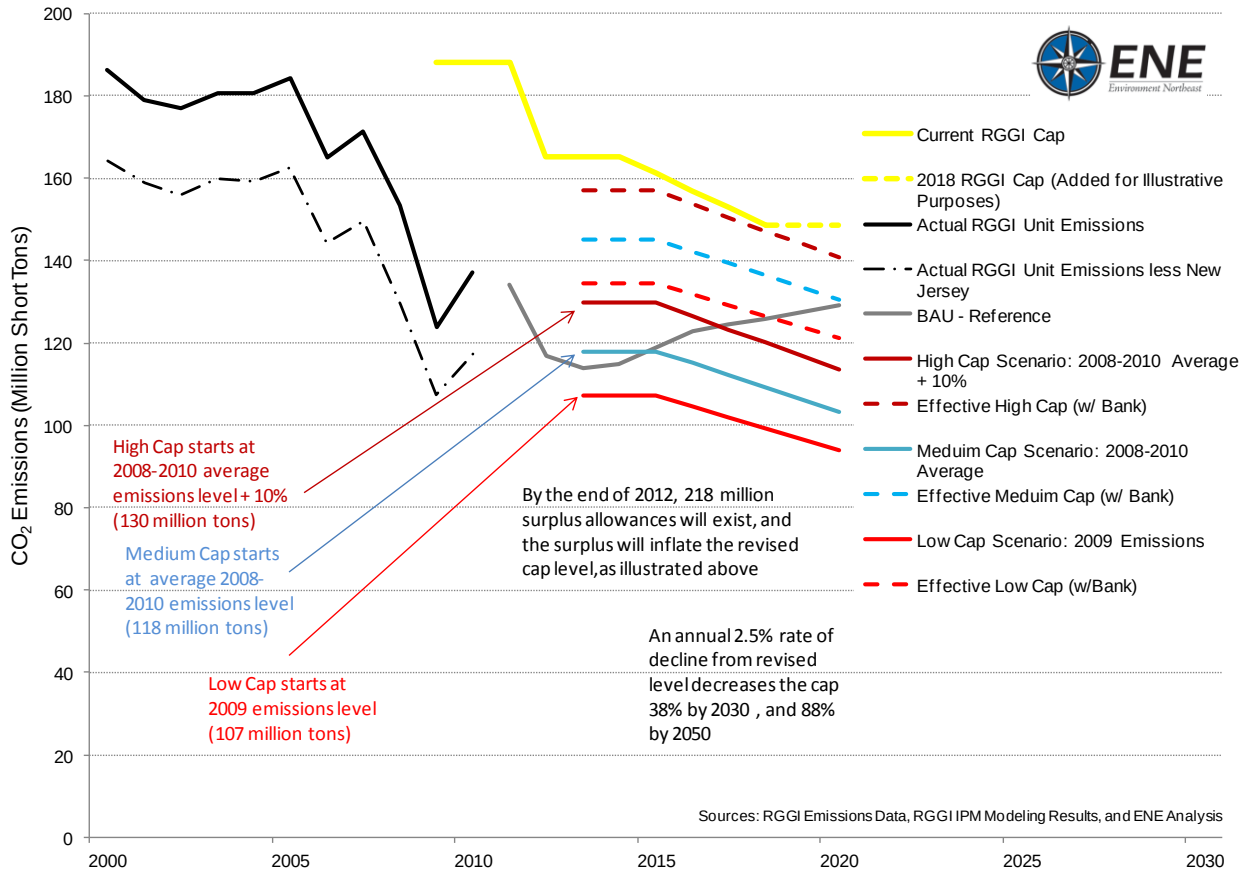
2) Medium Cap Scenario – Adjust the cap level to reflect average actual emissions levels for 2008-2010 (~118 million tons CO2e)

3) High Cap Scenario – Adjust the cap level to reflect 10 percent above actual average emissions levels for 2008-2010 (~130 million tons CO2e)

For all three suggested policy case scenarios, set a reduction path similar to the one originally planned for RGGI (e.g., stabilize cap for 3 years before beginning reductions). From that point, reduce the cap by 2.5% annually through the IPM modeling horizon.

[16] Available at: http://rggi.org/docs/Joint_Modeling_Comments.pdf

Figure 2: Policy scenarios developed in joint industry-environmental organization comments[17]



Additional policy sensitivities – including retiring unsold allowances, adjusting the revised cap level to account for surplus allowances, and beginning the reduction path immediately – are elaborated in the joint comments[18] and merit consideration.

Additional Policy Options to Reduce the Allowance Surplus

In addition to the policy options proposed above, we recommend one additional policy scenarios to aid understanding of the impact of allowance banking and to consider a full suite of policy options:

1) Eliminate the ability to bank allowances from current periods into subsequent periods (post program adjustment), with banking restored in the post program adjustment period – this scenario would simplify the treatment of surplus allowances by ensuring that the current over-allocation did not carry over into the revise program. The European Union ETS adopted a similar approach in prohibiting banking from their first "learning" compliance period (2005-2007) into the current compliance period (2008-2012) as they reacted to a similar over-allocation of allowances in the first period. This policy could only take effect after states notify the market, so assuming this could happen in 2012, the model could assume that allowances tied to years prior to the cap adjustment would not be bankable.

[17] Available at: http://rggi.org/docs/Joint_Modeling_Comments.pdf
[18] Ibid.

Revised Offset Categories

The RGGI offset mechanism has yet to be utilized, providing an opportunity to revisit eligible project types without causing market distortions. This reassessment of eligible project types could consider new project types and revisit certified project types in light of new information.

A new offset project type that should be considered for eligibility is forest management. Forests play an important role in the carbon cycle within the RGGI region and beyond, and comprehensive climate policy should harness the power of standing forests to sequester carbon. Furthermore, applying RGGI's Five Part Test to forest management would provide precedent for applying rigorous offset standards to these offset project types for states and provinces outside the RGGI region. As interest increases in forest management and agricultural offset projects (which confront technical issues similar to forest-based projects), adopting a rigorous forest management protocol would shape regional and national policy and create a framework for achieving critical GHG reductions in the land-use sector. We reference the detailed proposal submitted to RGGI in July 2009 by the Maine Forest Service, ENE and Manomet Center for Conservation Services. [19]

In terms of revisiting existing project types, states should consider accumulating evidence that industrial gas projects provide few environmental or sustainable development benefits and reconsider whether SF6 abatement project should be allowed to produce RGGI offsets. Based on evidence that HFC 23 projects were creating perverse incentives to continue the production and use of high global warming potential (GWP) gases, and were simultaneously crowding out other offset projects with greater co-benefits, the European Union recently decided to decertify such projects. RGGI should revisit SF6 projects (which similarly focus on abatement of high GWP gases) through a similar lens to determine whether alternative means of controlling SF6 emissions from electrical equipment may be more appropriate.

Program Review Process and Schedule

In order to promote thorough engagement in the RGGI review process it would be beneficial to provide greater advance notice of meeting dates and release of materials, as requested in the joint industry-environmental organization comments.[20]

We thank you for the opportunity to comment on the IPM modeling exercise and the upcoming program review, and we look forward to continuing engagement with states as we build on program successes to create a stronger program with extended reach.

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[19] On July 15, 2009 the Maine Forest Service, ENE (Environment Northeast), and Manomet Center for Conservation Services submitted to the RGGI Staff Working Group *A Policy Framework for Including Avoided Deforestation and Forest Management Practices as Forest Offset Types in the Regional Greenhouse Gas Initiative*, available at: http://env-ne.org/resources/open/p/id/884/from/345

[20] Available at: http://rggi.org/docs/Joint_Modeling_Comments.pdf