



Union of Concerned Scientists

Citizens and Scientists for Environmental Solutions

To: RGGI Environmental & Energy Commissioners and Staff Working Group
From: Alan Noguee, Clean Energy Program Director, Union of Concerned Scientists
Date: May 22, 2006

RE: Comments on the draft RGGI model rule

INTRODUCTION

The Union of Concerned Scientists is pleased to have this opportunity to submit comments on the Northeast Regional Greenhouse Gas Initiative (RGGI) Model Rule. Our comments are focused on a few key issues that we believe must be addressed to make RGGI as effective as possible.

Global warming is one of the most serious challenges humankind has ever faced, raising fundamental principles of stewardship and our shared responsibility to future generations. Scientists are acutely aware that our window for stabilizing greenhouse gas concentrations at reasonably safe levels is closing quickly. The scientific community has long moved past discussion of whether there is warming to the more profound question of how much time we have left to avert the most severe potential consequences of global warming.

Several recent analyses have concluded that, to avoid dangerous climate change, the United States and other industrialized countries may need to reduce emissions by as much as 60 to 80% below 2000 levels by 2050—and that we must have the policies in place within the next few years to begin to move toward this ambitious outcome.

The goals of RGGI—to reduce power plant carbon emissions 10% by the year 2020—are thus a modest step in the right direction. But first steps are often the hardest and the most important. This landmark initiative sends a powerful signal that Americans are ready to implement an innovative, flexible, cost-effective mandatory program to reduce their contribution to global warming in the leading carbon-emitting sector in the U.S. economy.

RGGI will be effective—both in its own right and as a model for other regions and the nation—to the degree that it succeeds in that objective. If properly designed, RGGI will reduce electric sector emissions while demonstrating to the rest of the country that it is possible to reduce emissions in a cost-effective manner while promoting technological innovation that stimulates the local economy.

Attaining those objectives will not be easy, however. It is therefore important that the program be designed from the beginning to maximize the likelihood of success. Our recommendations below cover five critical issues: (1) the treatment of renewable energy, (2) exemptions from the emissions cap, (3) the use of offsets, (4) consumer allocations and strategic energy purposes, and (5) leakage.

TREATMENT OF RENEWABLE ENERGY

The treatment of renewable energy is not the most important issue in the RGGI Model Rule, but we discuss it first because it may be the most under addressed issue relative to its importance.

Renewable energy sources—wind, bioenergy, solar, geothermal, ocean, and incremental hydropower from existing dams—are the region’s only indigenous energy supplies, let alone the region’s only indigenous carbon-neutral energy supplies. Their use can be dramatically increased while saving consumers money and reducing exposure to fossil fuel price volatility,¹ to the risk of supply shortages and interruptions, and to energy security challenges. They reduce upstream and downstream environmental impacts from fossil fuel extraction, refining, transport and waste disposal. When sited in or when their energy is delivered to the region, they reduce regional air emissions of fine particulates and mercury, and reduce the cost of controlling sulfur dioxide and nitrogen oxide emissions.

Renewable energy creates regional economic development opportunities, including increased employment, and increased revenues to local landowners and towns. With our region’s outstanding academic and technical communities, they create the opportunity for the region to become a global leader in the export of clean energy technologies.

The RGGI Model Rule contains some provisions that may help increase the use of renewable energy. There is at least one omission, however, that will likely decrease the demand for new renewable energy development. The net impact of these opposing forces cannot be predicted.

Voluntary renewable energy sales/purchases. In a system that allocates carbon dioxide allowances, we believe that renewable energy generation (and energy efficiency) should receive allowances through either an output-based allocation or a set-aside of allowances as proposed in the comments of September 9, 2004, by the Center for Resource Solutions on behalf of the Renewable Energy Working Group. (UCS served on the Steering Committee of the Working Group.) In this proposal, the carbon reduction benefits of additional renewable energy generation beyond any renewable energy requirements, also known as Renewable Portfolio Standards, or RPS’s, would be recognized and monetized, and incentives would be created for additional renewable energy generation.²

¹ A State Working Group modeling scenario found, for example, that in the reference case, if only 50% of current RPS targets were met, baseline emissions would increase, leakage from imports would increase, but energy bills would be virtually unchanged. Unfortunately, the impact of decreases or increases to renewable energy under higher natural gas price scenarios were not modeled. When natural gas prices increase, renewable energy becomes even more cost-effective, and tends to displace more new coal additions. Additionally, by reducing the demand for natural gas, adding renewable energy will reduce natural gas prices. (R. Wiser et. al., “Easing the Natural Gas Crisis: Reducing Natural Gas Prices through Increased Deployment of Renewable Energy and Energy Efficiency. Lawrence Berkeley National Laboratory,” January, 2005.)

² Under the Renewable Energy Working Group proposal, the carbon reduction benefits of renewable generation used to meet state RPS’s would automatically retire with the retirement of Renewable Energy Certificates (RECs) used to verify RPS compliance, thereby assuring that renewables used to meet the RPS get “credit” for reducing carbon emissions without creating an additional monetary benefit beyond that conferred by the RECs.

As currently proposed, however, additional voluntary purchases of renewable energy by or for retail customers would not affect the cap. While the additional renewable generation would avoid the need for additional fossil generation to be dispatched, fossil generators would retain the surplus allowances created and could use them to avoid future reductions.

Under such a system, neither the sellers nor buyers of additional renewable energy can make definitive claims to be reducing carbon emissions, undermining a crucial incentive for such purchases to be made. EPA officials have discussed the present ambiguity about whether renewable generators will be able to make carbon reduction claims in future cap and trade programs under the heading of “inconvenient news for renewable energy:”

Emissions will not be reduced below the cap ... even if new non-emitting generation comes on line. **The only way to reduce emissions of a capped pollutant is to retire allowances.**³ [Emphasis in original]

Voluntary demand for renewable energy, or green power, by individuals and corporations is growing significantly. In the northeast, most of this demand growth is coming from corporations, institutions and government, as evidenced by the growth of the EPA Green Power Partnership.⁴ A growing number of towns, colleges, and universities—including 25 towns in Connecticut as of this writing—are making commitments to purchase 20 percent of their electricity from renewable energy sources by 2010.⁵ A part of New York’s RPS also calls for at least one percent of renewable generation to come from voluntary purchases. Other states in the region have also invested significant time and resources into supporting the growth of renewable energy purchases, as has the federal government.

Customers that voluntarily purchase renewable energy, or green power, do so for a variety of reasons, but principal among them is a desire to create environmental benefits.⁶ Many corporations and institutions in particular are motivated by a desire to make greenhouse gas reduction claims. If they cannot make such claims for reduction of CO₂, green power marketers would have substantially less environmental benefit to sell, despite the fact that the additional renewable generation does avoid the dispatch of higher carbon generation.

Indeed, federal guidelines for meeting green power purchasing goals for federal agencies specifically state that:

Only those REC/renewable power purchases, renewable on-site projects or renewable facilitated projects that have retained all emissions credits/allowances

³ Matt Clouse, US EPA, “Environmental Attributes and RECS: A Work in Progress,” Southeast Green Power Marketing Conference, Orlando, Florida, May 2005. <http://www.southeastgreenpower.net/2005/presentations/MattClouse.ppt>

⁴ In 2005, for example, the EPA Green Power Partners (mostly large organizations) purchased over 4 million MWh of renewable energy or RECs, though what proportion was purchased in the RGGI region is not readily available.

⁵ See http://www.smartpower.org/20renewable_energy.htm

⁶ See for example, B. Farhar, *Willingness to Pay for Electricity from Renewable Resources: A Review of Utility Market Research*. Golden CO: National Renewable Energy Laboratory, 1999; E. Holt, R. Wiser, R. Mayer and S. Innis, *Understanding Non-Residential Demand for Green Power*, Washington DC: National Wind Coordinating Committee, 2001; R. Lehr, W. Guild, D. Thomas and B. Swezey, *Listening to Customers: How Deliberative Polling Helped Build 1,000 MW of New Renewable Energy Projects in Texas*, Golden CO: National Renewable Energy Laboratory, 2003.

and other environmental attributes can be counted against the Federal Renewable Energy Goal.⁷

If new renewable energy projects in the RGGI region are not associated with any allowance retirements, they would therefore likely be considered ineligible for purchase under federal programs, or by states, towns or other entities that decide to follow federal guidelines.

Therefore, to sustain and encourage these markets, we believe it is critical that the CO₂ benefits of renewable energy, which derive from displacement of emitting sources in the RGGI region, be recognized. Just as RGGI has forecasted demand for state renewable energy standards and lowered the emissions cap by subtracting the resulting emissions reduction, so too should RGGI forecast voluntary demand and subtract the resulting emission reductions from the cap. The forecast would be for each three-year period, and would be trued up by examining the number of RECs retired for voluntary market purposes. This information is available with the cooperation of the regional certificate tracking systems—the NEPOOL Generation Information System (GIS), the PJM Generation Attributes Tracking System (GATS), and the New York Environmental Disclosure Program (EDP).⁸

We understand that this approach has been discussed before and we had understood that it had been agreed to in concept, but it is critical that it be written into the model rule. As offered by CRS on behalf of the Renewable Energy Working Group:

Generic Language

The voluntary market for renewable energy in the RGGI states provides an avenue for businesses and individuals to reduce their greenhouse gas emissions. In recognition of the importance of allowing for voluntary action to reduce greenhouse gas emissions in the RGGI states, each State’s REGULATORY AGENCY shall incorporate a solution enabling the voluntary market for renewable energy to continue.

***Voluntary Renewable Energy Market:* The voluntary purchase of renewable energy and/or renewable energy certificates by or for retail customers as a method for reducing their greenhouse gas footprint.**

***RGGI Voluntary renewable energy market sales:* This is the number of megawatt hours of renewable energy or renewable energy certificates from renewable energy projects located in RGGI states sold to retail electricity customers in a RGGI state.**

The specific recommended language changes below adjust the working group language to fit with the specific location of the relevant model rule language:

Add to XX-1.2 Definitions:

***Voluntary Renewable Energy Market.* The voluntary purchase of renewable energy by or for retail customers as a method for reducing their greenhouse gas footprint.**

⁷ United States Department of Energy - Federal Interagency Energy Management Task Force 2005: *Executive Order* 13123 Renewable Power/REC Procurement Guidance: 3

⁸ The New York EDP is currently a manual system, but the Public Service Commission has stated its intent to develop an electronic certificate tracking system similar to GIS or GATS.

Voluntary Renewable Energy Market Sales. The number of megawatt-hours (MWh) of energy from renewable energy projects located in RGGI states and sold to electricity customers in a RGGI state.

Add to XX-5 CO₂ Allowance Allocations:

5.1 (f) Prior to allocating allowances from the CO₂ budgets listed in paragraphs (a) through (e) of this subsection, the REGULATORY AGENCY will forecast the anticipated volume of Voluntary Renewable Energy Market Sales by or for electricity customers in NAME OF RGGI STATE over the relevant budget period, and retire the appropriate number of allowances on behalf of the Voluntary Renewable Energy Market. After each three year Compliance Period NAME OF RGGI STATE will true up the difference between the forecast of the Voluntary Renewable Energy Market Sales and actual sales by adjusting the going forward forecast accordingly for the next Compliance Period.

Renewable energy additionality concerns. The Model Rule cover memo asks specifically whether renewable energy eligible for treatment as offsets should be excluded if it is used to meet a Renewable Portfolio Standard and/or if it receives System Benefit Charges.

We believe that use of renewable energy to meet an RPS should be a disqualification, although the disqualification should apply to units of generation (whether measured as MWh or RECs) rather than to entire projects. Receipt of System Benefit Charge (SBC) funds should not be a disqualification however.

RPS concerns. Because Renewable Portfolio Standards represent requirements for a certain amount of renewable energy to be generated, energy generated to meet the standard does not meet an “additionality” test and should not be eligible for offsets (or for allowance retirements, assuming the RPS-required level of generation is already assumed in the calculated baseline.)

Because all renewable energy requirements in the northeast are measured by energy generation, rather than by project development or megawatts of capacity, it is important to evaluate additionality by units of generation as well. In order to maximize the development of cost-effective, carbon-neutral renewable energy generation in the region, project developers should be encouraged—not prohibited—from developing projects that utilize multiple revenue streams, such as the sale of some output to meet RPS requirements, and the sale of additional output in offset or voluntary markets.

Selling the output to produce multiple revenue streams reduces the cost of developing renewable energy projects for a number of reasons:

- By building larger projects to sell into multiple markets, the developer can take advantage of economies of scale, reducing the project cost per MWh.
- The developer is able to hedge against the loss of value from each independent revenue stream, such as a crash in REC prices caused by expanded RPS eligibility (as seen

recently in the expansion of eligible biomass in Connecticut) or similar potential fluctuations in offset values or carbon allowance values as reflected in market prices.

It is essential, of course, to ensure no double-counting of the output of a project so that the same MWh is not used to meet RPS compliance in one market and also sold in a voluntary or offset market. The previously referenced tracking systems in the region can provide such assurance.

SBC concerns. The draft rule proposes to render ineligible for offset allowances any project that receives System Benefit Charge funding (page 93). Presumably this is because of a concern that such projects are not truly additional. UCS continues to support the position of the Renewable Energy Working Group expressed in the CRS comments on September 9, 2004 that SBC funds not count as a measure of additionality. Such a ban would be largely discriminatory against only renewable energy and energy efficiency, which are generally the focus of SBC eligibility.

Every energy source receives some form of subsidy from federal, state and/or local governments. Analysts strongly disagree, however, about what kinds of government grants, loan guarantees, tax credits, tax deductions, liability insurance limitations, etc., constitute subsidies, and how they should be quantified. One analyst's subsidy is another's leveling the playing field to account for market externalities or differential pre-existing subsidies. It is thus virtually impossible to untangle the web of financial and regulatory support received by one type of energy source compared to another.

Renewable energy and energy efficiency funds were typically created by states to enable these resources to overcome market failures and barriers to their competing on a level playing field, given pre-existing levels of government support. Capturing the benefit of carbon reductions was often one rationale, but only one of many, for trying to level the field through System Benefit Charge Funds.

Even determining where to draw the line for generation (or a project) having received System Benefit Charge support, and distinguishing it from other types of state support, can be extremely difficult and raise discrimination questions. Funds have used a very wide variety of mechanisms to provide support. Is a loan or loan guarantee as much of a subsidy as a grant, production incentive, purchase of RECs, or an option to purchase RECs at a certain price? Does a grant, loan or equity investment in a manufacturer disqualify all projects that use the manufacturer's product? What about direct marketing support, or indirect support through public education on a technology's benefits, or sponsoring a collaborative workshop to increase the level of factual debate between a project's supporters and opponents?

Moreover, of all forms of government support, Renewable Energy Funds are the most actively managed by government or quasi-government agencies, representing many of the same state governments involved in RGGI. Disqualifying projects receiving such funds as non-additional presumes that fund managers will fail to take into account any carbon reduction benefits conferred by RGGI in determining the types and amount of support they will be willing to provide, and instead disburse funds in a manner that simply provides a double-dip that enriches renewable energy developers. Such a presumption is entirely unreasonable. Rather, fund

managers should be presumed to take care to ensure that their funds are used to provide benefits to ratepayers that are additional to any benefits conferred by RGGI.

If, however, projects are to be screened for having received other funding, then (a) the screen should not be limited to just System Benefit Charge funding but should attempt to consider all subsidies comprehensively; and (b) such subsidies should not result in total project disapproval but should be used to discount or scale back offset allowances by the proportion of subsidies relative to overall project cost.

Biomass co-firing. There should be no exemption for fossil fuel-fired budget units that burn more than 50% biomass. As stated in the Joint Letter from Environmental Groups:

Carbon emissions do not go to zero over any arbitrary threshold, such as the 50% proposed, and should be calculated based on the proportion of fossil fuel input to any dual-fueled plant, except for de minimis use of fossil fuels as start-up fuel in biomass plants. In addition, annual reporting should be required from all plants over 25 MW that burn fossil fuels to ensure compliance and improve state GHG inventories.

Additional offsets eligibility/Purchase of off-system RECs without energy delivery to the RGGI region. We continue to support treating imports of off-system RECs as offsets, to the extent that other out-of-region projects can qualify as offsets. Determining that off-system RECs meet the test of additionality, as well as the other tests for determining that offsets are real, permanent, verifiable, and enforceable, should be easier than for other proposed offset types. As with in-region renewable energy, such REC imports, or their underlying energy, should not be used to meet any state RPS's, and should not be double-sold to any customer. They should also be required to be from projects that begin commercial operation subsequent to the start of the RGGI program. Because we do not anticipate the use of out-of-region offsets from any projects early in the RGGI compliance period, however, this issue does not need to be addressed in the initial Model Rule.

EXEMPTIONS TO THE CAP

As noted above, the initial RGGI cap is modest compared to the carbon reductions that will eventually be needed. We are thus quite concerned that exemptions to the cap proposed in the Draft Model Rule would weaken the program and could even prevent it from meeting the objective of reducing carbon dioxide emissions from electricity use in the northeast.

In addition to the biomass co-firing exemption previously discussed, we continue to support eliminating the exemptions identified in the Joint Letter from Environmental Groups:

- Not exempting large industrial power generators if their emissions were included in the initial calculation of cap levels, or if they are exempted, reducing the state cap by an amount equivalent to the exempted units' annual emissions. In order to judge the implications of this element of the rule the states should immediately identify those units they think could be eligible for this exemption.

- Address early reduction credits through a state's allocation scheme, not by inflating the cap and creating additional allowances of this type from the 2006-2008 period. In addition, any improvements in plant efficiency or reductions in emissions due to court orders or settlement agreements prior to December 2005 should not be eligible for early reduction credits.

OFFSETS

Offset Eligibility. Throughout the stakeholder process we had been assured by state officials that any offsets program would be bound by the so-called five point test (real, surplus, verifiable, permanent and enforceable) with language that is similar to that included in the Massachusetts 310 CMR 7.29 regulations. We were pleased to see that the MOU contained the following language: "*at a minimum, eligible offsets shall consist of actions that are real, surplus, verifiable, permanent and enforceable*". We were disappointed, however, not to see this same language in the model rule. These criteria must be clearly spelled out in the model rule for the public to have confidence that any offsets used in the RGGI program are equal to on-system emissions reductions.

Offset Triggers. We continue to be concerned about the imposition of offset triggers as well as other forms of direct cost controls for RGGI. Repeated modeling runs have shown that under a wide range of reasonable assumptions, if implemented with sufficient provisions for energy efficiency investments, the carbon reductions in RGGI can be achieved with energy bill savings to most customers and no significant costs to any customer classes.

We are especially concerned that relatively low triggers will distort the price signals needed to reduce carbon emissions efficiently, may reduce the incentives to invest in the clean energy technologies necessary to reduce emissions in the region, and may result in higher overall program costs than implementing RGGI without the triggers. We strongly encourage the SWG to examine the experience of northeast states with respect to implementation of RPS's using a price cap mechanism. RPS's typically utilize RECs as tradable certificates analogous in many ways to the tradeable allowances in RGGI. Please see the attached detail description of this experience.

Having two price-based triggers is also an unnecessary complication which will add to market uncertainty and could lend themselves to possible gaming. Having a second trigger causes unnecessary clutter. We recommend deleting the provisions that refer to the stage one trigger event. The effect would be to have the 'stage two trigger event' be the only trigger in the program. In addition, we would support either NRDC's proposal on modifying geographic availability or lowering the percentage of emissions allowed to be covered by offset allowances.

⁹ http://www.mtpc.org/renewableenergy/green_power/MGPPpaperAWEA.pdf. See especially Chart 2.

¹⁰ <http://www.mass.gov/doer/rps/rps-2004annual-rpt.pdf>

¹¹ Meredith Fowlie, "Emissions Trading, Electricity Industry Restructuring, and Investment in Pollution Abatement," University of California Institute, (CSEM WP-149), November 2005. <http://www.ucei.berkeley.edu/PDF/csemwp149.pdf>

However, as described above, those offsets allowances would need to come from offsets projects designed to meet the rigorous 5-point test (real, surplus, verifiable, permanent and enforceable) as well as other limitations as mentioned above

CONSUMER ALLOCATION & STRATEGIC ENERGY PURPOSES

UCS continues to support the principles articulated in the Joint Letter of April 20th:

The model rule and any supporting documents should reject anything which creates the impression that generators are entitled to allowances. We believe that 100% of the allowances should be allocated to consumers and that the MOU and Model Rule establish unjustifiably low minimum percentages for the consumer allocation. Data provided to the state working group suggests that there will be significant windfalls to generators at the direct expense of consumers unless the predominant share of allowances is reserved for consumers. If the Model Rule does not allocate all allowances to consumers, it should make clear that the percentage reserved for consumers is a minimum which each state is free to raise, and that the percentage allocated to consumers should increase over time.

We also have serious questions about the scope of the strategic energy purposes provision in the allocations section. There must be much better definition of this term. At a minimum, we recommend that the model rule clarify that all of the “consumer benefit or strategic energy purpose” allowance value must be used to: (1) reduce the costs of the RGGI program to the state’s electricity ratepayers; (2) provide additional benefits for activities or projects that would not have occurred anyway and not replace existing programs or investments; and (3) support programs and activities that do not pose a significant risk to human health and the environment.

Investment in increasing energy efficiency continues to be the most critical action needed to ensure that carbon reductions can be accomplished at very low or negative costs. We strongly support maximizing the auctioning of allowances and use for energy efficiency and additional renewable energy supplies. Indeed, given the low offset trigger price, and the reluctance of companies to make long-term investments, and the failure to retire offsets for energy efficiency and renewable energy, the consumer allocation may be the only mechanism within RGGI to stimulate the investments needed to reduce electricity sector emissions.

LEAKAGE

Last but far from least, UCS urges that the Model Rule address the issue of leakage. Leakage is expected to result from allowing the import of electricity from carbon-emitting sources outside RGGI without counting their carbon emissions under the RGGI cap. As Michael Bradley stated at the May 2, 2006 Stakeholder Meeting, leakage is the potential “Achilles Heel” of the RGGI program.

The current treatment discriminates against lower carbon sources within the region in favor of higher emitting imports. It therefore creates economic incentives for increased power generation and increased economic development of new dirty power plants outside the region over incentives to develop new clean energy sources within the region.

SWG modeling shows that leakage might be expected to account for 40 percent of the reductions attributable to RGGI. However, actual experience could easily turn out to be far worse than predicted by the modeling. Modeling generally assumes rational long-run economic behavior. Purchases of power from existing coal plants in the Midwest treated as “zero emissions” under RGGI, for example, do not necessarily require long-term commitments. Therefore, as discussed above, they could be incentivized even over less expensive long-term real zero emission investments within the region. New proposed transmission lines may increase the amount of power that can be imported from the Midwest relative to the modeling.

As we pointed out at the May 2 stakeholder meeting, the RGGI region is surrounded by proposals to build new conventional coal plants. The new coal plants proposed for Pennsylvania, Virginia and West Virginia alone could be sufficient to overwhelm all the emission reductions expected from RGGI. Demand from the RGGI states could contribute to new coal plant construction either directly, through contracts with these plants, or indirectly, by purchase of power from existing plants, enabling companies in the regulated states surrounding RGGI able to “justify” new plant construction, supported by their captive ratepayers, earlier.

Modeling by the U.S. Energy Information Administration of the National Commission on Energy Policy proposal, with double the rate of improvement in carbon intensity, under different price cap assumptions, found that 66-85% of overall carbon emission reductions would come from the electricity sector. A primary difference between the reference case and the case with the highest carbon emission reductions was the difference between building approximately 250 new 600 MW conventional coal plants in the reference and the net retirement of approximately 125 existing coal plants. In this scenario, no new conventional coal plants are built beyond those already under construction, although 17 GW of new IGCC coal plants with carbon capture and storage are built. Even so, overall carbon emissions are barely lower in 2030 than in 2003.¹² It is thus vital that RGGI not inadvertently contribute to construction of new coal plants outside the region.

We look forward to working with the leakage work group to help solve this problem. While it is important to try to create solutions that will solve the leakage problem for the lowest cost, leakage must not become a cost-control mechanism that undermines RGGI effectiveness and credibility. At a minimum, the Model Rule should state that the intent of RGGI is to reduce carbon emissions associated with electricity use within the region without exporting carbon emissions to other regions or discriminating against cleaner generation within the region. It should also provide mechanisms to ensure that state regulators are providing necessary data in a cooperative effort with utility regulators to prevent leakage.

Thank you for your consideration of these comments, and your continued efforts to implement this landmark program in a way that is effective, fair and a reasonable cost

¹² [http://www.eia.doe.gov/oiaf/servicerpt/agg/pdf/sroiaf\(2006\)01.pdf](http://www.eia.doe.gov/oiaf/servicerpt/agg/pdf/sroiaf(2006)01.pdf)

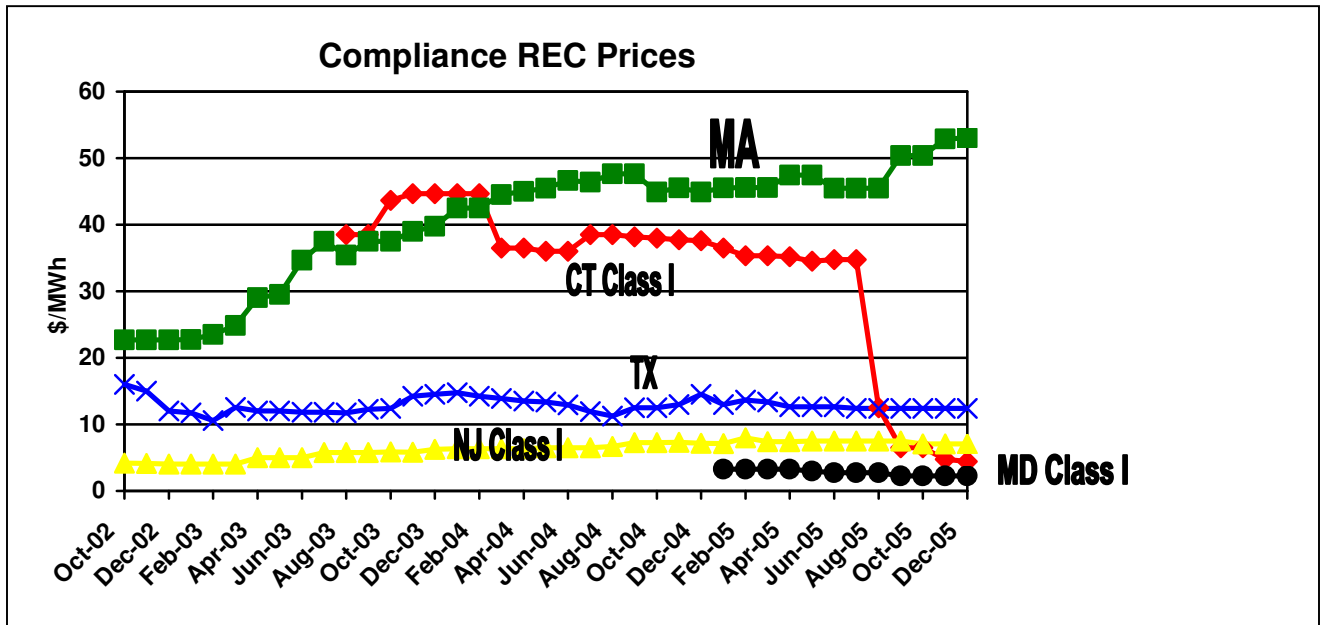
ATTACHMENT 1

Lesson Learned from Price Caps in Renewable Portfolio Standards

We will not repeat the general comments that have been submitted by many parties with respect to the theoretical distortions that price caps can introduce into market-based programs like RGGI. However, we do believe that the lessons learned from the experience of northeast states with respect to implementation of RPS's using a price cap mechanism are instructive. RPS's typically utilize RECs as tradable certificates analogous in many ways to the tradable allowances in RGGI.

These experiences demonstrate that so long, as the potential supply of tradable certificates significantly exceeds the demand, as determined by the regulatory requirement, the price of such certificates is low and market-based. Certificate prices, in New Jersey and Maryland currently, and very early experience in Massachusetts and Connecticut illustrate this point, as documented in the graph below from data from Evolution Markets.

When demand outstripped supply, however, as occurred within a few years in Massachusetts and Connecticut, REC prices quickly rose close to the level of the Alternative Compliance Payments, approximately \$50/MWh. (The 2005 drop in Connecticut prices was the result in expansion of biomass eligibility, creating a large surplus of RECs.)



Source: www.evomarkets.com

In theory, a \$50/MWh REC price should be sufficient to incentivize new renewable energy development in those states. In fact, solicitations for long-term purchases of RECs by the Massachusetts Technology Collaborative, which administers the Massachusetts Renewable Energy Trust and use of the Alternative Compliance Payments, resulted in long-term contracts or options to purchase RECs for a cost averaging about \$25/MWh at a time the price of RECs in Massachusetts was close to \$50/MWh.¹³ (In addition, through confidential conversations with developers, UCS is aware the total price of long-term contracts for energy and RECs from at least one project proposed in the state has been \$78/MWh, below the year 2005 average NEPOOL spot market price of \$81/MWh, or only about a \$15/MWh premium above the recent average of about \$63/MWh.)

In 2004, the most recent year for which there is a compliance report, approximately one-third of compliance with the Massachusetts RPS was met through Alternative Compliance Payments above \$50/MWh.¹⁴ Alternative compliance payments are expected to be used for a substantial fraction of compliance for 2005 and 2006 as well.

In Massachusetts (and other restructured states, especially where distribution companies have divested generation), distribution companies have simply been unwilling to make any long-term commitments to purchase RECs or renewable electricity, citing concerns about stranded costs and regulatory uncertainty. Retail suppliers have, with only one known exception to date, also been either unwilling or have lacked the creditworthiness to enter long-term contracts. Thus, these companies have been willing to purchase from spot REC and alternative compliance markets for at least double the price of the same commodity through long-term contracts.

With renewable standards, there are solutions to the reluctance to make long-term investments. Several states, such as California, Nevada, and Montana, have required long-term contracts. Connecticut has adopted such a requirement for 100 MW of renewable generation. Rhode Island has required consideration of long-term contracts in a Request for Proposals. New York has created a central procurement mechanism by which NYSERDA signs long-term contracts. It is not clear that there are any analogs to such solutions if generators in RGGI were to choose higher-price spot offsets available at the trigger price instead of investing in renewable energy and other compliance options that may be less expensive long-term options.

With generators subject to RGGI compliance, the dynamics may be different. Generating companies may be more creditworthy, and able and willing to enter long-term contracts than retail suppliers or distribution companies. However, developing or purchasing energy from renewable energy projects has not necessarily been part of many generating company business plans. In addition, a recent California study found that generators in restructured states are under investing in NO_x reduction technologies relative to companies in regulated states.¹⁵ And generating companies have many more options for direct NO_x control than they do for direct CO₂ control.

¹³ http://www.mtpc.org/renewableenergy/green_power/MGPPpaperAWEA.pdf. See especially Chart 2.

¹⁴ <http://www.mass.gov/doer/rps/rps-2004annual-rpt.pdf>

¹⁵ Meredith Fowlie, "Emissions Trading, Electricity Industry Restructuring, and Investment in Pollution Abatement," University of California Institute, (CSEM WP-149), November 2005. <http://www.ucei.berkeley.edu/PDF/csemwp149.pdf>