Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

Comments on Connecticut draft RGGI rule

John Rogers, Northeast Clean Energy Project Manager
June 1, 2007

Given that challenge and the opportunities to address global warming, the Union of Concerned Scientists appreciates this opportunity to submit comments on Connecticut's draft rule for implementing the Regional Greenhouse Gas Initiative in the state.

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. The Northeast Climate Impacts Assessment (NECIA),[1] a collaborative effort to apply the best and most recently available earth science and climate modeling capabilities to project the potential impacts of global warming on the Northeast, makes clear that our window for stabilizing greenhouse gas concentrations at reasonably safe levels is closing quickly.

Both the NECIA and the recently released Fourth Assessment Report of the Intergovernmental Panel on Climate Change *Summary for Policymakers* conclude that, to avoid dangerous climate change, the United States and other industrialized countries must reduce emissions on the order of 80% below 2000 levels by 2050—and that we must put the policies necessary to begin moving toward this ambitious outcome in place within the next few years.

RGGI, with its goal of reducing power plant carbon emissions 10% by the year 2020, is thus a modest but crucial step in the right direction, largely because of its precedent-setting nature. This landmark initiative and the widespread public support for it sends a powerful signal that the American citizenry is ready to implement an innovative, flexible, and cost-effective but *mandatory* program to reduce the U.S.'s contribution to global warming, starting with the leading carbon-emitting sector in our economy.

RGGI will be judged a success only to the degree that it actually succeeds in that objective. *If properly designed, RGGI will reduce electric sector emissions not merely from power plants located in the Northeast, but from all electricity generated anywhere to serve the Northeast's demand for electricity.* With proper design and implementation, RGGI will truly serve to:

- begin the shift toward more efficient and less carbon-intensive electricity generation;
- fully exploit the region's cost-effective energy efficiency resources, which analyses have demonstrated are ample;[2] and
- demonstrate to the rest of the country not merely the feasibility but the multiple benefits that can be realized by successfully harnessing market forces to reduce carbon emissions—the promise of carbon "cap-and-trade" systems—and stimulate improved energy efficiency and greater renewable energy development through technological and policy innovation that strengthens the local and regional economies.

Given that context, we offer brief comments on selected aspects of the draft Connecticut RGGI rule:

[1] Union of Concerned Scientists, Report of the Northeast Climate Impacts Assessment, October 2006. See: www.climatechoices.org

[2] See, for example, Northeast Energy Efficiency Partnerships/Optimal Energy, *Economically Achievable Energy Efficiency Potential in New England*, May 2005. Available at http://www.neep.org/files/Updated_Achievable_Potential_2005.pdf.

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Auction 100% of allowances from the beginning. While we appreciate the commitments in the draft rule to get Connecticut to auction of 100% of its allowances, we strongly agree with the comments of Clean Water Action about the importance of auctioning 100% of the allowances from the launch of RGGI. Because generators in Connecticut are operating in a regional context, deferring 100% auctions in Connecticut will not garner the state any stability, and will serve only *to lose the associated revenue* for Connecticut. The failure to include the social and environmental cost of carbon emissions—and as the Northeast Climate Impacts Assessment has shown, the very real economic cost—in the market for the production and use of electricity is a fundamental cause of the problem of global warming.[3]

Reject exemptions for long-term power contracts. We also strongly support the comments of Clean Water Action with regard to exemptions for generators' long-term power contracts. The advent of RGGI is no surprise, and generators should have been including it in their projections for some time now.

Use allowance revenues to meet goals effectively. We strongly recommend the use of allowance auction proceeds to reduce the costs of meeting the RGGI goals. The money from the auctions should be used to benefit consumers by substantially expanding programs promoting energy efficiency measures and renewable energy generation to serve Connecticut customers, enhancing consumers' and businesses' energy security and lowering their overall energy bills. Our position on the use of allowances is expressed in the joint statement, "How Revenues from RGGI Should be Used to Maximize Benefits for Consumers and the Environment," agreed to by 20 organizations from the RGGI region.[4]

Support the voluntary renewable energy market. We strongly applaud the draft rule's inclusion of the section on retiring allowances corresponding to voluntary renewable energy purchases in the state. So doing will help ensure the strong continuation of one of the most successful voluntary approaches to date to reducing CO2 emissions, the growing purchases of "green" or renewable energy by energy consumers. Information in support of that position appears in Appendix B.

Address leakage. We take this opportunity to reiterate our strong belief in the importance of addressing leakage actively and soon. UCS's position on leakage is stated in our May 17, 2007, comments in response to the *Initial Report of the RGGI Emissions Leakage Multi-state Staff Working Group to the RGGI Agency Heads*, released in March 2007. We are very willing to continue to work with the RGGI states, including Connecticut, and the leakage work group to help solve this problem. While trying to create solutions that will solve the leakage problem for the lowest cost is important, leakage must not become a cost-control mechanism that undermines RGGI effectiveness and credibility while setting a poor policy precedent.

* * *

[3] Brief additional information in support of 100% auctions: In creating a "cap-and-trade" system, government is essentially assigning monetary value to something that has previously had no monetized cost—the emission of a pollutant into the Earth's common atmosphere—forcing firms to take into account ("internalize") the full cost of their production. With trading, emissions allowances become a valuable, scarce commodity. Free distribution of allowances constitutes a major windfall for emitters, essentially rewarding them for their past and present production of the social and environmental harm that necessitated the program. Windfalls such as those received by generators under the European Union Emissions Trading System are highly regressive, rewarding relatively large firms at the expense of the average consumer. Introducing a requirement for carbon emissions allowances into this market means that electricity generators will have an economic incentive to reduce their emissions and that more efficient and cleaner forms of generation will be at an advantage. Auctions implicitly reward those with low emissions, requiring them to purchase fewer allowances. They also make it easy to handle new entrants in the market.

[4] See Appendix A.

Thank you very much for your consideration of these comments, and for your and your colleagues' continued efforts to implement this landmark program in a way that is fundamentally effective and fair, and provides a successful model for a solid national program.

Sincerely,

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Appendix A

How Revenues from RGGI Should be Used to Maximize Benefits for Consumers and the Environment
April 2007

The Regional Greenhouse Gas Initiative (RGGI) is a plan by 10 northeast states to jointly regulate carbon dioxide emissions (the primary cause of global warming) from electricity power plants, requiring a 10% reduction from current emission levels by 2018. Electricity generators will be required to have a permit (allowance) for each ton of carbon dioxide they emit. As of this writing, it appears that most or all of the states will sell 100% (or close to 100%) of the permits to generators, rather than giving them away for free. The interstate agreement gives individual states some flexibility in how to spend funds obtained from sale of the allowances. The statement below indicates agreement among many organizations on how the funds should be used in order to best serve the public.

1. All funds obtained from sale of the Regional Greenhouse Gas Initiative (RGGI) allowances should be used to benefit electricity consumers, to reduce the cost of implementing the RGGI program, and to advance the emissions-reduction goals of the program. Such funds should be allocated to those strategies which are most cost-effective in the short- and long-term for achieving these goals. No funds should be returned to electricity generators or used for other expenses of state government.

2. Because energy efficiency measures are currently the most cost-effective method of reducing energy consumption and therefore the costs of RGGI to consumers, the RGGI funds should be used primarily to expand efficiency programs.

3. Funds not spent on accelerating end-use efficiency should be used to assist the achievement of emissions reductions beyond those mandated by RGGI, to accelerate progress toward the 75% to 85% cuts that scientists agree are necessary and that are called for by the New England Governors/Eastern Canadian Premiers Climate Action Plan and in the plans of several northeast states. In particular, those revenues should support development and expansion of clean, safe renewable energy technologies beyond the levels required under state renewable energy standards, when such technologies are among the most cost-effective long-term options.

4. RGGI funds should only be used to support programs and activities that do not pose a significant risk to human health or the environment.

5. RGGI funds should be used to assist new programs or to expand existing programs, but only if those expansions would not have occurred anyway. In no case should RGGI funds be used to replace existing programs, investments, or funding.

6. RGGI funds should also be used to ameliorate the impacts of RGGI on low income customers, preferably through provision of energy efficiency programs to such households. In addition, a small portion of the RGGI funds could be used to ease the transition for communities and workers that see unusually sharp losses due to reduced operation of local fossil-fuel plants, should that occur.

American Council for an Energy-Efficient Economy
Connecticut Clean Water Action
Conservation Law Foundation
Environmental Advocates of New York
Environmental League of Massachusetts
Environment Connecticut
Environment Maryland
Environment Massachusetts
Environment New Hampshire
Environment Northeast
Environment Rhode Island
HealthLink (Massachusetts)
Massachusetts Clean Water Action
Massachusetts Climate Action Network
Natural Resources Defense Council
New Hampshire Clean Water Action
New York Public Interest Research Group
Pace Law School Energy Project
Rhode Island Clean Water Action
Union of Concerned Scientists

Appendix B
RGGI and the Voluntary Renewable Energy Market

The strong continuation of one of the most successful voluntary approaches to date to reducing carbon dioxide (CO2) emissions, the growing purchases of "green" or renewable energy by energy consumers, depends on Connecticut adopting the Model Rule provisions for reducing its carbon budget by the amount displaced by green purchases. Failing such a move by Connecticut, the voluntary market for renewable energy would have been seriously undermined.

Renewable energy is very important to Connecticut's energy development, as reflected in policies such as the state's renewable electricity standard (RPS). Renewable energy sources—wind, bioenergy, solar, geothermal, ocean, and incremental hydropower from existing dams—are the region's only indigenous carbon-neutral energy supplies, and the state's only indigenous energy supplies. Their use can be dramatically increased while saving consumers money and reducing exposure to fossil fuel price volatility,[5] 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 state, 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 the state'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.

Voluntary renewable energy purchases, in turn, have been very important to the development of renewable energy in the state and region, representing "a powerful market support mechanism for renewable energy development"[6] by individuals, businesses, and government agencies. Green power sales grew by 60% in 2004 and almost 40% in 2005, with 2005 retail sales totaling 8.5 million megawatt-hours—about 0.2% of total U.S. electricity sales; the Northeast was responsible for most of the customer growth in 2005. Voluntary green power markets have provided support for more than one-fifth of new renewable energy capacity additions nationwide since 1997.[7] 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.[8] A growing number of towns, colleges, and universities—particularly in Connecticut—are voluntarily committing to purchase 20% of their electricity from renewable energy sources by 2010.[9] Various states in the region have invested significant time and resources into supporting the growth of renewable energy purchases,[10] as has the federal government.

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[5] A State Working Group modeling scenario found, for example, that in the reference case, if only 50% of current renewable electricity standard targets were met, baseline emissions would increase, leakage from imports would increase, but energy bills would be virtually unchanged. 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)

[6] L. Bird and B. Swezey, *Green Power Marketing in the United States: A Status Report (Ninth Edition)*, National Renewable Energy Laboratory, November 2006.

[7] Ibid.

[8] The top 25 U.S. EPA Green Power Partners (mostly large organizations, including several companies in the Northeast), for example, annually purchase over 4 million megawatt-hours of renewable energy or RECs. (See, for example, U.S. EPA, "Private Sector Tops Green Power List," January 29, 2007, available at http://yosemite.epa.gov/opa/admpress.nsf/4b729a23b12fa90c8525701c005e6d70/70628d9a3fdd05ac85257272005a8efe!OpenDocument, and Green Power Partnership, www.epa.gov/greenpower/partners/top25.htm).

[9] See, for example, http://www.smartpower.org/20renewable_energy.htm.

[10] New York's renewable electricity standard, for example, specifically includes voluntary purchases, with a part calling for at least one% of renewable energy generation to come from voluntary purchases.

While customers that voluntarily purchase renewable energy, or green power, do so for a variety of reasons, principal among them is a desire to create environmental benefits.[11,12] Many corporations and institutions in particular are motivated by a desire to make greenhouse gas reduction claims. In announcing its recent record-setting purchase of renewable energy, for example, Wells Fargo presented it as "help[ing] develop renewable energy *and prevent[ing] the emission of 380,000 tons of carbon dioxide each year…*"[13]

Without an ability to make such claims for reduction of CO_2, 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, and would likely have considerably reduced market appeal.

> To further the goals of RGGI, in auctioning emissions allowances Connecticut should support, not undermine, such voluntary action. The draft Connecticut rule provides clauses that provide clear and simple guidelines on accounting for voluntary renewable energy purchases

Including those important clauses in the Connecticut RGGI rule will like have limited effect on allowance availability or prices, because of the current small scale of the retail green power market.

Failing to include those clauses, however, would likely have had significant effects on the voluntary market. Without those clauses, additional voluntary purchases of renewable energy by or for retail customers would not affect the state's allowance allotment. While the additional renewable generation would avoid the need for additional fossil generation to be dispatched, no corresponding allowances would be retired. Neither the sellers nor buyers of additional renewable energy could 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 the ability of renewable energy generators to make carbon reduction claims in future cap-and-trade programs, and the implications 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.**[14]

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 and other environmental attributes can be counted against the Federal Renewable Energy Goal.[15]

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.

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[11] 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.

[12] These comments apply to renewable energy certificates for which any carbon emissions reduction credit corresponding to the same underlying electricity has not been sold separately.

[13] "Wells Fargo Commits to Largest-Ever Corporate Purchase of Renewable Energy in U.S.," Press release, October 3, 2006 (emphasis added). Available at www.wellsfargo.com/press/20061003_GreenPower?year=2006.

[14] Matt Clouse, US EPA, "Environmental Attributes and RECS: A Work in Progress," Southeast Green Power Marketing Conference, Orlando, Florida, May 2005 (emphasis in original). Available at: www.southeastgreenpower.net/2005/presentations/MattClouse.ppt

[15] United States Department of Energy - Federal Interagency Energy Management Task Force 2005: *Executive Order 13123 Renewable Power/REC Procurement Guidance*; "REC" is "renewable energy certificate" or "renewable energy credit".

To sustain and encourage the voluntary markets, the CO_2 benefits of renewable energy in displacing emitting sources in the RGGI region must be recognized. Just as RGGI has forecast demand for state renewable energy standards and lowered the emissions cap by subtracting the resulting emissions reduction, so too should Connecticut's RGGI rule include the provisions for forecasting voluntary demand and subtracting the resulting emission reductions from the cap.

We strongly support the inclusion in the Connecticut RGGI rule of the clauses covering the treatment of voluntary renewable energy. The "free" carbon emissions reductions, paid for by interested and motivated citizens and corporations in Connecticut through their voluntary purchases of renewable energy, improve the effectiveness and cost of RGGI, and deserve the support of Connecticut's RGGI rule.