PACE UNIVERSITY
PACE LAW SCHOOL
ENERGY PROJECT

March 7, 2007

To: Connecticut Department of Environmental Protection
Subject: Pace Energy Project Comments on Prospective RGGI Rule Making

The Pace Law School Energy Project appreciates the efforts that the Connecticut Department of Environmental Protection and all stakeholders have made to construct an outstanding regional climate change program. We think that the rule making efforts in Connecticut will serve not only to design a superior state program, but also will serve as a model for other RGGI states as they pursue their rules for participating in RGGI.

We focus here on several key considerations: (1) Consumer Allowance Allocations, (2) Auction Design and Implementation, and (3) Provision for Voluntary Renewable Energy Programs. Further, we include an Attachment that addresses the series of claims against a 100% auction that have been raised by Evolution Markets and the International Emissions Trading Association.

(1) 100% Auction of Allowances

There should be a 100% auction of all allowances. All allowances should be auctioned or sold on behalf of electric consumers. There are several compelling and independent reasons for total allocation to consumers. At the same time, no sustainable arguments have been forwarded for why the generators should receive any of the allowances.

First, the allowances are held in trust by regulators on behalf of the true, beneficial owners--the public. The public owns the right to pollute The Commons. That society has erroneously allowed private enterprises to pollute freely in the past does not constitute a property right to do so in the future. In fact, it would be far more reasonable to require recompense to the public for past pollution, than to give entrepreneurs free right to do so in the future.

Second, auctioning allowances would be more in line with the Northeast's reliance on market forces and wholesale competition as a means of determining generator dispatch decisions. From a business point-of-view pollution is just another cost of production. In competitive wholesale electricity markets—such as we have throughout the RGGI area—this cost of production should be purchased by all the competitors and priced into their market offers. The resulting prices should reflect these true market and societal costs. Offering "costs of production" for free to market competitors is a subsidy that costs the consumers money and distorts the market. There can be reasons for intervening in the market with subsidies, but no good ones have been offered for why generators should be subsidized in the form of free allowances.

One of the major pluses that consumers were supposed to get out of the competitive restructuring of the electricity market was that for-profit generators would assume the major risks of building and operating electric generating plants. At that time there were a

lot of “stranded assets” (ill-advised generating investments) for which the consumers were paying. When these customer–paid-for utility plants were sold to private companies, the purchasing companies assumed all risks going forward. Such risks specifically include “regulatory risk”—such as new environmental requirements, whether those new risks were anticipated or not. In the case of CO_2, regulation is a well anticipated development, since President George Bush signed, and the US Senate ratified, the Rio Climate Treaty in 1992—long before almost all of these generating plants were privately owned, and 17 years before RGGI commences. To “protect” the shareholders of these private, competitive plants for any risk at all, let alone one as apparent as CO_2, constitutes a subsidy without purpose—a sheer and arbitrary transfer of wealth from consumers to generator shareholders.

Third, the indisputable evidence is that generators will include the price of allowances in their wholesale bid price as an “opportunity cost” whether they receive the allowances for free or pay, and that ultimately the consumers will pay for allowances in the electricity price even if the allowances are given to the generators for free. Consumers, one way or another, should receive the proceeds of selling allowances in order to offset in part the price increase they will, in any case, pay. Owners of coal plants, and to some extent owners of oil plants, will tend to lose some net income as a result of RGGI if they have to buy their allowances. But these plants are lower cost providers; they are giving up some of their profits, and for the most part not incurring an operating loss.

The coal plants that will be at greatest risk to lose profits are the oldest, most polluting ones with the highest heat rates. Hopefully the Connecticut Rule will not take the position that the oldest, dirtiest plants somehow need special protection.

The generators have raised the issue of <u>system reliability</u> with respect to awarding allowances. This issue has been discussed at length and hopefully by now has been dismissed. First, the ICF IPM modeling, under a broad range of assumptions, showed almost no coal plants closing. There was reduced operation of some coal plants as the highly efficient combined cycle gas plants partially displaced, in run-time hours, some of the operating hours of the least efficient old coal plants. These are the coal plants that have the highest heat rate and the highest emissions per MWH. But, with rare exception, the vast majority of coal plants maintained their availability.

Even if a number of coal plants or dual-fueled plants were to become economically imperiled, this is not a bad development. Some of these plants are very old and inefficient. Obsolescence happens, or at least it is supposed to happen in a market economy as older, less efficient plants are replaced by newer, more efficient ones. In any case, it is the responsibility of the Connecticut Department of Public Utility Control and the New England Regional Transmission Organization to monitor and maintain system reliability. They all have methods in place for doing so, working with the other relevant state public utility commissions. Further, the range of price impacts that RGGI may introduce to the market are <u>virtually insignificant compared to the market vacillations of fuel prices</u>. There are real world issues about availability of dual-fueled units, voltage support, and so forth, but these are all within the normal province of ISO/RTO responsibilities and concerns, and are minimally influenced by the envisaged RGGI initiatives.

Finally, it is important that the proceeds from selling the allowances be dedicated to reducing the cost of efforts to mitigate climate change for consumers over the coming decades. It is appropriate that the proceeds from allowance sales be dedicated to electricity consumers in the form of investments that reduce their current and future

costs of compliance. It is crucial that the proceeds be used for clean energy programs, especially energy efficiency. Such programs will reduce the cost of future CO_2 compliance by reducing the need for generation and attendant emissions, while simultaneously reducing electricity bills. The ICF IPM modeling analysis of energy efficiency along with the REMI analysis conducted for RGGI by the Economic Development Research Group clearly demonstrate the power of investments in energy efficiency to reduce CO_2 while simultaneously reducing bill impacts. A limited amount of allowance sale revenues should also be directed to helping to develop sustainable supply-side options that do not incur negative impacts on safety, health and the environment.

(2) Auction Design and Implementation

A good deal of attention has appropriately been directed to the effective design and efficient implementation of the auctions that will be used to sell RGGI allowances. Important progress has already been made in this direction and it must continue as a high priority concern. That said, it is also clear that this is a highly manageable task. Indeed, the ISO-NE, like the NYISO and PJM, has successfully demonstrated that it is possible to design, operate and monitor electricity markets of vastly greater monetary scale and electric system impact than RGGI.

There seems to be general and appropriate agreement that the auction should be open, transparent and liquid. A market is facilitated by the rules being clear and announced well beforehand, by there being a large number of buyers and sellers, and by there being a well-functioning secondary market. Monitoring needs to be conducted to assure that market power is not exercised.

There seems also to be some emerging agreement, which we share, that: (a) the auctions of allowances by the different RGGI states should be coordinated, and perhaps, integrated; and (b) there should be frequent, smaller auctions of limited numbers of allowances especially at first to help the market incrementally "feel out" the appropriate range of stable prices for allowances (rather than waiting until later and putting up all the allowances for sale at once).

(3) Treatment of Voluntary Renewable Energy

The voluntary market for renewable energy 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 Connecticut, the RGGI Rule should incorporate a solution enabling the voluntary market for renewable energy to continue. If such provision is not made by the DEP, it is extremely likely that this voluntary market will fail altogether in Connecticut. Given that SO_x and NO_x are already capped in the Northeast, unless voluntary renewable energy marketers can correctly claim CO_2 reduction credit for their products, they are likely to fail.

We would suggest incorporating into the Connecticut Rule the following definitional language from the RGGI Model Rule:

> *Voluntary renewable energy purchase definition. A purchase of electricity from renewable energy generation or renewable energy attribute credits by a retail electricity customer on a voluntary basis. Renewable energy includes electricity generated from biomass, wind, solar thermal, photovoltaic, geothermal, hydroelectric facilities certified by the Low Impact Hydropower Institute, wave and*

> *tidal action, and fuel cells powered by renewable fuels. The renewable energy generation or renewable energy attribute credits related to such purchases may not be used by the generator or purchaser to meet any regulatory mandate, such as a renewable portfolio standard.*
> (Page 20, RGGI Model Rule)

Further, the proposed language for voluntary renewable energy market set-aside allocation that appears on pp. 47-49 of the RGGI Model Rule should also be included in the Connecticut Rule.

Summary

We have appreciated the opportunity to work closely with the Connecticut DEP, and the other stakeholders over the past three years. We think that real progress is within our collective grasp, but that we need to move quickly to approve a final Connecticut RGGI Rule so that we can proceed to early announcement and implementation. Doing so will allow for a more gradual and more efficient adaptation by industry, allowance market, and other participants to that rule.

Larry DeWitt
Pace Law School Energy Project

Attachment

IETA and Evolution Markets
Criticism of 100% RGGI Auction and Responses to Them

The International Emissions Trading Association (IETA) and Evolution Markets have raised several objections to auctioning 100% of RGGI allowances. It should be noted that the proposal for 100% auction of allowances has been made and maintained since the beginning of the RGGI process three years ago, so this is not a new proposal or consideration. Further, all of the concerns recently expressed by Evolution and IETA have also been raised over the three year course of development of the RGGI MOU and Model Rule. We here summarize and respond to Evolution's arguments from its "Draft: RGGI Auctioning Position Paper" (undated) and its February 14, 2007 comments made in Connecticut for the February 15, 2007 meeting. IETA has raised similar concerns in their presentation: "IETA, Presentation by Ian Carter at NYDEC January 12, 2007 Meeting, Albany NY" .

1) "Although the [RGGI] rule calls for a set-aside of 25% of the total allowances for 'consumer benefit or strategic energy purpose', regulators in New York have proposed something more extreme: an auction of 100% of the allowances".
(Evolution, *Draft Position Paper*, p.1)

RESPONSE:
The RGGI Model Rule reads: "*Allocation provisions will vary from state to state, provided at least 25% of the allocations will go to a consumer benefit or strategic energy purpose".* (*RGGI Model Rule* Section 5.3 (a), p.44).

For several years a number of entities including the Office of the Attorney General of New York (under Eliot Spitzer), National Grid, the City of New York, industrial and commercial customer associations, religious groups, low-income groups, environmental groups and many others have called for a 100% auction with the proceeds allocated for these public purposes. Vermont's bill requiring 100% auction, H860, was introduced in February 2006, passed both Houses on April 20, 2006, and was signed by the Governor on May 2, 2006.

The Model Rule calls for states to determine where in the range from 25% to 100% they stand. More than half the parties that commented on the Draft Model Rule called for a 100% auction, and the average, for whatever it is worth, was 70%. In any case, the Model Rule absolutely did not call for a 25% auction, and clearly did call for states to each select a number in the 25% to 100% range. There is nothing either new or "extreme" about a 100% auction.

2) "Under the New York proposal, industry is not given the incentive to find new and innovative emissions reductions at their own plants. Rather, they will struggle to conform through expenditures to buy allowances, or, at best, inefficiently seek to minimize the purchase of allowances. On a practical level, this means that any reductions beyond those that are mandated are not rewarded financially and thus because there are no commercially available back-end controls, mandated

reductions translate to 'decreased generation' which may affect system reliability." (Evolution, *Connecticut Comments*, p.2)

RESPONSE:
This seems to ignore a fundamental competitive business reality: whether emitters are given allowances for free or not, they will, either way, be looking for the least cost way to generate electricity. If an emitter has a technological approach to reduce emissions that costs less than the allowance price, they will do so because it costs less. And this is true whether they are given allowances or have to buy them. If they are not given allowances, they will pursue the investment if it is less costly than buying allowances. If they are given allowances they will pursue that same less costly technological approach and sell their extra allowances. If this is not true, there is a problem with our competitive electricity markets, not with how we allocate allowances.

The expression "…struggle to conform through expenditures to buy allowances, or, at best, inefficiently seek to minimize the purchase of allowances…" does not explain what the "struggle" is or why generators would be so "inefficient" in their purchase of allowances. Evolution seems not to recognize that: (a) if gas generators are not given allowances, they will recover the cost of allowances by adding that cost to the market price, and (b) if coal generators are not given allowances, they will recover about half their allowance cost through the price increase established by gas generators (when gas is on margin), and all of their costs through price increases when coal is on margin. The modest declines in operating costs experienced by coal when gas is setting prices will not create an operating loss, but will reduce the current large margins that coal experiences with a competitively set price. Or is the "struggling" and "inefficiency" related to something else?

It is not clear what the meaning is of the expression "reductions beyond those that are mandated are not rewarded financially". An emitter does not have a "mandated" reduction. The cap imposes, by definition, a "mandated" level on the whole market, but there is no reason for the market to yield emissions below that level unless the cap is so "soft" that it would not have been exceeded under business-as-usual circumstances, or if the emitters as a group are "saving" allowances for use at a later time when they think allowances will cost more. But, once again, neither of those circumstances is affected by whether allowances are given or sold to emitters.

The reliability issue is raised: "because there are no commercially available back-end controls, mandated reductions translate to 'decreased generation' which may affect system reliability**."** Evolution is correct that there currently are limited means for fossil generators to reduce their CO2 emissions, although conversions to more advanced and efficient generation processes can lower heat rates and thus lower CO2 emissions per MWH. The modeling by ICF, as well as logic, shows clearly that what will happen under RGGI is not "decreased generation", but that coal plants will operate for fewer hours and be replaced for this time by more CO2-efficient gas plants. Studies by the NYPSC corroborate the extensive modeling by ICF that indicate that there are no reliability issues associated with RGGI.

3) "These programs encourage entities with a lower cost of abatement to "overcomply," so that they can sell their extra allowances to entities with a higher cost of abatement. Under full auctioning there will be no incentive to overcomply and thus greatly reduced prospects for trading." (Evolution, *Connecticut Comments*, p. 2)

RESPONSE:
Evolution claims that under a full auction, emitters would have no incentive to reduce emissions at their own facility and "'overcomply'", and then sell their extra allowances to others. In fact, such an emitter would have exactly the same incentive under a 100% auction as when they are given allowances for free. Either way the emitter will have the incentive to reduce its emissions as long as the cost of such reductions is less than the prevailing allowance market price.

When given the allowances, the emitter makes a profit equal to the difference between its reduction cost and the value of the allowance—it then sells the allowance (more than covering its reduction cost) and also receives the increased price for electricity driven by allowance costs included by the marginal price-setting generator. Under a 100% auction, the emitter would be reducing its operating costs by this same amount—it being less expensive to reduce CO2 than to buy an allowance—and it will also receive the increased price for electricity.

Finally, as noted above, there is just as much incentive for generators to make deep reductions under a 100% auction as there is under a free allocation – every ton of reduction returns value equal to the price of credits.

5) "Elimination of a viable secondary market eliminates any incentive for early or overcompliance: Overcompliance is the real success story of the SO2 programs. (IETA, Presentation by Ian Carter at NYDEC January 12, 2007 Meeting, Albany NY p. 5)

RESPONSE:
There is no reason to think there will not be a large and effective secondary market. The auction design must take into account the need for such a secondary market. There is reason to think that the secondary market will be larger and more liquid under a 100% auction since the emitters will not already have the lion's share of the allowances in the first instance. The ISO/RTOs have conducted numerous auctions, and a very healthy secondary market has developed with limited volatility. In fact, volatility has been dampened by secondary markets—by having larger numbers of informed traders.

We do not question that the SO2 market has been successful, but do question using "over compliance" as a major indicator of such. Over compliance by the market as a whole, indicated by actual market emissions below the cap, can tend to indicate that the cap was set higher than would have been emitted under business as usual conditions. Over compliance by the market as a whole can also indicate that emitters are banking allowances in anticipation of higher prices later.

4) "**In the U.S. SO2 program regulated entities are provided 30 years of allowances. If they choose, these companies can sell blocks of future allowances in order to finance the installation of control technologies or other major emissions reductions measures."** (Evolution, *Connecticut Comments*, p.3)

RESPONSE:
We have a competitive market for generation, the whole purpose of which is to put generation on a "business like basis", and get away from subsidies such as 30 years worth of allowances (which the generators are free to sell in order to provide enhanced immediate profits to shareholders). In a market economy, firms should make long-term investment decisions based upon whether investments in major emissions reductions measures are profitable compared to buying allowances. We should not use public

subsidies in the form of free environmental allowances for private enterprise in a competitive market. Whether to invest in pollution control equipment or to pay for pollution permits is a business decision like any other long-term investment choice. Surely we do not want environmental regulators intervening to subsidize participants in private markets.

5) "**Market Manipulation: Excessive auctioning of allowances can also lead to market illiquidity and leave a program open to price manipulation. Time and again in the SO2 program, we have seen expectation-led price distortions in the run-up to and aftermath of the SO2 auctions."** (Evolution, *Connecticut Comments*, p.3)

RESPONSE:
Auctions are commonplace in the competitive energy markets, with tens of billions of dollars contracted through such markets in the Northeast each year. The experience has clearly indicated that such markets benefit from having many buyers and many sellers. The role of competitive secondary markets is to provide additional options and price stability as expert judgment, expressed through arbitrage, tends to limit the market to a "reasonable range" of professional uncertainty.

Starting the market by giving all or most of the allowances to a very small number of fossil generators in the Northeast is not a recipe for a vibrant, transparent, liquid market in any case. The experience of EU, with its roller coaster allowance prices, stands in stark contrast and testimony. EU had no auction.

How the auctions are designed can have significant impacts on the stability of the allowance markets. If there were to be one auction every three years for three years worth of allowances, that would be a potentially unstable circumstance. We have confidence that the RGGI State Working Group will receive expert advice on how best to design and monitor the auction process. Most groups are calling for a larger number of smaller auctions, starting in early 2008, almost a year before the RGGI program begins.

6) "As we have seen in the SO2 and NOx cap-and-trade programs, as well as in the European Union's Emissions Trading Scheme, regulated entities find it profitable to find innovative and low-cost means to reduce emissions in a fully-incentivized trading program. This raises the question of who is more capable of investing energy industry funds: energy firms or state agencies. We believe the private sector has proven that it is more flexible, innovative and efficient in allocating capital in this industry than are government agencies." (Evolution, *Connecticut Comments*, p. 3-4)

"Success of the RGGI program will rest entirely on the ability of the State to find more efficient abatement opportunities for capital than the private sector." (IETA, Presentation by Ian Carter at NYDEC January 12, 2007 Meeting, Albany NY, p. 6)

RESPONSE:
Again, we have a competitive generation market in the Northeast, and it is at least surprising that IETA and Evolution Markets would propose a system of subsidizing participants in this market, allowing them to decide how much of this windfall to invest in new plants anywhere in the world, how much to invest in new plants in this region, how much if any to invest in CO2 control equipment in the Northeast, and how much to return immediately to shareholders as dividends. Further, most experts view investments in energy efficiency as the highest payoff and least cost way to reduce CO2 emissions and

to reduce the cost of this program to consumers, and this is precisely the sort of investment that a generator will not make.

The purpose of the “consumer benefit or strategic energy” funds is to finance CO2 reduction activities that benefit customers over the long-term and that would not be invested in otherwise. No one has proposed using the funds for investments in individual generating plants—that is a business decision made by the plant owners with their internal or market financing. Evolution Market’s challenging whether the generators will actually make such investments efficiently with market resources is really Evolution’s concern about the effectiveness of competitive wholesale generating markets in general, and is beyond the scope of this environmental proceeding.

Conclusion

Everyone is aware that with competitive markets for energy, there is a huge windfall gain realized by generators if they are given allowances for free. Everyone knows that they charge consumers for these free allowances, as the rules of Adam Smith dictate they do. We are puzzled by why IETA and Evolution do not take this into account in their comments, especially since both are so actively involved in the EU ETS market where the billion dollar annual windfall is a major topic of the year.

Further, it is remarkable that IETA and Evolution assure us that the RGGI 100% auction markets will be unstable, while failing to note and explain that EU ETS has experienced highly unstable prices in what we assume is the type of allowance allocation system that IETA and Evolution are encouraging the RGGI states to adopt.

Finally, we do not understand IETA’s and Evolution’s lack of confidence in the ability of competitive generators to make rational long-term investments without public subsidies in the form of free allowances.