



3 PHASES
ENERGY SERVICES

PRESIDIO OF SAN FRANCISCO
6 FUNSTON AVE.
SAN FRANCISCO CA 94129
WWW.3PHASES.COM

To: RGGI Environmental & Energy Commissioners and Staff Working Group
From: Gabe Petlin, Senior Manager Regulatory Affairs, 3 Phases Energy Services, LLC.
Date: May 31, 2006

RE: Comments on the draft RGGI model rule

INTRODUCTION

3 Phases Energy 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.

As currently proposed the RGGI model rule would eliminate the voluntary market for renewable energy in the RGGI states. That would be unfortunate. As a marketer of voluntary renewable energy, 3 Phases Energy and other marketers would be forced to write off the RGGI region as a source of supply for the voluntary renewable energy market. A customer in the RGGI region who wished to purchase renewable energy would look to sources outside of the RGGI region precisely because they desired to make some incremental impact in lowering GHG emissions through their purchase and because they know that if they sourced from within in the RGGI region there would be no impact on CO2 emissions.

RGGI is a much needed mandatory cap and trade program, but there is no reason why a good program like RGGI needs to come at the expense of other initiatives that also make significant contributions to reducing GHG emissions. Fortunately there is a win-win solution readily available that makes a rigorous mandated cap and trade program compatible with a vibrant voluntary market for renewable energy. The renewable energy community has gone to great length to organize itself and present a unified and constructive vision to RGGI of how these two markets work hand in hand (as explained in the body of the comments below.)¹

¹ The Center for Resource Solutions convened a Renewable Energy Working Group to submit comments on behalf of the voluntary renewable energy market. This group submitted comments in June 2004; September 9th, 2004; March 7, 2005; September 16th, 2005; and May 2006.

SCOPE OF THE EFFORT

Climate change is one of the most serious challenges humankind has ever faced, raising fundamental principles of stewardship and our shared responsibility to future generations. The scientific community is acutely aware that the Earth's window for stabilizing greenhouse gas concentrations at reasonably safe levels is closing quickly. The majority of the scientific community has long moved past discussion of whether there is global warming to the more profound question of how much time we have left to avert the most severe potential social, ecological, economic, and humanitarian 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 early steps are often the most difficult and the most important. This ground-breaking initiative sends a powerful signal that the US can 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 RGGI succeeds in that objective: reducing power sector carbon emissions. 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.

BACKGROUND ON THE VOLUNTARY RENEWABLE ENERGY MARKET

As a company completely dedicated to servicing the voluntary market for clean reliable renewable energy, 3 Phases Energy is acutely aware of the contribution renewable energy plays in avoiding the release of harmful greenhouse gases. In fact a major motivation for customers to voluntarily pay a premium for renewable energy is their desire to play their part as an individual or an organization in reducing emissions of GHG. The National Renewable Energy Laboratory (NREL) reports that voluntary purchasing of renewable energy has resulted in over 2,200 MW of new renewable generation capacity. We don't believe voluntary markets alone can achieve the significant reductions in GHG emissions needed to address the crisis of global warming. That is why 3 Phases Energy firmly supports and applauds the creation of RGGI. Voluntary markets are an important tool that compliment mandates such as RGGI by giving all consumers the power to help achieve GHG emission reductions *beyond* those levels mandated by law. We in fact

believe the RGGI mandate - to reduce power plant carbon emissions 10% by the year 2020 – is just a start and RGGI needs to go even farther.

With this introduction we turn to our recommendations that cover three critical issues: (1) the treatment of renewable energy, (2) exemptions from the emissions cap, and (3) leakage.

Rather than repeat in our own words what many organizations have already communicated to the RGGI SWG so articulately, 3 Phases will quote the excellent comments of the Union of Concerned Scientists (UCS) submitted on May 22, 2006. 3 Phases concurs in full with UCS’ statement on the treatment of renewable energy, on exemptions from the emissions cap, and on leakage.

BEGIN QUOTE

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,² 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.

² 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.)

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.³

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.**⁴ [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.⁵ A growing number of towns, colleges, and universities—including 25 towns in Connecticut as of this writing—are making commitments to purchase 20

³ Under the Renewable Energy Working Group proposal, the carbon reduction benefits of renewable generation used to meet state RPS's would automatically retired 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.

⁴ 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>

⁵ 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.

percent of their electricity from renewable energy sources by 2010.⁶ 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.⁷ 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 and other environmental attributes can be counted against the Federal Renewable Energy Goal.⁸

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

⁶ See http://www.smartpower.org/20renewable_energy.htm

⁷ 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.

⁸ United States Department of Energy - Federal Interagency Energy Management Task Force 2005: *Executive Order*

Generation Attributes Tracking System (GATS), and the New York Environmental Disclosure Program (EDP).⁹

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.**

***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

⁹ 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 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 projects 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.

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 2003.¹⁰ 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.

END QUOTE

Thank you for the opportunity to share these comments, and your continued efforts to implement a much needed ground-breaking program in a way that is effective, fair, compatible with multiple objectives and does so at a reasonable cost.

¹⁰ [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)