

INTRODUCTION

The Center for Resource Solutions (CRS), a non-profit organization, has convened a Renewable Energy Working Group to develop a proposal for the inclusion of renewable energy into greenhouse gas cap and trade programs. The Regional Greenhouse Gas Initiative (RGGI) state policymakers are charting a course for the rest of the country and we therefore look to RGGI for innovative approaches that will create a marketplace that values the carbon reductions renewable energy can provide. We greatly appreciate this opportunity to present our thinking to state policymakers and other RGGI participants for your consideration.

Our primary recommendation is that *renewable energy be specifically granted allowances through a pool of allowances established to support “public benefits.”* Without recognition in the RGGI cap and trade program, voluntary renewable energy markets are at risk and mandatory programs cannot properly quantify the volume of carbon dioxide reduced as a result of RPS implementation. Many current buyers of renewable energy do so because it helps them reduce the level of CO₂ in the atmosphere from electricity. If there is a cap, and renewables do not receive allowances, this claim cannot be made by a voluntary buyer. This would be a loss for both the cap and trade program as well as for the voluntary renewables market.

The following sets out in greater detail the recommendations that resulted from our deliberations. The first section of this submittal lays out our recommendations. The second section, in Question and Answer format, describes some of the rationale behind the recommendations that we make.

RECOMMENDATIONS

RGGI should create a Public Benefit Allowance program that ensures allowances are granted to in-region renewable generation on an output basis. Renewable energy should also be included in an offset program for out-of-region projects.

1. Public Benefit Allowance Program for Renewable Energy and Energy Efficiency¹

If the Northeast Regional Greenhouse Gas Initiative elects to allocate emissions allowances to fossil generators based either on historical carbon (CO₂) emissions or on the heat-input (MMBtu) of the primary fuels, then RGGI should allow renewable power

¹ / Renewable energy and energy efficiency are environmentally and economically beneficial for the region and key to the transition to a cleaner electricity sector and thus deserving of support. Activities that create severe or highly uncertain environmental impacts or risks should not be included in a Public Benefit Allowance pool or for out-of-region offsets.

facilities to participate in the system through establishing a pool of “public benefit” allowances specifically for renewable energy and energy efficiency.² Key design parameters of this program include:

Size of the pool: The pool of allowances for renewable energy and energy efficiency should be sufficient (and grow fast enough) to cover all anticipated renewable energy and energy efficiency needs in the region. When the RGGI cap-and-trade program begins, we recommend the public benefit allowance pool be equivalent to 15% of the program’s total number of emissions allowances per year. This amount should be adequate to cover renewables and energy efficiency within the region in the early years of this program. The Administrator should consider gradually increasing this share of allowances over time as renewables and energy efficiency installations increase.

Eligible allowance recipients: All owners/operators of qualifying renewable power facilities should automatically receive these allowances. Qualifying renewable power facilities are those fueled by eligible renewable resources located in eligible states (see below). Eligible facilities are those that have become operational since January 1, 1999.³

*Eligible renewable resources:*⁴ For the purpose of this program, ‘eligible renewable energy resource’ means:

- Solar,
- Wind,
- Ocean (tidal and wave)
- Geothermal energy,
- Biomass (excluding solid waste and paper that is commonly recycled)⁵,
- Landfill gas, or
- Incremental hydropower⁶

² The rest of this document will concentrate on the renewable energy portion of the public benefit allowance program.

³ At this time there are approximately 140 MW of renewable facilities operating in the ten-state RGGI region that would meet this eligibility criterion.

⁴ The definition below was taken from the Senate version of the Energy Policy Act of 2003 (HR 6).

⁵ The term ‘biomass’ means any organic material that is available on a renewable or recurring basis, including dedicated energy crops, trees grown for energy production, wood waste and wood residues, plants (including aquatic plants, grasses, and agricultural crops), residues, fibers, animal wastes and other organic waste materials, and fats and oils, except that with respect to material removed from National Forest System lands the term includes only organic material from--

- (A) Thinnings from trees that are less than 12 inches in diameter;
- (B) Slash;
- (C) Brush; and
- (D) Mill residues.

⁶ The term ‘incremental hydropower’ means additional generation that is achieved from increased efficiency or additions of capacity after 2005 at a hydroelectric dam that was placed in service before that date.

Geographic eligibility: To receive a state's public benefit allowances, a qualifying renewable power facility should be located in one of the states participating in RGGI's cap-and-trade program. Given the limited renewable energy project potential in a number of Northeast states, the Administrator should consider the option of allowing projects in one state to apply for unused allowances from another state's budget.

Recommended allocation approach: Allowances in the public benefit pool should be allocated to owners/operators of qualifying renewable power facilities on an "output-basis", i.e., lbs of avoided CO₂ per megawatt-hour of renewable power generated. The amount of avoided emissions caused by a particular renewable power facility should be calculated by a pre-determined methodology used in common across the Northeast.⁷

Procedure for receiving allowances: Owners/operators of qualifying renewable power facilities would submit basic information (e.g., facility identification number, location of generation, a Generation Information System (GIS) report⁸ that contains the megawatt-hour (MWh) produced over the applicable time period, or an independently verified report that contains this information⁹) to the state government and then automatically receive allowances from the pool for that output. All eligible renewable energy submitting the proper information would receive allowances regardless of how they will be used or whether they have received support from a state renewable energy fund.¹⁰

How public benefit allowances can be used: Once a renewable power generator receives its public benefit allowances, it has a choice to sell them to one of three potential buyers:

- A voluntary buyer who would retire them to support green marketing or emissions reduction claims;
- A utility buyer with an RPS requirement¹¹ that would then turn in the renewable energy credit and the allowance to the state for retirement under the RPS program; or
- Sell them to a fossil generator or utility as an additional GHG allowance.

⁷ RGGI could adopt a common "avoided emissions" calculation methodology that the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Protocol Initiative is in the process of developing by mid-2005 in collaboration with a number of national and international stakeholders.

⁸ The NEPOOL/GIS and other generation tracking systems under development around the country provide reports to their electricity generator account holders that can be provided to the RGGI program (at the account holder's discretion) and that include an accurate summary of the electricity production from the facility during whatever time period is specified. This information has been verified through the traditional 'control area' process or through some other type of independent verification system approved by the GIS. As such, these reports can be relied upon for accurate, up-to-date output data.

⁹ E.g. The Western Renewable Energy Generation Information System (WREGIS) has developed a credible methodology for determining the output from smaller renewable energy systems that are too small to be electronically reported to the tracking system through traditional methods.

¹⁰ For more details on the interaction of public benefit allowances with Clean Energy Funds, see the Question and Answers section of this document.

¹¹ For more details on the interaction of public benefit allowances with RPS Programs, see the Questions and Answers section of this document.

Regardless, once a green marketing, renewable energy program claim, or end use purchase of an allowance is made, the allowance is retired and cannot be resold or reused.

Status of unclaimed public benefit allowances: A state could sell any unclaimed allowances from its public benefit allowance pool. The revenue from these sales could be allocated to the state's public benefits fund for investment in new renewable energy, energy efficiency and low-income energy support projects.

2. Out-of-Region Offset Program for Renewables Located Outside the RGGI Region

We recommend RGGI put in place an out-of-region offsets program in which renewable energy projects are eligible for offset credits. This second recommendation assumes that renewable energy projects located within the RGGI region earn allowances through the public benefit allowance pool.¹²

Renewable energy is a desirable candidate for inclusion in an offset program. As a valuable commodity that is metered for sales purposes, quantification of the volume of renewable electricity is relatively straightforward. There are methodologies for converting the volume of renewable electricity into tons of mitigated CO₂ (see recommendation below). In addition, a well-developed system of tracking the renewable kilowatt-hours is in place, both through national programs such as the Green-e program and through the NEPOOL/GIS power tracking system and other similar systems.

Eligible renewable resources: The same renewable resources that are eligible for public benefits allowances (see above) would be eligible for offsets.

Geographic Eligibility: Renewable energy offsets should be allowed from renewable projects located anywhere within North America¹³, but outside the RGGI region. Should another region establish a GHG cap-and-trade regime or some other mechanism for issuing carbon allowances, the Administrator would not continue to issue allowances to projects from that region. However, renewable generation that has verified GHG allocations issued to it by another program (that meets RGGI standards) would still be acceptable for RGGI offset purposes as long as GHG benefits have not been counted toward any other environmental or renewable energy target.

Additionality: For offsets, the determination of additionality is essential to exclude carbon reductions from projects that probably would have occurred anyway. Under the

¹² The Renewable Energy Working Group recognizes that there may be a desire to cap or limit the degree to which out-of-region offsets can be used to meet GHG requirements in the RGGI region. We have left that to you to determine.

¹³ As long as the data come from a RGGI authorized independently verified source like a tracking system.

September, 2003 *Road Test Draft of The Greenhouse Gas Protocol Project Quantification Standard*, offset projects are not additional if they are being undertaken to come into compliance with regulations, or as a result of “voluntary agreements” between business and government in lieu of regulations. Thus, at a minimum, the following are not eligible as offset projects. Projects:

- 1) For which the renewable energy (or energy certificates) have been used to meet an RPS requirement in another state, or
- 2) That have been awarded credit for GHG emissions reductions that have been applied to meet a state regulatory or GHG requirement [e.g., the Oregon and Washington carbon dioxide standards for new power plants], or
- 3) That have been developed as part of a broader settlement (e.g. Minnesota wind projects developed to compensate in part for extending on-site storage of nuclear waste), or
- 4) That have been developed as part of an enforcement action, or
- 5) That are being paid for in a regulated utility’s rates, or
- 6) For which the renewable energy certificates¹⁴ have been sold into some other renewable energy market.

Timing: Renewable energy projects that become operational after the date that the RGGI program becomes operational should be eligible as offsets.

Measurement and administration of the Offsets Program:

Measurement and conversion of the generation into carbon offsets can be accomplished by (1) The verification of electricity generation through a generation tracking system or similar independently verified data source; and (2) the conversion of this generation information into tons of avoided CO₂ through a widely accepted emissions calculation methodology (GHG Protocol).¹⁵ The amount of avoided emissions caused by a particular renewable power facility should be calculated by applying the same pre-determined methodology that is used to calculate renewable energy allowances for in-region offsets.

The program Administrator will need to establish a process for reviewing and approving offset projects. It is important that projects are treated consistently, and that input from a broad spectrum of stakeholders is considered when developing the approval criteria. In order to ensure consistent treatment, one set of offset approval criteria based upon stakeholder input should be developed for all RGGI participating states, and RGGI should establish or designate an entity to review and approve offset projects for use anywhere in the region using these criteria.

¹⁴ / *Renewable energy certificates* are also referred to as RECs, TRCs, TRECS, Green Tags, Green Tickets, and Renewable Energy Credits. These terms are essentially the same and represent the social and environmental benefits associated with the generation of one MWh of renewable power.

¹⁵ RGGI could adopt a common “avoided emissions” calculation methodology that the World Resources Institute (WRI), and WBCSD Greenhouse Gas Protocol Initiative, working with a number of national and international stakeholders, is in the process of developing and is expected to have completed by mid-2005.

**3. Recommendation if an Output-based Emissions Allowance Allocation
Approach is selected by RGGI**

If an output-based emissions allowance allocation approach is selected by RGGI as its model program, then all renewable generation facilities in the region should be awarded a pro-rata share of the GHG emissions allocations based on their share of electricity output. No other criteria are necessary for renewable power generation in the region. The Public Benefit Allowance Program recommendations (item #1 above) would not apply but the Out-of-region Offset Program recommendations (item #2 above) could still apply.

RATIONALE FOR RECOMMENDATIONS

1. Public Benefit Allowance Program

Q: *We expect that a carbon cap and trade program will raise the cost of fossil-fuel based electricity in the region and that will directly benefit renewables. Isn't that enough without also giving renewables allowances?*

A: Current SO₂ and NO_x emissions trading programs have not helped bring new renewables to market though they have raised the cost of fossil generation. Renewable energy is part of the long-term strategy for reducing man-made greenhouse gas emissions. GHG emissions markets being designed today need to recognize this contribution and send a market signal up-front to significantly increase the scale of renewable power generation. In addition, coal and other fossil fuel based generators, if grandfathered, will receive windfall profits because they will be permitted to emit CO₂ AND receive valuable allowances. These windfall profits will negate any electricity price benefits renewable power might receive. This will economically disadvantage renewables unless they receive allowances. Finally, policymakers should be creating synergies between existing and new policies to ensure that these programs are economically efficient and environmentally effective. Unfortunately, most existing cap and trade programs were developed before renewables were viewed as an important growth area in the energy industry and the economy.

Q: *What is the rationale for a Public Benefit Allocation for renewable energy and energy efficiency?*

A: We are calling this a public benefit allocation to indicate pro-active distribution and not to invoke the idea of the set asides included in the NO_x budgets that were small (below 5%) and had high transaction costs that discouraged energy efficiency and renewable energy developers from going after them.

The rationale for a Public Benefit Allocation is threefold:

1. There is societal value in promoting renewable energy technologies that are just coming to scale. Government policy is a critical component to help build a robust marketplace.
2. A public benefits allowance program allows states and the region to create regional solutions over time – the simplicity of this approach provides flexibility and allows different technologies and programs to emerge as appropriate for the region's needs.
3. The public benefits allocation process for renewable energy on an output basis is designed to overcome the high transaction and administrative costs associated with the SO₂ and NO_x emissions trading set aside programs.

We have therefore endeavored to design a public benefit allocation that can be used for both renewable energy and energy efficiency that will recognize the short-term GHG

benefits from these technologies, as well as support the long-term transformation of the electricity sector into one that features more efficient use of electricity and the creation of a cleaner generation system. Renewable energy and energy efficiency are environmentally and economically beneficial for the region and key to this transition thus deserving of support. Activities that create severe or highly uncertain environmental impacts or risks should not be included in a Public Benefit Allowance pool or for out-of-region offsets.

Q: *We want to have this program as easy to administer as possible. Doesn't your Public Benefit Allocation make administration complicated?*

A: No, we believe that with the existence of the NEPOOL/GIS (and similar tracking systems currently under development in the region) the issuing of allowances to renewable generation facilities can be very fast, efficient and accurate with low transaction costs for both the RGGI Administrator and the renewable generator.

Q: *What is the basis for using 1999 as the initial year of operation for eligible renewables seeking Public Benefit Allowances?*

A: This is the date after which competitive markets first began to open in the region. Therefore, projects after this date can be assumed to be 'additional' to the regional electricity generation system. In the 10 states there were about 1000 MW of operational renewables prior to 1999, and 140MW that became operational after 1999 that could qualify as "new" for the region.

Q: *Are you double counting renewable facilities (e.g. including them in the baseline and giving them allowances as well)?*

A: No, renewable generation that became operational before the qualifying date will be included in the base-line calculation for the cap, while generation that became operational after the date will NOT be included in the baseline.

Q: *Why did you choose to use this definition of renewables?*

A: Because this definition of renewable energy has already been vetted through the US Senate in energy legislation. We believe it is appropriate to use for this purpose.

Q: *What is the basis for setting the allocation level at 15 %?*

A: A 15% allocation to renewables, efficiency, and other public programs allows for states: (1) to meet their ever-increasing RPS requirements; (2) support the growth we are seeing in the voluntary green power markets; (3) create incentives to ensure that energy efficiency remains an effective tool to mitigate climate change; and (4) support other public programs, like rebates to low-income customers who might face hardship as electricity prices rise.

In addition, revenue from the sale of unused allowances will be inversely proportional to the rate of renewable energy/ energy efficiency development (e.g. the more renewable energy/ energy efficiency development the lower the number of unused allowances), thus providing a self-governing contribution to the Clean Energy Funds in the region directly linked to the growth of the technologies being supported.¹⁶

2. Out-of-Region Offset Program

Q: *Why did you include an out-of-region offset program as well as an in-region public benefit allowance pool?*

A: An offset program offers flexibility and may be a less costly alternative for compliance. Including renewables in the offset program will encourage investment in renewable generation in neighboring regions thus helping to reduce absolute emissions of GHG, and other air pollutants that would contribute to air pollution within the regional air-shed.

Q: *Doesn't this effectively raise the GHG cap in the region?*

A: The overall cap stays the same regardless of the availability of offsets; offsets just provide a flexibility mechanism for complying with the cap. GHG levels will be reduced in other areas – and the region can still meet its' goals (as a global pollutant, the location of the GHG emissions reduction is not a critical issue). Offsets will reduce the price pressure on in-region allowances and lower the cost of compliance.

Q: *What are the eligibility requirements for renewables under the offset compared to the public benefit allowance pool?*

A: The primary difference is that for allowance eligibility, the required date after which the renewable energy facility must have become operational is January 1999. For offsets, a more stringent additionality standard is used and the required date is after the point at which the RGGI program goes into effect

3. The Integration of the RGGI program with Renewable Portfolio Standards (RPS) and Clean Energy Funds (CEF).

Q: Regarding the interaction of the RGGI C&T with RPS programs, should renewables that are used for RPS compliance in the RGGI region receive GHG allowances?

¹⁶ / Once the State RGGI Administrator has sold any unclaimed allocations, for states that do not have clean energy funds, they could either establish a special state fund or have one of the other state Clean energy funds handle the allocation.

A: We recommend that RGGI issue allowances to all eligible renewable energy production in the region; but that for any renewable energy used to comply with a state RPS program, the GHG allowances be required to accompany the renewables and be retired on behalf of the ratepayers of that state (unless the RPS Administrator determines otherwise). This provides an explicit way to track the impact of the RPS program on GHG reduction targets (that can also be included in periodic cap reduction calculations) while at the same time simplifying administration for both programs. Under this approach, potential RPS program impacts would not be included in the initial RGGI baseline cap calculations, while actual GHG certificate retirements would be included in cap updates.

If a state RPS administrator decides not to require carbon allowances be bundled with renewables being used for RPS compliance, then that state's RPS program should not be included in the calculation of the GHG baseline for that state. Nor should it be included in any periodic cap reduction calculations since that RPS program will not affect GHG reductions.

Q: Should projects that receive incentives from state Clean Energy Funds be able to receive GHG allowances?

A: We recommend that all eligible renewable generators be eligible for GHG allowances regardless of whether they receive an incentive payment from a Clean Energy Fund. It is very difficult to decide where to draw a line about 'incentives.' Clean Energy Funds were created for a variety of reasons and yield many public benefits other than carbon reduction. There are also a number of other incentive programs for different types of technologies and fuels. Would fossil plants that receive various tax, depletion allowances, and other government incentives be ineligible for allowances? Unless you are going to apply such a rule to all types of generation and all incentive programs, there is no justification for applying it only to renewables that receive support through a Clean Energy Fund.

Finally, if the fund, as quid pro quo for the incentive payment requires a pro-rata share of renewable certificates from the project be returned to the fund, then the fund administrator should also determine if the associated GHG allowances would come back to the fund as well.

If you have any further questions, please feel free to contact us.