



UNITED STATES COMBINED
HEAT & POWER ASSOCIATION

May 22, 2006

Staff Working Group
Regional Greenhouse Gas Initiative

Dear Staff Working Group:

The United States Combined Heat and Power Association (USCHPA) and the Business Council for Sustainable Energy (the Council) are pleased to offer the following comments on the RGGI draft Model Rule released March 15, 2006. The USCHPA is a private, non-profit association, formed in 1999 to promote the merits of combined heat and power (CHP) and achieve legal recognition and public policy support for CHP. The Council was created in 1992 and its members span the energy spectrum. It represents companies and trade associations in the wind, solar, hydropower, energy efficiency, natural gas and insulation industries. The Council promotes public policies that reduce the environmental footprint of energy production and use, while encouraging economic growth and energy independence for the United States.

The topic of these comments is the formulation of the early reduction credit provisions. Our concern is the formula for calculating credit, shown on page 41 of the rule. As currently formulated, the only emission reduction action that can receive credit is fuel-switching, while efficiency improvement is systematically excluded from receiving credit under this provision. The reason for this is the input-based formulation of the rule. The problem can be fixed by re-casting the provision on an output-basis.

There are three generic ways to reduce CO₂ emissions from fossil-fuel processes:

- Reduce utilization
- Increase efficiency
- Switch to lower carbon fuel

RGGI has made clear that reduced utilization will not receive credit under the early reduction provisions. Fuel-switching can provide genuine emission reductions, however at a very high cost (\$30/ton or more) and potentially exacerbating regional concerns over fuel-diversity. Increased efficiency is the lowest cost and most widely applicable approach to CO₂ reduction and one that RGGI has often endorsed as a vital component of its plans. We are therefore surprised that the proposed regulation systematically excludes energy efficiency as an option.

Early Reduction Allowances (ERAs) can be awarded under the proposal for operation during early reduction period of 2006-2008 compared to operation during the baseline period of 2003-2005. As currently formulated, the ERA calculation considers two cases:

- If heat input during the early reduction period is less than or equal to the heat input during the baseline period, the ERAs are equal to the early reduction period heat input times the reduction in the input-based emission rate (lb/MMBtu) from the baseline to the early reduction period.
- If the heat input during the award period is higher than during the baseline period, the ERAs are equal to the decrease in absolute emissions from the baseline to the early reduction period.

These calculations provide ERAs for a facility that switches to a lower carbon fuel (e.g. coal to gas). However, they provide no credit for a facility that reduces its emissions through increased efficiency. This can be demonstrated through several examples:

- If the facility increases its generating efficiency and continues to generate the same amount of electricity, its heat input (and emissions) will decline between the baseline and early reduction periods. However, the input-based emission rate (lb CO₂/MMBtu) does not change, since it is dependent only on the fuel characteristics. Thus, though the plant has made a real reduction in emissions, it cannot get any ERAs because there is no change in emission rate.
- If the facility increases its generating efficiency and increases its output, there are three possible outcomes:
 - First there is a range of operation in which the heat input is still lower than the baseline and the unit receives no credit as in the first case.
 - There could be a small window at which there is an absolute reduction and the unit could get ERAs.
 - Beyond that, no ERAs are available even though the emission rate is lower.

The results of the last sub-case are partly a manifestation of RGGI's determination that ERAs should only be available to a unit that makes both a rate reduction and an absolute reduction. The same limitation applies to fuel switching. It's not clear to us why RGGI does not want to encourage the increased use of lower emitting units through the early reduction provision. This provision will have a limiting effect on all early reduction actions since plant operators will not know the future level of plant operation and will be reluctant to make early reduction investments if they do not know whether they will be creditable or not.

That said, our concern is not so much with the specifics or even the existence of the early reduction provision as with the lack of focus on energy efficiency as a compliance mechanism. As noted above, energy efficiency is widely recognized as a critical component of a successful RGGI strategy. Yet in the one place in the model rule in which it could have been incorporated, it has been neglected. As a reflection of RGGI's

commitment to energy efficiency and a guidepost for state implementation of the Model Rule, this is a red flag.

On the hope that this formulation is simply an oversight rather than a policy statement, we offer the following simple fix to the problem by converting section xx-5.3(c)(3)(i) and (ii) to an output basis that automatically reflects improved efficiency:

xx-5.3 (c)(3)

(i) If total heat input from all CO₂ budget units at the CO₂ budget source during the early reduction period is less than or equal to the total heat input from all the CO₂ budget units at the CO₂ budget source during the baseline period:

$$\text{ERAs} = ((\text{AER}_{\text{BASELINE}} - \text{AER}_{\text{ERP}}) \times \text{MWh}_{\text{ERP}}) / 2000$$

where:

“AER_{BASELINE}” is the average CO₂ emission rate for all of the CO₂ budget units at the CO₂ budget source during the baseline period (in pounds/MWh);

“AER_{ERP}” is the average CO₂ emission rate for all of the CO₂ budget units at the CO₂ budget source during the early reduction period (in pounds/MWh); and

“MWh_{ERP}” is the total electric output from all CO₂ budget units at the CO₂ budget source during the early reduction period (in MWh).

(ii) If total heat input from all the CO₂ budget units at the CO₂ budget source during the early reduction period is greater than the total electric generation from all the CO₂ budget units at the CO₂ budget source during the baseline period:

$$\text{ERAs} = \text{E}_{\text{BASELINE}} - \text{E}_{\text{ERP}}$$

where:

“E_{BASELINE}” are total CO₂ emissions from the all of the CO₂ budget units at the CO₂ budget source during the baseline period (in tons); and

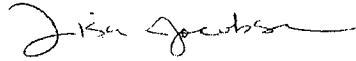
“E_{ERP}” are total CO₂ emissions from the all of the CO₂ budget units at the CO₂ budget source during early reduction period (in tons).

This approach provides credit for both fuel-switching and efficiency improvement while maintaining RGGI’s interest in recognizing only absolute and rate reductions. More importantly, it sets an example of regulation that recognizes and rewards increased efficiency through output-based regulation. This could also be improved by including the efficiency effects of CHP through recognition of the thermal output of CHP retrofit projects during the early reduction period.

Increased efficiency will be a critical requirement for successful implementation of the RGGI program and it must be incorporated into the structure of the RGGI regulations from the outset. We hope that the Model Rule will lead the way in this important respect. We appreciate the opportunity to submit these comments and would be glad to respond to any questions related to them. If you have any questions, please feel free to

contact Lisa Jacobson of the Council at (202) 785-0507 or via email at ljacobson@bcse.org or Thor Ketzback of the USCHPA at (312) 807-4437 or tketzback@bellboyd.com.

Sincerely,



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