

**Regional Greenhouse Gas Initiative
Stakeholder Group Meeting Process
April 2nd 2004**

NY PSC, 8th Floor Board Room
New York City

Facilitator: Dr. Jonathan Raab, Raab Associates, Ltd.

RGGI Stakeholder Group Meeting #1: Meeting Summary

106 people attended this meeting that began at about 9:30am and concluded at about 4:00pm.

I. Materials Distributed and Presented

Prior to Meeting:

- a. Agenda
- b. Ground rules
- c. Outline of Key Policy Issues

At the Meeting:

1. Stakeholder Process Overview, *Jonathan Raab, Raab Associates, Ltd.*
2. Review of IPM Model and Approach, *Steve Fine, ICF Consulting*
3. Comparative Cap and Trade Programs, *Joe Kruger, RFF*
4. Future Meeting Sequencing and Schedule, *Jonathan Raab, Raab Associates, Ltd.*

All the documents and presentations can be accessed on the RGGI project website:

http://www.rggi.org/stakeholder_schedule.htm

II. Welcome, Agenda Overview, Meeting Summary Review

Carl Johnson, Deputy Commissioner of New York State Department of Environmental Conservation welcomed the group on behalf of Erin Crotty, Commissioner of NY DEC. Sonia Hamel, of the Massachusetts Office of Commonwealth Development then welcomed everyone and encouraged stakeholders to provide their input. Franz Litz of NY DEC then thanked all of the staff from the state agencies working on the RGGI effort. New Jersey DEP's Sam Wolfe rounded out the welcomes from the RGGI Staff Working Group's Steering Committee.

Facilitator Jonathan Raab of Raab Associates, Ltd. then reviewed the agenda for the day. The Staff Working Group (SWG), the Resource Panel (RP), the Stakeholder Group, and the public all introduced themselves. The formal Stakeholder Group members were also asked to respond to the following question: "*If RGGI is successfully designed and implemented, what do you think would be a key indicator of that success?*"

The Stakeholder Group members provided the following indicators of success:

1. Getting this diverse group to agree
2. Balancing different interests
3. This system links up with other carbon cap and trade systems in world (like Acid Rain).

Final RGGI Meeting Summary 4-2-04

4. Group to come up with model that other states can adopt in a reasonable, economic manner
5. If allocation of costs associated are fairly distributed
6. Balancing cost and reliability in and between regions
7. Transparency and liquidity, upward compatibility with other systems
8. Develop System with meaningful targets and efficient mechanisms to reach targets, encourage clean energy sources.
9. Adopt model rule by April 2005, reduce emissions, replicable by others
10. High integrity policy, with real environmental benefits
11. Hitting carbon targets. Including energy efficiency as part of goals, so net economic benefits are positive
12. Achieve reductions in most cost effective manner, apply nationally
13. Maintain reliability of transmission
14. Develop program in as flexible a manner as possible
15. Model becomes a framework for a nationwide program
16. SWG make informed decisions, program with environmental integrity and deliver emissions reductions in this sector
17. Nationally replicated system, with equity and meaningful CO2 reductions
18. Meet reductions in a way that is not economically harmful
19. Environmental benefits, system reliability, not disadvantaging RGGI states, preserve jobs
20. Have this program preclude other patchwork programs which unfairly advantage certain regions / states
21. Fair, balanced, program, eventually adopted nationally
22. MD and PA join as full participants, practical, directionally correct, provide right financial incentives to meet goals
23. Real cap with real reductions from current emitters, trading scheme that provides net environmental benefits. Equitable allocation of costs
24. Simple, economically feasible

III. Stakeholder Group Meeting Process Goals, Structure, Timeline, Website, and Ground rules

Jonathan Raab then presented an overview of the process and reviewed the ground rules. Click on the following link to see the presentation:

http://www.rggi.org/docs/stakeholder_process_4_2_04.pdf.

One stakeholder said that large coalitions need more than one week to review documents, and asked if documents can be distributed more than one week before meetings. Another stakeholder suggested establishing an area on the RGGI website where people can post comments and have a discussion pertaining to a particular document or issue.

One stakeholder suggested putting a background document section on the website, where stakeholders can submit documents. Jonathan Raab asked that all background documents submitted for posting be in electronic format.

In response to a question about the role of the Resource Panel, Franz Litz clarified the RP was available to provide specific expertise as issues arise. One Stakeholder asked how the

Stakeholder Group should interact with the SWG sub groups, and was told that communication would be best through the sub-group chairs for now.

IV. RGGI Staff Working Group (SWG) Structure and Process

Chris James from CT DEP said that the SWG is made up of environmental and energy agencies from the RGGI states. He said the SWG has so far worked on the components of the rule, and created sub groups to look at various pieces and processes including website, energy modeling, macroeconomic modeling, source inventory and applicability, etc. Chris added that subgroups are working mainly by conference calls.

V. RGGI Carbon Cap and Trade Framework and Key Policy Issues

The SWG then reviewed the outline of key issues. Click on the following link to view the outline of Key Policy Issues document: http://www.rggi.org/docs/keyissues_4_2_04.pdf

I. Initial Policy Foundation:

Franz Litz began by reviewing the initial policy foundation. Franz clarified that “other sources” in section I. E did not refer to offsets, but rather other stationary sources. Stakeholders also asked whether the program would be expanded to non-stationary sources and would cover other gases beyond CO₂. Franz responded that these were possibilities beyond Phase I.

II. Policy Issues and Questions:

(A) Technical Groundwork

Chris Sherry of NJ DEP reviewed the Technical Groundwork section.

When asked about the scope of the inventory, Chris said the Data Analysis subgroup is including RGGI states and US observer states, and would include self-generating units behind the meter that exceed the size threshold. No imports or exports will be included. Chris stated that a state-by-state inventory is being developed for this process, ICF will be doing the energy modeling using IPM, and that NESCAUM would be doing macroeconomic modeling using the REMI macroeconomic model. Dwayne Breger from MA DOER said the SWG will also be conducting a bottom-up analysis of the economic impacts of RGGI on the energy efficiency and renewable energy industries in the RGGI region. This analysis will be independent of the REMI modeling. The SWG also said that the energy modeling will not present results at an individual plant or unit level, but the IPM dispatch model does represent all existing generating units in the RGGI region.

(B) Program Applicability

Chris stated that the SWG is leaning toward a 25 MW minimum size threshold.

Numerous comments and potential additional questions were raised by Stakeholder Group and Resource Panel members for SWG consideration:

Final RGGI Meeting Summary 4-2-04

- Units that have CEMS could be a better criteria for applicability than generator size
- Opt-ins could potentially be an offset
 - What are the data needs to determine whether the opt-in question should be an applicability or an offset issue?
- Will the modeling be able to project plant closures and associated impacts on local communities and to include job losses? If not, how will this be assessed?
- What modeling should be done to determine the impact of the program on energy reliability, fuel diversity and security?
- What power generation/emissions modeling should be done to evaluate leakage (i.e., increased CO₂, SO₂, NO_x and Hg emissions in surrounding States and Canadian Provinces that result as a consequence of increased generation to offset reduced generation in the RGGI states)?
- What evaluations need to be done to develop a program that does not create a competitive disadvantage for the industries and consumers in RGGI participating states versus surrounding states and Canadian Provinces that do not participate in the program?
- What is the proper basis for the cost/benefit assessment of the program? What environmental benefit will accrue from the program? Net tons of GHG emissions reductions that may be achieved do not necessarily reflect environmental benefits. What information needs to be developed to allow the preparation of a defensible benefit/cost assessment?

Could source data for other stationary (non-EGU) sources be collected and used later? (Chris replied not at the moment, due to SWG staff resource constraints.)

- Do sources under B-2 need to be limited to stationary sources?

(C) Emissions Cap and (D) Flexibility Mechanisms

Bill Lamkin, of MA DEP then reviewed the emissions cap and flexibility mechanisms, stating that the cap will be in relation to a 1990 base year emissions level, and that modeling will be used to evaluate various cap options. He added that there are tradeoffs and linkages between flexibility mechanisms and cap size.

Numerous comments and potential additional questions were raised by Stakeholder Group and Resource Panel members for SWG consideration:

- What is the rationale for setting the cap, (e.g., cost benefit analysis, science, etc.)?
- What is the time period of the cap?
- There should be concrete rules for opting-in.
- There could be an implementation challenge, as all states may not adopt and implement a cap at once. SWG should ensure that there would be some flexibility in terms of adoption and implementation
- What are the implications of not being consistent across states?
- Flexibility could undermine the integrity of the cap
- The program should be replicable across other parts of the country

Final RGGI Meeting Summary 4-2-04

- Flexibility mechanisms should be reviewed on an annual basis to provide a safety valve to protect against inordinate implementation costs for generators
- Netting and bubbling should be allowed, as well as a cap on allowance prices if there is no access to allowance markets
- Is there a reason to weather normalize the cap?
- Will generation performance standards be considered?
- How will energy efficiency be accounted for?
- Will sequestration be credited toward compliance under the cap?
- What impacts (e.g., leakage, increased costs, plant closures, etc.) will result by not having flexibility mechanisms available at the beginning of the program?
- Look at current emissions, not just 1990.
- There needs to be an overall goal (e.g., least cost, flexible, cheaper compliance). Other things are then just tradeoffs.
- Piggyback on international trading systems.
- Assuming offsets and project-based reductions for GHG's other than CO2 will be allowed, how will these be converted into a metric usable in the program?
- What time period should be used to determine allowances needed (e.g., possibly each year surrender allowances equal to the past 5-years' annual emission average)
- Should the ability to create early reduction allowances be allowed?

Should a cap on allowance prices be established to act as a safety valve to assure compliance costs do not significantly exceed what RGGI modeling projects the program will cost society and that is the basis for the development of the program design (e.g., the size of the cap)?

An observing member of the audience suggested that compliance targets could be input or output based.

(E) Allocations

Bill Lamkin presented the seven allocation-related questions currently under consideration by the SWG. Numerous comments and potential additional questions were raised by Stakeholder Group and Resource Panel members for SWG consideration:

- What are the economic and resource implications of various allocation choices?
- Should allocations be fuel neutral or fuel specific?
- Look at history under NOx SIP process
- If you move to a full auction, questions 4-7 may no longer be relevant.
- Should there be set asides, and if so, for what?
- Look at impact on renewables market, especially for voluntary programs
- Consider doing this without allocations to avoid winners and losers
- Consider allocating to load rather than generation
- How will baselines be established?

- Question E.3 mixes two different issues and should be separated into two questions.

(F) Regional Greenhouse Gas Registry (RGGR) and Emissions and Allowance Tracking

Joanne Morin from NH DES reviewed the RGGR program and said they were in the early stages of conceptual design, and anticipate beginning a stakeholder process next winter.

(G) Other Policy Decisions

Chris James of CT DEP then reviewed other policy issues the SWG is considering. Stakeholder Group and Resource Panel members had the following comments and suggestions in this area for the SWG to consider:

- Northeastern ISOs are working together on attribute trading, and SWG should coordinate with them and Canada with respect to tracking and monitoring
- Extremely important to have collateral energy policies included to align incentives and reduce leakage (e.g., energy efficiency, renewables).
- Bring more PSCs / PUCs in to the discussion.
- How will historical CO₂ reductions be considered in the program (e.g., carbon dioxide emissions (on a carbon equivalent basis) from the electric generating sector in NY have been reduced approximately 23 percent since 1990. had over 23% reductions since 1990 Look at cross cutting implications of
 - Leakage
 - Setting the cap, etc.,
- How regional does the structure have to be?
 - What must be uniform, and what can be flexible?
- How will compliance be demonstrated?
- What enforcement mechanisms will be used?
- How to deal with expanded PJM? (as of May 1, 2004 PJM will expand to include all or parts of VA, WV, KY, OH, IN, IL)
- Will offsets be included in the RGGR, both historically and prospectively?
- Expandability—what program design elements are necessary to incorporate other sectors?

Observing members of the audience added the following points:

- May want to consider how to expand to include other sectors. Otherwise may miss important opportunities (e.g., electrification in other sectors may lead to GHG reductions)
- Decreasing use of coal could significantly impact the cost and availability of rail transport. REMI and ICF models apparently don't take into account these collateral implications of other sectors using rail transport

VI. Modeling Choices and Approach

Final RGGI Meeting Summary 4-2-04

After lunch, Karl Michael from NYSERDA gave an overview of the approach the modeling subgroup is taking to modeling the impacts of a carbon cap and trade program.

Karl said he would like feedback on the process, and to contact him at (518) 862-1090 (x. 3324) or ksm@nyserda.org if you have comments about the modeling process.

One Stakeholder wanted to ensure that policy drives the modeling process rather than vice versa, and was hoping for a formal opportunity for public comment on the model reference case. Other Stakeholders also expressed their interest in providing input throughout the modeling process – perhaps directly to the SWG sub-committee working on modeling.

Steve Fine and Chris MacCracken from ICF then gave a presentation on the Integrated Planning Model (IPM) to model impacts of a carbon cap and trade program. Fine pointed out that the gas and demand forecast assumptions are major drivers in the modeling. Click on the following URL to view the presentation: http://www.rggi.org/docs/icf_presentation_4_2_04.pdf

In response to questions from the Stakeholder Group, Steve Fine said the IPM model builds new generation if needed, but does not build new transmission capacity unless specifically instructed to do so. However, the model is capable of evaluating the impact of upgrading and adding transmission. One Stakeholder asked about interactions between energy efficiency, renewables, and gas prices. Bill Prindle from ACEEE offered to supply ICF with some data to help better model energy efficiency opportunities.

Another Stakeholder asked if IPM takes into account the value of avoided transmission.

In response to a Stakeholder query about how offsets are modeled, Fine explained that it is difficult but that they rely on cost curves to represent classes of technologies. One Stakeholder suggested linking to IPM EPA runs and EPA modeling assumptions on the RGGI website, to familiarize Stakeholders and others with the IPM model. A Stakeholder asked if there will be calibration of the IPM model based on a historical reference case to check model accuracy. Steve said they usually don't do this due to cost constraints, but IPM has a proven track record.

One member of the Resource Panel said that he could supply EU forward contracts prices for carbon allowances which would be better than estimating allowance costs. Another member of the Stakeholder Group said it's important to better understand how the model dispatches existing generation and builds new generation capacity, as there were some surprising results from Connecticut modeling.

When asked about dispatchable demand response, Steve said that this can be built in. Another Stakeholder asked if the model adjusts when it finds leakage, (e.g., have to reduce more tons to make up for leaked tons). Steve responded that it did not.

One Stakeholder asked how IPM handles a demand side allocation of allowances (allocate to load vs. generation)? Steve was uncertain if IPM can allocate to load.

Another asked if IPM can break out different regions (e.g., parts of PJM), and Steve replied that PJM is broken into: East, West, and South now, but can break PJM and RGGI region out on a state basis. .

VII. Comparative Cap and Trade Programs

Final RGGI Meeting Summary 4-2-04

Joe Kruger of Resources for the Future gave a presentation on how US NO_x, SO_x, and EU carbon cap and trade programs addressed key design elements. Click on the following URL to view the presentation: http://www.rggi.org/docs/kruger_presentation_4_2_04.pdf

One member of the Resource Panel asked how allocation methodologies varied between states in the OTC NO_x Trading Program. Joe said that methodologies varied considerably. For example, some States based allocations on output based standards, while others used input based standards. States also used different base years for the allocations, and had discretion on how many years worth of allowances to give out at one time.

After the meeting, a member of the Resource Panel suggested that stakeholders interested in how different states did their allocations under the OTC could find some more information on Table 7 (p. 43-44) of a NERA report: <http://europa.eu.int/comm/environment/climat/pdf/allocation.pdf>. One member of the Stakeholder Group asked what the EU is doing about mobile sources, and Joe said they could potentially cap them upstream based on the emission potential of the fuels used. However, Jonathan Pershing from WRI said they were unlikely, in a first phase, to move into transportation. In response to a question, Pershing said that EU offsets are primarily from Clean Development Mechanism (CDM) projects (projects in developing countries and Joint Implementation (JI) projects primarily from countries in transition to market economies), but that this does not preclude an in-state offset project, as long as it is not double-counting reductions. Joe added that there is a proposal to change the EU directive to recognize trade with individual US and Australian States even though they are not Kyoto signatories.

One Stakeholder said that, compliance cost estimates are often higher than actual costs –and therefore should be discounted.

Pershing said that the EU currently has a list of offset options under consideration.

VIII. Future Meetings, Schedule, Logistics, Topics and Approach

Jonathan Raab then reviewed the sequencing of the Stakeholder meetings. Click on the following link to view the presentation:

http://www.rggi.org/docs/sequencing_slides_4_2_04.pdf

Dr. Raab asked if Stakeholders Group and Resource Panel members were comfortable having their phone numbers and email addresses posted on the RGGI website, and everyone said yes, provided they can be posted in such a way that is difficult to be harvested by spammers.

Jonathan encouraged members of the Stakeholder Group to contact the SWG sub-group chairs to provide input at this juncture. He said that the SWG heard many Stakeholders request additional involvement, especially on modeling, and would take this under advisement.

One Stakeholder suggested that a ground rule be added, stating that all major documents will be posted to the website and shared with the public, which will have an opportunity to comment.

The Resource Panel members said they are available as a resource to the Stakeholder Group and Staff Working Group. A member of the Resource Panel also suggested trying to get electricity regulators more involved and better understanding interface between RGGI and utility sector policies.

Final RGGI Meeting Summary 4-2-04

After reviewing the Stakeholder Group Process meeting schedule, one Stakeholder said there is a potential scheduling conflict for the November 17th date due to a national consumer advocates meeting and a NARUC meeting.

IX. Next Steps / To Do's

- Put RP and SG phone and email address on website. (*Raab Associates, Ltd., NJ DEP*)
 - Post in manner difficult to be harvested by spammers –talk to Seth Kaplan of CLF
- Post all documents presentations on RGGI website (*SWG, Raab Associates, Ltd.*)
- Meeting Summary (*Raab Associates, Ltd.*)
- Consider comments and questions on Policy paper (*SWG*)
- Consider request for more involvement in sub-group work, esp. modeling. (*SWG*)
- Nov 17 date change?
- Supply ICF with data to better model energy efficiency opportunities and forward EU carbon prices. (*Bill Prindle, ACEEE and Richard Rosenzweig, Natsource respectively*)

Attendance List

Affiliation	Name	4/2/04
Staff Working Group		
CT DEP	Chris James	X
DE DNREC	Philip Cherry	X
MA DEP	Bill Lamkin	X
MA DOER	Dwayne Breger	X
MA OCD	Sonia Hamel	X
MD-DOE	Gene Higa	X
ME DEP	Kevin Macdonald	X
NH DES	Joanne Morin	X
NH DES	Bob Scott	X
NJ BPU	Michael Winka	X
NJ DEP	Christopher Sherry	X
NJ DEP	Joe Carpenter	X
NJ DEP	Sam Wolfe	X
NY DEC	Franz Litz	X
NY DEC	Michael Sheehan	X
NY DEC	Thomas McGuire	X
NY DEC	Lois New	X
NY DEC	Mark Lowery	X
NY PSC	John D'Aloia	X
NYSERDA	Karl Michael	X
PA DEP	Joe Sherrick	X
VT DEC	Dick Valentinetti	X
Resource Panel		
ISO-NE	Mark Babula	X
ISO-NE	Jim Platts	X
NatSource	Richard Rosenzweig	X
NatSource	Neil Cohn	X
NESCAUM	Ken Colburn	
NESCAUM	Suzanne Watson	X
NESCAUM	Kelly Levin	X
NYISO	Dave Lawrence	X
NYISO	Mollie Lampi	
Pew Center	Sally Ericsson	X
Pew Center	Judi Greenwald	X
PJM	Susan Covino	
PJM	Joe Kerecman	X
RAP	Richard Cowart	X
RFF	Joe Krueger	X
WRI	Jonathan Pershing	X
WRI	Andrew Aulissi	X
Stakeholder Group		
ACEEE	Bill Prindle	X
AES	Mark Buzel	X
CLF	Seth Kaplan	X
Constellation	John Quinn	X

Final RGGI Meeting Summary 4-2-04

Dominion	Dan Weekley	X
Dominion	Lenny Dupuis	X
EDF	Jessica Holliday	X
Entergy	Brent Dorsey	X
Environment Northeast	Dan Sossland	
Environment Northeast	Derek Murrow	X
International Paper	Doug Stilwell	
International Paper	Karen B Risse (Alternate)	X
Keyspan	Bob Teetz	X
Keyspan	Cathy Waxman (Alternate)	X
Maine Public Advocate	Steve Ward	X
NEGT	Tom Powers	X
NGRID	Joe Kwasnik	X
Northeast GHG Coalition	Michael J Bradley	X
Northeast GHG Coalition	Brian Jones (Alternate)	X
NRDC	Dale Bryk	X
NRDC	Emily Billo (Alternate)	X
Northeast Utilities	Jon Russell	X
NY Coalition	John G.Holsapple	X
NY Coalition	Sandra Meier (Alternate)	X
PA Consumer Advocate	Sonny Popowsky	X
Pace Law Center	Larry De Witt	X
PIRG	Rob Sargent	X
PSEG	Ron Drewnowski	X
PSEG	Christine Neely (Alternate)	
The New England Council	Deirdre Savage	X
UCS	Deb Donovan	X
UCS	Michelle Manion (Alternate)	X
United Technologies Corporation	Christopher Powell	X
Observers		
AgCert International LLC	Susan Wood	X
American Petroleum Institute	Steven L Crookshank	X
American Ref-Fuel Company	Derek Grasso	X
BP America	James W. Keating	X
California Climate Action Registry	Jill Gravender	X
Calpine	Don Neal	X
Center for Energy & Economic Development	Eugene M. Trisko	X
Center for Energy & Economic Development	John Paul	X
Center for Resource Solutions	Steve Schiller	X
Chicago Climate Exchange	Robert Rabinowitz	X
Con Ed	Dan Cunningham	X
Environmental Advocates of New York	Christine Vanderlan	X
Environmental & Economic Consulting	Alice LeBlanc	X
IEP of NJ	Steve Gabel	
Independent Power Producers of New York	Radmila Miletich	X
IPPNY	Carolyn Brown	X
NEI	Mary Quillian	X
NEI	Paul Genoa	X
NESCAUM	Kelly Levin	X
NRG	Rodney Bownds	X

Final RGGI Meeting Summary 4-2-04

NRG	Cindy Karlic	X
NY Coalition	Richard Koda	X
Orbis Energy Advisors	Ethan J. Podell	X
Pace Law School	Joseph Siegel	X
Penn Future	John Hanger	X
PPL EnergyPlus LLC	Sharon J. Weber	X
PPL Services Corporation	Brian C. Nagle	X
PSEG	David B. Damer	X
Read & Laniado	Richard King	X
Synapse Energy Economics	Geoff Keith	X
The Nature Conservancy	Sarah Woodhouse Murdock	X
Unions for Jobs & the Environment	Bill Cunningham	X
Energy Association of NYS	Stephen Hanse	X
MA Climate Action Network	Marc Breslow	X
US Climate Action Network	Gary Cook	X
MA Legislature	Jim Marzilli	X
Yale Environmental Protection Clinic	Jordana Fish	X
Yale Environmental Protection Clinic	Erica Schroder	X
Consultants		
ICF	Chris MacCracken	X
ICF	Steve Fine	X
Facilitators		
Raab Associates, Ltd.	Jonathan Raab	X
Raab Associates, Ltd.	Peter Wortsman	X