

**Regional Greenhouse Gas Initiative
Stakeholder Group Meeting Process
May 20th 2004**

Foley, Hoag, LLP
Seaport World Trade Center West
Boston, MA

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

RGGI Stakeholder Group Meeting #2: Meeting Summary

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

I. Materials Distributed and Presented

Prior to Meeting:

- a. Agenda
- b. Revised Outline of Key Policy Issues, *RGGI SWG*
- c. Draft Discussion Piece on Offsets, *RGGI SWG*
- d. IPM Modeling of Electricity Sector Impacts of Regional Carbon Cap & Trade Program, *RGGI SWG*

At the Meeting:

1. RGGI Discussion Questions and List of SWG Subgroup Chairs
2. Emissions Caps and Flexibility Mechanisms, *Denny Ellerman, MIT*
3. Use of GHG Project Offsets -Reviewing Existing Programs, *Jonathan Pershing, WRI*
4. SWG Draft Discussion Piece on Offsets, *Franz Litz, NY DEC*
5. June 25th RGGI Stakeholder Offset Workshop Draft Agenda, *WRI, RFF and Pew*
6. Energy Modeling Plan and Stakeholder Involvement, *Karl Michael, NYSEDA and Sonia Hamel, MA OCD*
7. Stakeholder Meeting Sequencing, *Jonathan Raab, Raab Associates*

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

Facilitator Jonathan Raab, of Raab Associates, Ltd. welcomed attendees to the meeting. All those present introduced themselves. Dr. Raab reviewed the agenda for the day and indicated that a draft meeting summary would be sent out shortly to participants, who are invited to suggest any edits. After suggested edits have been incorporated, a final meeting summary will be posted on the RGGI website.

Dr. Raab then announced that the date for the November Stakeholder Meeting has been changed to November 12th. He then reviewed the Revised Outline of Key Policy Issues for the RGGI Stakeholder Group. Dr. Raab said there had been some confusion regarding EPS (Emission Portfolio Standards) and GPS (Generation Performance Standards) and that both were now listed

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in the policy question (see section G2 of the Revised Outline of Key Policy Issues.). Comments from a group of environmental organizations on modeling, the Northeast GHG Coalition on offsets, as well as a group of NY stakeholders on broad policy issues have been submitted to the RGGI SWG and will be posted on the RGGI website.

A list of Staff Working Group Subgroup Chairs was displayed for the group on the overhead projector, and will be posted on the RGGI website following the meeting. The RGGR subgroup, chaired by Joanne Morin from the NH DES, needs to be added.

III. Emissions Caps and Flexibility Mechanisms

Dr. Denny Ellerman, Executive Director of the Center for Energy and Environmental Policy Research at MIT, gave a presentation providing an overview of emissions caps and flexibility mechanisms. Click on the following link to see the presentation:

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

Stakeholders asked the following clarifying questions of Dr. Ellerman and these were his responses (paraphrased, not verbatim):

Questions from Stakeholders:

- Q.** Where do indirect emission reductions fit into the equation? Cap and trade programs in effect have allowances for end-use efficiency; how do you take that into account?
- They (indirect emission reductions) don't generally fit in. If the objective is reducing electricity use, this isn't the right tool. This tool is about making reductions in carbon. If an electricity source is covered, it may elicit a higher price and thus bring about a change in consumer behavior. The goal should be one objective, one tool, one instrument. Keep the objectives clear. Monitor carbon emissions. Efficiency incentives are in there, but are probably imperceptible. Allocations for indirect savings (like renewables and energy efficiency) are a political decision.
- Q.** Please explain your use of the phrase "the customer is always right." Who is the customer?
- The customer is the regulator, acting as the agent of society. It's whoever is assigning rights.
- Q.** Why do you assume that the initial cost of allowances would be low?
- Low prices are a result of the political reality of where the cap is likely to be set. Under the proposed McCain/Lieberman bill and the European trading program, costs are expected to be low. If allowances have a high price and if your system doesn't accept off system credits, it will be difficult for others to follow that example.
- Q.** If there isn't an off-system credits scheme at program launch, is that a fatal flaw? Does "tough" mean a higher level of complexity? One objective is getting rules established by a set date.

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- I'm not sure about a set date. The issue is getting a reliable system. Deadlines can get in the way, even though we need them. The system can fail if the process is too rushed. Attitudes should be open but tough. There is no environmental reason not to accept offsets. What matters is only that this system spreads and that we provide incentives for propagation. There is no environmental reason to limit geographically, either.

Q. How do you deal with demand responses due to increased cost of fuel or electricity generation? Isn't reduced consumer demand response an "anyway" ton?

- Electricity has very little elasticity, so I don't expect a lot from small price increases. If an energy efficiency program is above and beyond what would have happened, then there will be additional savings, but additionality is difficult to measure. High-income countries will do it anyway to become more efficient.

Q. Will updating allocation affect the integrity of the system?

- No. Updating constitutes a production subsidy. In theory this will lead to higher prices and increased production. For existing cap and trade systems, there is some research being done measuring effects, but it's too early to tell.

Q. What's your view about whether off-system credits should be generated within RGGI region or across globe?

- There is no reason to limit this to within the RGGI states. It doesn't matter if the reduction is in Massachusetts or Brazil. It makes no difference where the reduction takes place from an environmental perspective.

Q. What should the priorities be on flexibility mechanisms? Is there a problem starting in an incremental way, and building as program continues? Is there a problem with too much flexibility? Is there a problem limiting percentages of offsets or limiting types of offsets?

- I'm more worried about the fact that, once in place, these are hard to remove, like the supplementarity limits in McCain Lieberman. Concern about off-system is minor. It is more important to keep it open and to maintain the basic approach. The initial cap will be low, so offsets will be less of an issue at the beginning. Better to keep cap low rather than pulling in an escape hatch. Only could become a problem when RGGI links up with other systems.

Q. What are critical distinctions between opt-ins and offsets? And when would you use each?

- Opt-ins are a system extension. Instead of giving a credit, opt-ins bring a source into the system. Offsets are generated outside of the jurisdiction of the regulatory authority. To include offsets properly, you need to adopt some standards. Geographic location is usually the criteria in deciding which to use.

Q. Further down the road, when there are higher prices of carbon, do you see a role for a safety valve?

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- Safety valves are set up to avoid a price spike. Safety valves are used to avoid what may be perceived as too stringent a cap. If you have banking and borrowing, you don't need it. All systems have a safety valve –e.g., SO₂ – price is \$3000 + cost of permit. The lower it is the more it starts looking like a tax.

Q. In a forward market with a good trading system, is there a difference between going short or long and a banking vs. a borrowing scenario?

- In Reclaim, forward vintages cost 2005 RTC's for 40% of price of current year. This curve probably wouldn't exist if banking and borrowing had been in effect.

Questions from Observers:

Q. Can you elaborate on updating allowances? Would it encourage new, more efficient sources?

- I don't think it affects the integrity of the system. It would benefit the cheapest source of generation. Updating favors marginal energy production (coal in today's situation). It favors whoever is generating at the lowest cost.

Discussion Questions from Staff Working Group

Question # 1: What factors should RGGI Staff Working Group consider in selecting caps to model (and ultimately to recommend?)

Responses from One or More Stakeholders and Resource Panel Members:

- Consider setting the cap at today's emissions levels, since using 1990 emission levels could skew the target, given varying policies of each state. (Later this stakeholder clarified that he had been talking about where states are now and the regional cap level, not allocations.)
- Look at NEG-ECP targets and NY targets.
- Another stakeholder had the following comments/questions:
 - New England emissions are lower than those in the rest of the country. Setting a very tight cap therefore reduces the likelihood that the program will be acceptable to other states to adopt.
 - Caps shouldn't jeopardize the fuel diversity, reliability and affordability of electricity sources.
 - What cap will minimize leakage?
 - What cap will not result in competitive disadvantage for generators in RGGI states?
 - Cap should be achievable for broader geographic region than just RGGI states or won't be easy to propagate.
 - We may be able to achieve a lower cap, but may need to raise it if we want to export this system.
 - Many generators have long-term contracts, and can't transfer price increases to customers.
 - Consider fuel prices in setting the cap.
 - The Northeast has more nuclear generation (as a percentage of total generation) than the rest of country and eventually these plants will stop

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generating. Nuclear plant retirement should be factored in to setting the cap.

- Same cap should be applied to each state throughout region. States that have made reductions should get credit.
- Get baseline energy demand forecast right. Many things will affect this. For example, Connecticut's recently passed Energy Efficient Standards bill for appliances. The potential of energy efficiency should get incorporated. Make sure IPM uses the best available energy efficiency cost curves. Specifically, energy efficiency resources need to be built into the model as a dispatchable unit.
- Look at fuel interactions between electricity and gas markets.
- Transmission system has limitations on flexibility - keep these in mind.
- It is very important, in setting the cap, not to view the demand forecast (or standards) as an external constraint, but dynamic factor that can be changed with policies.
- Cap should be fuel and technology neutral.
- This is technologically different than NO_x and SO₂ because there is nothing we can put on back end of vintage 1950's power plants that have already been updated to meet all other standards that will reduce CO₂ emissions. Look at our carbon standards compared to rest of the country –an aggressive cap won't be exportable to other regions.
- Leakage—concern that PJM will make leakage easier to come in to RGGI from Ohio due to increased west to east transmission capacity.
- Look carefully at assumptions on fuel prices.
- Need additional buy in down the road? How does the efficiency of Northeast differ from rest of country? If the cap is too aggressive, it will be harder for other regions to join later.
- Which is more important – an environmentally successful program or one that is politically successful leading to longer run environmental benefits? Is the goal of RGGI to expand throughout country or reduce carbon emissions in the region?
- Hierarchy of flexibility is important.

Resource Panel:

- Cap and flexibility need to be thought about together, as they are interdependent.
- Having flexibility at the beginning is important, as you will learn from the experience. We won't know in advance what the reductions will look like. We're not going to get forecasts exactly right, therefore use a range of forecasts or run sensitivities.
- Recognize uncertainty.
- Stringent cap in RGGI region not necessarily a problem for extension to other regions. Offset and trading compatibility seems more important. But still an open question.

Question #2: What are the most important flexibility mechanisms for RGGI to include?

Comments/Questions from Stakeholders:

- Banking is key in incentivizing early reductions and assisting with potential future volatility.
- Imperative that flexibility mechanisms be available right at the beginning. If not, plants may have to shut down, and it's difficult to restart them. This is especially

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important for marginal plants. There shouldn't be geographic limits on flexibility mechanisms. Consider price caps on compliance.

- Banking and borrowing for GHG, but impose a short time period, say 2 years.
- Need realistic ways to comply for owners of coal generation. Cutting output or converting to gas not viable. Need to be reasonable and put forward something that other regions will want to follow.
- Don't limit flexibility mechanisms, but it is very important to make standards clear, and to define the rules as firmly as possible up front. Should learn from Kyoto CDM process, where investment in quality projects was hindered by a lack of clarity in rules.
- Flexibility upfront is the most conservative approach. Forecasts are often wrong and then it's too late to build in flexibility later.
- It is more efficient to build in flexibility mechanisms up front. Hard to add later.
- Important to include offsets that reduce generation requirements within region.
- Indirect emissions should be included. Energy efficiency programs do have substantial impacts on state electricity loads –EE decreased CA demand by 7%, and peak demand by 12%. Those able to aggregate and fund these savings need to be able to participate in market in efficient ways.
- Market should involve sellers and buyers. Need to allow demand side of the market to play. Need to design rules for demand side of market.
- Support for banking and borrowing.
- Opt-ins should stay on the table, but depends on how they are structured. Number of new allowances has large impact.
- Should look at other gases beyond CO₂
- Rules among states should be as consistent as possible
- To evaluate a program moving forward, need to have as few moving parts as possible. The more flexibility mechanisms involved, the more resource intensive for regulatory agencies.
- Look at opt-ins at same time as offsets. Need to do opt-ins right, especially interested in opt-ins for mobile sources.
- Include non-emitting generation (nuclear and renewables) in cap.
- Maximize flexibility options at start because: 1) reduces compliance costs, and 2) makes program more attractive to other states
- Should pay attention to important potential co-benefits, as well as other costs
- Build in flexibility mechanism to allow cap to ratchet down over time.
- Figure out how to ratchet down cap based on what's happening. Program can include circuit breaker.
- Unlimited use of emissions offsets, sequestration or project-based reductions, with no geographic restrictions on where they are derived from.
- Use of multiple years' average emissions as the basis for true-up
- Use of allowances from other GHG programs (e.g., ETU allowances)
- Cap on allowance prices
- Early reduction credits

Resource Panel:

- Start with a few offsets, and then expand program as time goes on.

Observers:

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- RGGI should design a program that recognizes other existing programs. Look at how RGGI fits into other existing programs in Canada, the UK and the European Union. Temporal triangulation to see where programs are going to develop synergy.
- Acid test is replicability.
- RGGI region can set a more stringent cap than other regions, and still trade with them.
- Don't hold offsets hostage to April deadline if program not fully developed. Include at least principles by April. Offset program can then be introduced later and fleshed out on a separate track.
- If using a 1990 baseline, look at changes that have occurred in competitive generation.
- In setting caps, consider how often and when cap levels will be adjusted. Very difficult if you set a flat cap and that's it. Should be able to revisit this to consider price changes.

IV. Offsets

Jonathan Pershing from WRI then gave a presentation on the use of offsets in other programs. Click on the following link to view the presentation:

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

Stakeholders had the following questions and comments Jonathan Pershing:

Q. Are most programs project based?

- Yes. I didn't look at opt-ins or set-asides. In Kyoto, Mexico was interested in opting in, but developed countries wouldn't allow it.

Q. How did other programs address Renewables and Energy Efficiency?

- EU has RPS programs, and does not want to double count. So if already getting credit through another program, it would not qualify. Difficult to separate out some of these issues.

Q. One of the most effective ways to develop cost effective GHG reduction options is with codes and standards. Has that been discussed?

- In UK and Germany there are mandatory efficiency improvement programs. No set asides or special allowances are granted to avoid double counting. Oversight is by separate regulatory agencies in the government.

Q. What is the potential role of performance standards on environmental integrity?

- It is enormously more efficacious to do performance standards (vs. "we'll know it when we see it"). In this set of existing programs, the EU and CDM didn't adopt performance standards due to environmental integrity concerns, despite support from EU Energy Ministers. Will probably move there, but transition problem is hard.

Q. What were the criteria that allowed the EU to come up with 6% and 8% limits to offsets?

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- Political criteria overlaid economic, transaction costs, technological and environmental concerns

Q. Does it matter (environmentally) whether offsets occur outside or inside region?

- No. Mixing CO₂ in atmosphere takes 2 weeks within North America, and 1 month globally. So doesn't matter from CO₂ concentration perspective. However, Canada is developing programs on a provincial level, to keep economic benefits of investment in the region. Can be economic and political reasons to favor home vs. away.

Q. How are offset projects tracked on compliance?

- We need a monitoring plan that is periodically reviewed. Also, projects have costs of compliance assessed by the bank.

Q. Should co benefits also be considered for inside/outside offsets?

- Absolutely, but not a lot of work has been done on this.

Next, Franz Litz, of the New York State Department of Environmental Conservation, presented a draft outline on offsets. Click on the following link to view the presentation:

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

He said that the Staff Working Group wanted to ensure that they were looking at the right questions before developing recommendations in each area, and asked for feedback.

Question Area 1: “Should the cap-and-trade program allow for credits for GHG reductions from sources not covered by the cap?”

- Add “for” and “against” from Pershing presentation.
- Add co-benefits as reason for.
- Add promote technology innovation as a reason for.
- Add reduce leakage concerns as reason for.

Question Area 2: “If offsets are to be included, which offsets?”

- What lookback period should be used to evaluate offsets?
- Does it increase efficiency in the regulated sector?
- Co-benefits –need to look at total economic impact, as opposed to focusing only on cost of allowance. EE reduces cost of energy in region, and reduces cost of allowance.
- Perhaps consider categories for negative offsets—allowances to cover leakage.
- In addition to the question, “What categories of offsets are desirable?”, should also ask “What subcategories should be included?”
- Are we locking into a long-term program, or can we adjust as we go along? There should be periodic evaluations.
- What other sectors will be linked into this program?
- Who pays for additional administrative burden? Is there a way for the state agency to charge fees to recover this extra cost?
- Biomass could also be considered a non-emitting, indirect emissions reduction.

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If offsets are to be included, how will they be included in the program?

- What kinds of offsets should be applied to regional standards?
- Will third party verification be required?
- Who is going to be the entity in charge of the offset aspect of the program?

Stakeholders and Resource Panel members were then asked: “Under what circumstances should offsets be included in RGGI?” One or more had the following responses:

- Coal-fired plants may not necessarily need to have access to offsets to come into compliance, as they can purchase allowances.
- Need to look at context of program.
- Most effective program is to lower emissions. Not best to give allocations to those non-emitting sources.
- Need clear standardized criteria for model rule (which doesn't need all protocols to be worked out). Handing this part off to RGGR working group may be a good idea.
- Is displacement of non-emitting resources double counting?
 - Jonathan Pershing replied that most analyses say it would be double counting if inside of region. Outside the region, a different case, and depends on baseline.
 - Rich Cowart offered that it may not be double counting within region either if generation is freed up and consumed elsewhere.
- Should go slow and thoughtfully on this to make sure offsets have integrity. Make sure get the reductions you pay for. Use a limited set of offsets at the outset. Can anticipate loopholes and difficulty in enforcement.
- There has to be environmental integrity but all offsets that meet strict criteria should be allowed. There shouldn't be artificial percentage caps.
- How will this affect sources beyond the generation sector?

Offsets Workshop

Jonathan Pershing then reviewed the draft agenda for the upcoming offset workshop, scheduled for June 25th, 2004. The location is going to be the same as the first meeting - at One Penn Plaza (on W. 33rd St. between 7th and 8th Avenues), 8th Floor Board Room, across from Penn Station. Click on the following link to view the draft agenda:
http://www.rggi.org/stakeholder_schedule.htm

About half the attendees indicated they would attend the workshop (show of hands—about 40)

Feedback from Stakeholder and Resource Panel members on workshop:

- Build in more discussion time and limit the slots for each presentation
 - Jonathan Pershing: We are trying to limit the length of presentations, leaving half of each session for discussion time.
- Try to make sure that people are keyed up in advance to lay out issues of special interest to this process and this region for RGGI. People should be prepared in advance on particular questions in order to have a sharp, focused discussion.
- Presenters' papers and presentations / or offset publications should be available on website at least one week ahead of time so that participants can prepare and

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engage more in the workshop. Other articles speakers have published should be accessible on the website.

- Develop list of potential offset projects shown in appendix to RGGI offset document further and circulate to workshop participants.
- Please email Judi Greenwald, greenwaldj@pewclimate.org; Jonathan Pershing, jpershing@wri.org; and Joe Kruger, Kruger@rff.org with additional feedback on the offsets workshop draft agenda.

V. Modeling Choices and Approach

Karl Michael, of NYSERDA, reviewed a presentation on the modeling plan and the process for stakeholder involvement. Click on the following link to view the presentation:
http://www.rggi.org/stakeholder_schedule.htm

Karl first reviewed the four-stage modeling plan. Stakeholder and Resource Panel members had the following comments and questions, with answers from Karl Michael below:

Q. How many model runs is there a budget for?

- Model runs cost between \$5-15K, so that's approximately 18-20 runs.

Q. What region will be modeled?

- No decisions have been made, but likely looking at states committed to the carbon cap. Potentially can run model with and without observer states, but a limited budget may rule that out.

Q. How will assumptions around policy-forcing goals be incorporated?

- We will make these decisions in Stage III, so we know what questions to answer in the modeling runs. Greatest amount of time required for Stage III.

Q. If offsets are part of the program, how would they be modeled in IPM, especially non-electric sector offsets?

- They will be modeled offline. Steve Fine from ICF can provide greater detail.

Q. What is the schedule for the modeling process?

- Benchmark reference scenarios slated for end of July, and Stage II modeling for end of August.

Q. Will model be building transmission lines and power plants?

- New power plants - yes, but not new transmission lines. Transmission lines are static in the model, and they need to be added manually. A sensitivity could be run to measure impact of adding transmission.

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- Stakeholders added: For leakage need to look at transmission. Also, would be good to reflect benefit of not having to build new transmission lines

Q. How do you incorporate all of the data on energy efficiency programs and potential?

- Karl Michael - Counting on you (Bill Prindle at ACEEE) to help.

Q. Would like to see at least one scenario where system builds efficiency resources along with increased generation resources.

- We would like to do that too.

Q. Does it specify where and what is built?

- Yes, by state.

Q. Reference case based on a recent past year should be modeled to give stakeholders confidence in model.

- Steve Fine at ICF said it's hard to do, as not all data available historically, and will be expensive. 2005 will be our starting point.

Chris Sherry added that IPM is an optimization model, and not a simulation model. Not necessarily going to give results in line with actual past year.

Q. Does the model determine fuel source of new generation?

- Yes

Q. Does model take into account capacity factors?

- Yes, model takes into account plant's capability and availability.

Stakeholder Involvement in Modeling Effort

Sonia Hamel of MA OCD explained that the modeling process needs to be as transparent and inclusive as possible without getting bogged down or going over budget. She asked interested stakeholders to contribute their expertise to the modeling subgroup via periodic conference calls, and then reviewed the process for Stakeholder involvement.

Stakeholders and Resource Panel members provided the following feedback with Sonia Hamel's responses below:

Q. Is it appropriate to bring in advisors and consultants?

- It is fine if stakeholders have support of consultants, but we'd like stakeholders or other members of the stakeholder organizations to be the ones speaking on the conference calls. Karl Michael added that there was a need to keep the number of people involved manageable.

Q. How does energy sector modeling connect with economic modeling? When will broader economic modeling begin?

- Likely we will have the same group, with some more people who join when cost-benefit analysis is conducted.

Q. ACEEE, UCS, and the Maine Public Advocate all expressed interest in joining the modeling working group.

Another Comment: SWG should give stakeholders enough lead-time and information to prepare for meetings.

Jonathan Raab said that the SWG will send out an email to all stakeholders asking them to respond if they are interested in joining this subgroup, and to indicate who from their stakeholder organization will participate.

Sonia and Karl said that documents related to this subgroup's work will be on the website, but not necessarily at the first draft stage.

The Staff Working Group asked for feedback on some key questions for benchmark and policy reference cases. Stakeholder responses are below.

1. What demand forecasts should be used (e.g., EIA forecasts?)

- More comfortable with ISO forecasts than EIA forecasts because more detail and in-region. But ISO forecasts may only be for 10-year period.
- Are ISO forecasts really better than EIA forecasts?
- Look at enhanced efficiency forecast scenarios.
- Ask what ICF recommends, since they do this all the time.
- EIA goes out further in time, wider in range. Easier to compare with other processes.
- May need to use more than one forecast.
- Good thing about EIA is transparency.
- IEA didn't like EIA because they found it more conservative than more local forecasts (like ISOs).
- I was under impression that ICF tends to depend on EIA information. Why?
Karl Michaels -ICF will run what the client wants.
- Hope ISOs will contribute to modeling team whether their forecasts are used or not.

2. What fuel price forecasts should be used?

- Don't use EIA data in near term for gas prices. Natural gas industry uses EEA model, which is more sophisticated and credible. EEA and EIA very different for next 10 years, and then converge.
- Pick city gates more representative of RGGI region (don't use only Henry Hub in Louisiana).
- Have ICF explain how gas prices are used in the model, and have them reexamine their coal price algorithm.
- Do sensitivity analysis.

- 3. How should we deal with fact that some states' RPSs are final and in place (e.g., MA and CT), others are not final but likely imminent (e.g. NY), and other states are seriously considering adopting or modifying (e.g. RI and ME)?**
 - Jonathan Pershing stated that this question and 2 above are an order of magnitude more important than the price of carbon in all modeling processes he's been involved with.
 - Does model take into account ability to meet RPS? There may not be enough renewables in place in early years to meet RPS in MA and CT.
 - Decide on the mix of renewables to satisfy.
 - IEA Modeled policies that were in place in first year, and did sensitivity taking into account policies to be implemented later.
 - NY RPS may not be imminent.

- 4. How should potential federal 3P legislation be treated?**
 - Don't hold breath for Congress.
 - 3P will be implemented according with current proposal.
 - Follow the progress of 3P proposal in Congress.
 - The stringency of which NSR is implemented will have a real impact on which power plants exist going forward.
 - Is 3P a benchmark or a policy issue? Exclude in benchmark but include in policy scenario.
 - What about 4P or McCain Lieberman? What about election's impact on climate policies?
 - Perhaps just model a strict federal scenario on carbon regulation – NSR and 3P strictly defined vs. a more lax federal scenario.

- 5. What criteria should be used for including expected/planned new generation capacity (or other changes such as plant retirements) in these scenarios?**
 - Assume that nuclear plants only run to the end of their licenses.
 - Assume dirtiest coal plants are eventually retired.
 - Prioritize known retirements in the region.
 - Talk to ISOs and state environmental agencies – for known resources
 - Usually it's a market issue more than a license issue. Need to look at what happens to peak plants. Discuss with ISOs and their Market Monitors.
 - Use high standard for hard wiring into model.
 - May have no lag time for retirement but significant lag time for new generation/transmission.
 - Significant lag time for new construction. 5-10 years works but 20 years doesn't for modeling.
 - Look at cost of capital.
 - Look at transmission constraints on fossil when Reliability Must-Run payments stop. Many units have applied for those payments.

- 6. What transmission assumptions should be in the benchmark case?**
 - Very dynamic and hard to figure out what to do.
 - Something will happen if sufficient congestion. Need to understand there will be a response by transmission system to specific conditions
 - Assume only licensed transmission projects.
 - Assume we're still linked to Ohio.
 - Are state level distribution lines modeled too?

- Karl Michael - No, model doesn't go below transmission level.

Other Issues Raised and Questions Asked:

Q. Is the expansion of PJM an issue?

- Steve Fine at ICF said this is in the model and under control.

Q. PJM and MISO?

- Yes.

Q. Locational Marginal Prices?

- Yes. (Note: not as formally defined. IPM uses regional transmission prices)

Q. Does the model implicitly include projections on distributed generation in the region?

- Yes.

Q. Can it compare with distributed resources?

- Yes.

Additional Stakeholder comments:

- RGGI will need to prioritize sensitivity runs.
- It would be very helpful if RGGI SWG would put its initial leanings for all these modeling questions up on the website very soon for Stakeholders to respond to.

VI. Other Issues

Jonathan Raab then reviewed sequencing slides and went over the agenda for the June meeting. In response to a question about when the economic modeling will start, Sonia Hamel said, "over the summer, but will need IPM model results."

Jonathan Raab then showed a brief demonstration of a threaded discussion and asked if Stakeholders were interested in using it. Some Stakeholders were interested in giving it a try, while others were concerned that it may prove a distraction. Stakeholders stated that they would be more interested if threads were initiated by SWG questions and were time constrained.

VII. Next Steps / To Do's

- Please email Judi Greenwald, greenwaldj@pewclimate.org; Jonathan Pershing, jpershing@wri.org; and Joe Kruger, Kruger@rff.org with additional feedback on the offsets workshop draft agenda. (*Stakeholders, Resource Panel, Staff Working Groups, Raab Associates Ltd.*)
- Update SWG Offsets paper with feedback from Stakeholder meeting (SWG)
- Comments from a group of environmental organizations on modeling, from Northeast GHG Coalition on offsets, and from a group of NY stakeholders on broad policy issues have been submitted to RGGI and will be posted on the RGGI website. (*Chris Sherry, New Jersey DEP*)
- A list of Staff Working Group Sub-Group Chairs was displayed for the group on the overhead projector, and will be posted on the RGGI website with contact information.

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The GHG Registry RGGI sub-group, chaired by Joanne Morin from the NH DES, needs to be added to the list. (*Chris Sherry, New Jersey DEP*)

- Circulate email to all Stakeholders asking them to respond if they are interested in joining the modeling subgroup, and to indicate who from their stakeholder organization will participate (*SWG*)
- Write and circulate meeting summary (*Raab Associates, Ltd.*)

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May 20, 2004

Attendance List

Affiliation	Name	4/2/04	5/20/04
Staff Working Group			
CT DEP	Chris James	X	
CT DEP	Chris Nelson		X
DE DNREC	Philip Cherry		
ECP	Bill Breckenridge		
MA DEP	Bill Lamkin	X	
MA DEP	Nancy Seidman		
MA DOER	Dwayne Breger	X	X
MA OCD	Sonia Hamel	X	X
MD-DOE	Gene Higa	X	X
MD-Energy Administration	Michael Li		
ME DEP	Kevin Macdonald	X	
ME DEP	James Brooks		
ME PUC	Dennis Bergeron		
NB	Darwin Curtis		
NH DES	Joanne Morin	X	X
NH DES	Bob Scott	X	
NH DES	Andy Bodnarik		
NH PUC	Maureen Sirois		
NJ BPU	Michael Winka	X	
NJ DEP	Christopher Sherry	X	X
NJ DEP	Joe Carpenter	X	
NJ DEP	Jeanne Herb		
NJ DEP	Sam Wolfe	X	
NY DEC	Franz Litz	X	X
NY DEC	Michael Sheehan	X	X
NY DEC	Thomas McGuire	X	X
NY DEC	Lois New	X	X
NY DEC	Mark Lowery	X	X
NY PSC	John D'Aloia	X	X
NY PSC	Tina Palmero		
NYSERDA	Karl Michael	X	X
PA DEP	Joe Sherrick	X	X
RI DEM	Steve Majkut		X
VT DEC	Dick Valentinetti	X	

Final RGGI Meeting Summary 5-20-04

Affiliation	Name	4/2/04	5/20/04
Stakeholder Group			
ACEEE	Bill Prindle	X	X
AES	Mark Buzel	X	X
AES	Chris Wentlent	X	
CLF	Seth Kaplan	X	X
Constellation	John Quinn	X	X
Dominion	Dan Weekley	X	X
Dominion	Lenny Dupuis	X	X
EDF	Jessica Holliday	X	X
Entergy	Brent Dorsey	X	X
Environment Northeast	Dan Sossland		
Environment Northeast	Derek Murrow	X	X
IEP of NJ	Steve Gabel		
IEP of NJ	Mally Becker		X
International Paper	Doug Stilwell		
International Paper	Karen B Risse (Alternate)	X	X
Keyspan	Bob Teetz	X	X
Keyspan	Cathy Waxman (Alternate)	X	X
Maine Public Advocate	Steve Ward	X	X
NEGT	Tom Powers	X	X
NGRID	Joe Kwasnik	X	X
Northeast GHG Coalition	Michael J Bradley	X	X
Northeast GHG Coalition	Brian Jones (Alternate)	X	X
NRDC	Dale Bryk	X	X
NRDC	Emily Billo (Alternate)	X	X
Northeast Utilities	Jon Russell	X	X
NY Coalition	John G.Holsapple	X	X
NY Coalition	Sandra Meier (Alternate)	X	X
PA Consumer Advocate	Sonny Popowsky	X	
Office of PA Consumer Advocate	Griffiths, Dan		X
Pace Law Center	Larry De Witt	X	X
PIRG	Rob Sargent	X	X
PSEG	Ron Drewnowski	X	X
PSEG	Christine Neely (Alternate)		X
The New England Council	Deirdre Savage	X	X
UCS	Deb Donovan	X	X
UCS	Michelle Manion (Alternate)	X	X
United Technologies Corporation	Christopher Powell	X	X

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Affiliation	Name	4/2/04	5/20/04
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	X
NYISO	Dave Lawrence	X	
NYISO	Mollie Lampi		
NYISO	Aaron Breidenbaugh		X
Pew Center	Sally Ericsson	X	X
Pew Center	Judi Greenwald	X	X
PJM	Susan Covino		
PJM	Kenneth A. Schuyler, PE		X
PJM	Joe Kerecman	X	X
RAP	Richard Cowart	X	X
RFF	Joe Kruger	X	X
WRI	Jonathan Pershing	X	X
WRI	Andrew Aulissi	X	
Consultants			
MIT	Denny Ellerman	X	X
Facilitators			
Raab Associates, Ltd.	Jonathan Raab	X	X
Raab Associates, Ltd.	Peter Wortsman	X	X
Raab Associates, Ltd.	Susan Rivo		X

Final RGGI Meeting Summary 5-20-04

Observers at May 20th Meeting	
Affiliation	Name
American Petroleum Institute	Steven L Crookshank
American Ref-Fuel Company	Derek Grasso
Boston Carbon Corporation	Charlie Parker
Calpine	Don Neal
Center for Energy & Economic Development (CEED)	Eugene M. Trisko
Center for Energy & Economic Development (CEED)	John Paul
Center for Clean Air Policy	Stacy Davis
Con Edison	Dan Cunningham
Covanta Energy	Gary Thein
Ecology and Environment Inc.	Bruce Wattle
Edison Electric Institute	Eric Holdsworth
El Paso Corporation	David Shakespeare
El Paso Corporation	Jim Sinclair
Environmental Advocates of New York	Christine Vanderlan
Foley Hoag	Seth Jaffe
FPL Energy	Lynn Smallridge
Green Fuel Technologies Corp.	Juliannne Zimmerman
Green Markets International	Steven Kaufman
Gustin Comm	Carl Gustin
Harvard EHS	Miles Walker
Independent Power Producers of New York (IPPNY)	Radmila Miletich
IPPNY / Couch White	Morgan Parke
MA Climate Action Network	Marc Breslow
MA DTE	Amy Barad
MA Legislature	Jim Marzilli
Mc Lane Law Firm	Jonathan Peress
MA Renewable Energy Trust (MTC)	Francis Cummings
NEI	Mary Quillian
NESCAUM	Kelly Levin
NI Source	Alison Berkowitz
NRG	Cindy Karlic
Penn Future	Jan Jarrett
Shaw Emcor Waste Management	Bruce Maillet
Synapse Energy Economics	Geoff Keith
The Climate Trust	Mike Burnett
The Nature Conservancy	Sarah Woodhouse Murdock
US Gen NE	Paula Hamel
Vermont Energy Investment	Chris Granda
Wheelabrator Technologies	Frank Ferraro
Yale Environmental Protection Clinic	Jordana Fish
Tetra Tech FW, Inc	Leo Sicuranza