NATIONAL COMMISSION ON ENERGY POLICY
Design Issues in Market-based Greenhouse Gas Reduction Strategies

Washington Court Hotel
525 New Jersey Ave, NW
Washington, DC 20001

Workshop 1: September 1, 2005

Attendees: See attached attendee list

FINAL AGENDA

Welcome—Jason Grumet, National Commission on Energy Policy (NCEP)

Workshop Goals—Sue Tierney, NCEP and Jeff Sterba, PNM Resources

Introductions—Daniel Yergin and Robert LaCount, Cambridge Energy Research Associates, Inc. (CERA)

Overview of Energy Information Administration (EIA) Economic Analyses—Howard Gruenspecht, EIA

Overview of Acid Rain Program—Brian McLean, US Environmental Protection Agency

Summary of European Union Trading System and State Approaches—Joe Kruger, Resources for the Future

Overview of Greenhouse Gas (GHG) Trading Design Issues—Rob Stavins, Harvard University

Senate Perspective—Alex Flint, Office of Senator Pete V. Domenici; and Jonathon Black, Office of Senator Jeff Bingaman

Moderated discussion, led by CERA

ADMINISTRATIVE ITEMS

All workshop presentations will be posted on the NCEP Web site (http://www.energycommission.org). NCEP would also like to use the Web site to continue the exchange of information beyond the specific materials discussed during the actual workshops. Participants are invited to send relevant materials, including analyses, reports, and presentations to Info1@energycommission.org.

Participants are also invited to send additional comments regarding the September 1 workshop along with suggestions for the remaining workshops to this same address.

Currently scheduled workshops include

- **Point of Regulation in a GHG Trading Program—September 16, 2005**
  Mandarin Oriental Hotel
  1330 Maryland Avenue, SW
  Washington, DC 20024
  Phone: 202-554-8588

- **Allocating GHG Allowances—September 30, 2005**
  L'Enfant Plaza Hotel
  480 L'Enfant Plaza, SW
  Washington, DC 20024
  Phone: 202-484-1000

A fourth workshop may be scheduled for October.

The workshops are closed to the media. CERA will prepare brief summaries of the key topics from each workshop (absent attribution) along with a Final Summary Proceedings for the combined discussions. The final report will identify the critical issues discussed throughout the workshops and the range of opinions expressed on the various topics.

WORKSHOP GOALS

The workshop series focuses on questions concerning the specific design features of a national GHG emissions trading program. Although the specific design elements will directly influence the economic and environmental implications of any future GHG program, they have received only limited attention in current policy discussions. Numerous models are available for implementing market-based programs, but limited real-world experience exists for applying these systems to the control of GHG emissions.

The workshop series is intended to address a limited number of key design questions related to a GHG emissions trading program, in particular Point of Regulation and Allocation of Allowances. (NCEP and CERA are currently considering a fourth workshop to consider the technology incentives provided by different approaches to GHG mitigation.) The dialogue is intended to identify these critical issues and to explore different options along with potential strengths and weaknesses of these options.

We will not attempt to reach an explicit consensus on any of the topics discussed regarding the trading program design issues, nor do we intend to address the full range of trading program design issues through this workshop series. Additionally, we do not intend to address overarching issues associated with US climate change policy, including

- the appropriateness of a national GHG trading program
- the timing and stringency of any future program
- the acceptable level of economic costs associated with any future program
- the coordination between domestic climate change policies and actions taken by major trading partners

PRESENTATIONS

All workshop presentations are posted on the NCEP Web site: (http://www.energycommission.org).

Each presentation was followed by a brief question-and-answer period.

MODERATED DISCUSSION

Robert LaCount, CERA, facilitator for the discussion, began by reviewing the overall goals of the workshop series. In preparing for these workshops, the organizers identified the topics of Point of Regulation and Allocations as priority items to be discussed during the workshops. As currently planned, the three workshops for this series are intended to address the following topics:

- Workshop #1: Introduce main topics and discuss content for future workshops
- Workshop #2: Point of Regulation
- Workshop #3: Allocations

For the discussion with participants, Robert LaCount asked two main questions:

- In addition to Point of Regulation and Allocations, what other critical design elements should be addressed when designing a GHG trading program?
- How should the future workshops be structured to facilitate productive discussions?

The following points summarize the main comments made during the subsequent conversation.

Timing

- What is the relationship between the short- and long-term goals? Many policy proposals discuss the need to slow, stop, and reverse emissions growth, but they only include specific policies that address the initial phase aimed at slowing emissions. What needs to happen in the long run to stop and reverse the trend in GHG emissions? We should consider how these long-term goals can be reinforced with the design of near-term policies.

- Could near-term costs associated with a national program impede important investments in future reductions, i.e., less money for research and development (R&D)? We need to have program linkages in the different phases of a program for short-term and long-term issues.
- The long-term picture is really important for timing. Long-term direction provides planning certainty and this will drive entrepreneurial spirit and R&D.

Scope of Regulation

- What is the relationship of a domestic GHG regulation to an international GHG regime? How a program will affect the competitiveness of the manufacturing sector must be considered. It is possible that the costs of a program could push manufacturing offshore to locations that do not have policies for addressing emissions. In this example, there would be no environmental benefit in terms of a net reduction in GHG emissions.
- We need a specific goal in order to discuss the design of a program. If you can't identify the goal, then you can't identify the costs. Without an understanding of costs, you cannot have a meaningful dialogue.
- Offsets provide a large amount of environmental benefits beyond GHG reductions. Offsets should be available for all GHG to maximize benefits and to keep costs low.
- We are not very good at predicting the economic outcome of any future program. Let's not fool ourselves into thinking that we will know the future outcomes. Therefore, we need to be careful to not overengineer the program by trying to extract money from those that we think will gain economically and those that will have the largest economic costs. The fact is that we will probably be wrong in our economic projections. So instead, we should focus on designing an overall structure that encourages the outcomes that we want to see: program efficiency, energy efficiency, fuel diversity, and technology development.

Point of Regulation

- We need to think about the administrative effectiveness and the simplicity of the emissions-trading system.
- Decisions about point of regulation can affect the incentives for entrepreneurial activity. We should discuss how point of regulation decisions will affect compliance decisions. A program that imposes costs upstream may not maximize downstream incentives for innovation and entrepreneurial activity. However; these decisions need to be weighed against the potential administrative costs associated with different options for point of regulation.

Allocations

- What is the basis for making allocations? We should discuss the principles of allocations. This has not been directly addressed in past emissions-trading programs. It is more important this time because the potential value of carbon dioxide (CO_2) allocations is so large.

- The topic of allocations is very important and relates to the question of incentives for new technologies. The ratio of the value of allowances to the cost of a CO_2 program differs greatly from the ratios in the US sulfur dioxide (SO_2) and nitrogen oxide (NO_x) trading systems. There are very important decisions that must be made regarding allocations including how technology incentives are structured and how consumers are affected.
- The concept of updating allocations should be addressed. New entrants in the SO_2 program have low SO_2 emission rates; so although the program does not provide allowances to new entrants, there are low economic impacts. In contrast, new entrants burning fossil fuels under a CO_2 program will have significant emissions, and therefore, allowances for them must be addressed.
- Global warming is real and has an impact today. Policies should undertake issues of adaptation to address changes that are currently happening. Many people are not only asking how we are going to stop global warming, they are also asking how we are going to deal with the near-term effects. This program could potentially generate a lot of revenue through the allocations. We need to think about how some of this revenue should be used for adaptation.
- What is the role of renewable energy? We should address how the program will provide direct incentives for investing in renewable energy.

Compliance Flexibility

- What will the degree of compliance flexibility be? Senator Tom Carper's proposal, for example, provides for unlimited off-sector compliance options. In the Regional Greenhouse Gas Initiative (RGGI), up to 50 percent of credits for compliance can come from off-system resources. This will have a large impact on the cost of compliance. These issues also raise questions regarding the scope of a future program. The topic of offsets is a key area affecting short-term costs.
- We need to define all of the options that could be included as flexibility mechanisms and then discuss some of the potential limitations that some parties may want to place on these mechanisms. Some of the questions about flexibility mechanisms may not look like a large question from a macro level, but they could be very important from a political perspective. For example, some parties will want to know what happens to biosequestration projects.

Cost Controls

- What are the options for controlling costs? There are a variety of ways that policy mechanisms could be designed, including many variations for developing a safety valve. These options may have very different implications. They can affect what may happen in the long term and how a US system may relate to a European or other international systems.

Technology Development

- What are the incentives for R&D for new technology? Significant reductions in emissions aren't possible without new technology.
- Energy efficiency is the lowest cost/most available source of GHG reductions. What is the best way to encourage energy efficiency under a cap-and-trade program? Any future program should include provisions that provide direct incentives for investing in energy efficiency rather than the indirect incentives that have historically been used.
- How do you advance the R&D agenda more quickly and effectively? Some of the value associated with allocations should go directly to R&D efforts. Some of this value could also go into providing incentives for investing in the use of new technologies abroad. However, we must be careful to insure that these incentives and provisions are effective and are not overly burdened with accounting and bureaucratic paperwork.
- R&D is fundamentally essential to changing the way we generate power and pollute. A safety valve provision could generate a large amount of money. What happens to this money? How can the money be effectively utilized to invest in R&D for new technologies?

Behavioral Incentives

- What are the incentives for individual decision makers? How will these programs work once implemented? The discussion has focused on the macro level, but we need to think about how these programs will affect consumer decisions that will ultimately decide the overall impacts of the program.

Transaction Costs

- What will be the magnitude of future transaction costs? We should try to estimate potential transaction costs under a future program. An economywide system, with many more entities included than in the SO_2 and NO_x programs, could have very high transaction costs. This is important if a safety valve is also included as a part of the program. We need to discuss the various provisions that would be included in a program and make sure that they all work together to lower costs.

Barriers to Entry

- We should identify specific topics or questions that deserve further analysis. For example, are there any barriers to entry associated with different allocation programs?

Economic Impacts

- Home energy bills are an example of a regressive tax. We should think about ways of dealing with CO_2 that are not as regressive and economically harmful to residential customers. We have very different electricity market models in place across the United States; for example, cost-of-service versus market-based systems. These different

models will affect the economic implications of different allocation options. How would the different design options actually play out in the various electricity markets in the United States?

Economic Risk

- Future policies will need to address difficult questions about the expected costs and benefits of a national trading program. The program has a lot of associated economic risk and should include provisions to address problems that may arise once the program is implemented in the future. For this reason, we should discuss diagnostic and remedial mechanisms that should be included in the program. What do you do if the regulation gets it wrong? What economic risk insurance do we build in the program?