



MEETING SUMMARY
IOWA CLIMATE CHANGE ADVISORY COUNCIL
Clean and Renewable Energy (CRE) Subcommittee
Meeting #12, July 15, 2008, 1:00 PM CDT

Attendance

Iowa CRE SC Members: Kim Handlos and Mark Landon for Roxanne Carisch, Rural Electric Cooperative; Amy Christensen, Iowa Utilities Board; Tom Fey, Fey & Gomez, Inc.; Michelle Arenson, Alliant Energy; Bob Loyd, Clipper Windpower; Pam Mackey-Taylor, Sierra Club; Jeff Myrom, MidAmerican Energy Company; Rep. Donovan Olson, Iowa Legislature; Norman Olson, Iowa Energy Center; John Pearce, Iowa Utilities Board; Krista Tanner, Iowa Utilities Board; Wally Taylor, Sierra Club; Mike Thatcher, Corn Belt Power Coop.

Iowa Department of Natural Resources: Marnie Stein.

IUB: Amy Christenson

Center for Climate Strategies (CCS): Hal Nelson, technical advisor and facilitation support; Tom Peterson, facilitation support; Joan O'Callaghan, administrative support.

Background Documents

The following documents for call #12 were posted at: <http://www.iaclimatechange.com>:

- Notice and Agenda
- Draft Summary of Meeting #11
- CRE PowerPoint Presentation
- Levelized Costs for Iowa, version 1
- IA Quantification-CRE-2
- IA Quantification-CRE-12-CHP
- IA CRE POD

Discussion Items and Key Issues

Meeting Introduction

Hal Nelson called the meeting to order and took attendance. The draft meeting summary for call #11 was reviewed and approved without changes. Nelson provided an overview of the process and expectations of call #12. The SC has moved from developing straw proposals to quantifying reductions and costs/cost savings.

CRE-3a—Federal Cap and Trade (including offsets to promote renewables) and CRE-3b (MGA Cap and Trade (including offsets to promote renewables))

Nelson noted that CRE-3 has been broken out into federal and regional policy options. Tom Peterson asked the SC to identify the information that would be of greatest value to the group regarding the analysis of a Midwest regional cap-and-trade (C&T) system.

Jeff Myrom commented that the biggest question concerns cost estimates, but the SC doesn't have the detailed information it will need to provide them for CRE-3a or CRE-3b by the September 3–4 ICCAC meeting. Nelson responded that the Midwestern Governors Association (MGA) Accord has very little detail and no specific targets, so it's difficult to model. The question is where the SC wants Iowa to be relative to other states' greenhouse gas (GHG) reduction targets. Peterson added that some key variables are determining an approach's goals, structural design (e.g., single state, regional, or national), costs and cost containment issues, scope (impacts on the full economy or just a few sectors), and stringency levels. In the electricity markets, the real emphasis has been on a multistate approach.

Myrom suggested that the SC examine and compare the generation profiles of states participating in the MGA agreement and determine which states will most likely be buying or selling emission reduction credits. The electricity sector will be a critical component for modeling, with fuel switching from coal to gas in the energy sector and switching to plug-in hybrids in the transportation sector. He isn't optimistic about linking a Midwest C&T system to other regional initiatives to add geographic scope. California dominates the Western Climate Initiative (WCI) and probably won't be selling emissions out of state, and the Regional Greenhouse Gas Initiative (RGGI) is just getting started. The SC agreed to stay within the bounds of regional and federal guidance for modeling.

Nelson summarized, saying the model will look at a 90% target by 2050, an economy-wide cap, and no linkage to other regional C&T initiatives. He will ask Adam Rose what he needs to model these specifications. Tanner suggested contacting Jerry Schnoor for more detail on the specifications. During the next SC meeting (call #13) Nelson will present more specifics on the proposed modeling approach. Also, the policy option description (POD) will be revised to reflect a hypothetical MGA C&T under CRE-3b. SC members will send comments for additional revisions.

CRE-4a—Decarbonization Fund

The SC confirmed that CRE-4a should be a utility-wide carbon tax and CRE-4b should be an economy-wide carbon tax.

CRE-4b—Carbon Tax

Nelson noted he's uncomfortable using the same modeling approach for \$80/ton as for \$8/ton. The SC approved recommendations to move the policy option to the Cross-Cutting (CC) SC, along with transportation and biofuels, to do an economy-wide carbon tax analysis; to give the CC SC background information on where the \$80/ton comes from, and let the CC SC decide what the tax level should be; and to include an analysis of

\$40/ton and \$80/ton, unless these are inconsistent with other regional and national modeling efforts.

Levelized Costs (from PowerPoint presentation)

Escalation Rate—page 8:

- Line C8—Myrom said the 0% rate of inflation could be higher in the first 3 years. Michelle Arenson agreed, estimating that over at least the next 5 years, it will be closer to 7% over 3% inflation (i.e., 10%/year), not including the costs of rebuilding from floods and tornadoes.
- Line C9—The SC agreed to increase the construction factor to 100%.

Assumed Cost Components of Utility/NUG Capacity—page 9:

- Line J34—The capital costs for nuclear, which come from the U.S. Department of Energy's *Annual Energy Outlook 2007* (AEO) are low.

Assumed Cost Components of CHP Capacity—page 9:

- Row 49—The capacity factor is capacity utilization, a term used in the AEO.

Assumed Delivered Fuel Costs—page 9:

- Row 58—The costs for biomass are significantly higher than for nuclear.

Arenson will provide Nelson information on existing coal plant amortization. He also asked the SC to provide Iowa-specific fuel price forecasts for nuclear, natural gas, and coal, since the current price information is derived from different sources.

Quantification of CRE-2—Technology Initiatives, Including Renewables (from PowerPoint presentation)

GHG Reduction Goals—page 10:

- Line N43—Myrom recommended capping 20% of Iowa's total renewables until new baseline technology comes online. Nelson agreed, adding that wind would constitute 10% of renewables by 2020 using the 833 megawatts (MW)/year new turbine assumption.
- Line E47—Myrom pointed out that 2,628,000 is about 833 MW/year from about 420-550 turbines/year. Arenson said this number is 50% higher than it should be, noting production capacity constraints (about 200 MW produced in 2009), long lead times for orders, and a long queue for transmission. Nelson explained the 2,628,000 is based on an extensive modeling study that assumes a density of turbines per area. He will provide more information that the SC can review and discuss during the next call.
- Row 71—Myrom recommended looking at the difference between this number and the study on page 7 of the policy option document.

Quantification of CRE-12—Combined Heat and Power (from PowerPoint presentation)

The language in the policy option document should reflect the fact that Iowa has 4 large wet mills and 2 smaller dry mills that use coal. Of the 276 facilities being examined, 20 industrial facilities that aren't utilities use coal, as do 3 universities. This results in 10% of the facilities using coal, and 90% using natural gas. Marnie Stein offered to provide the SC fuel inputs revised to include weighted-average sources.

Next Steps

Between call #12 and the next ICCAC meeting on September 3–4, 2008, the SC has four calls scheduled to complete the quantifications and extensive work on other topics. Calls #14 and #15 (see below) may need to be rescheduled because CCS conducts its internal calls on Mondays. An additional call was tentatively proposed for August 15.

Upcoming Call Schedule

- CRE call #13—July 30, from 1:00 to 2:30 p.m. CDT.
- CRE call #14—August 4, from 1:00 to 2:30 p.m. CDT.
- CRE call #15—August 11, from 1:00 to 2:30 p.m. CDT.

Public Comments

None.

Announcements

None.