

# MGA Renewable Electricity and Advanced Coal with Carbon Capture and Storage

**Teleconference**

**December 19<sup>th</sup>, 2008**

# Introductions

- Larry Johnston, Mike McNalley, Harvey Thorleifson, Mike Bull, Tom Godboldt, Nathaniel Baer, Geoff Matthews, Brian Warner, Forest Ceel, Dan Weiss, Kristy Monk, Liz Marshall, Frank Zaski, Rex Buchanan, Tom Stanton
- Staff: Wick Havens, Greg Powell, Brad Crabtree, Jennifer Johnson, Mike Gregerson

# Review of Carbon Management Infrastructure Partnership Progress

- Appropriations – Identify what might be put into a draft appropriations letter (draft ready for review in January).
- A letter on the stimulus package is currently being put together with input from a number of advisory group participants on each group.

# Review of Carbon Management Infrastructure Partnership Progress cont'd

## CO2-EOR Paper

- Brad and Jennifer are following up with ARI on data disaggregation.

## Inventory and Toolkit

- Regulatory inventory and regulatory toolkit are being completed with an interim report being sent out before Christmas.

# Review of Carbon Management Infrastructure Partnership Progress cont'd

## CO2 pipeline study

- Further discussions have been ongoing with on the modeling effort.
- Phase I looking at Midwest to the Gulf Coast.
- Phase II effort that will expand to look at build out to achieve the MGA goals.

# Review of Carbon Management Infrastructure Partnership Progress cont'd

## Commercial Plan

- Putting together a draft commercial plan before the meeting in January of what the region could do to start the infrastructure build-out within the 2050 timeframe.
- Putting together key incentives, key financing, etc. Staff will be asking for feedback on this.

# Renewable Electricity: Transmission Initiative

Transmission studies for showing how to meet MGA 10% renewable energy platform goal:

- Regional Generator Outlet Study (RGOS) should be completed in April with results showing renewable energy zones for 16,000 MW of wind development in the 5 state region under study (ND,SD,MN,IO,WIS) and will show alternatives for regional with transmission wind vs. local wind costs/benefits.
- Southwest Power Pool (SPP) regional transmission studies for wind expansion in Kansas and Nebraska (MGA states not in Midwest ISO) should provide expansion plans for those MGA states.
- RGOS combined with SPP studies and other utility and transmission companies is expected to provide transmission costs and plans to meet the MGA 10% goal in the May/June time period.

# Renewable Electricity: Transmission Initiative

Transmission studies for meeting the 20 to 30% MGA renewable energy platform goals:

- Joint Coordinated System Plan (JCSP) is expected to be completed in January or February, 2009 and will show “indicative” transmission proposals to meet the MISO portion of a 20% national wind RPS. Depending on how the wind is sited, that would be 90-120,000 MW of wind on the MISO/MGA footprint and would meet the MGA 30% goal.
- Transmission studies to meet the intermediate MGA goals will be done after the RGOS study is complete and will require load serving entity surveys in the rest of the MISO/MGA states and expanded siting of renewable energy zones using NREL wind data. We don't have a schedule yet, but this will likely go well into 2010.

# Renewable Electricity: Transmission Initiative

Utility Commission Surveys of regulatory authority and approval of regional transmission projects MGA letter has been sent out and is currently in process. We are hoping to have all responses by end of 2008. Organization of Midwest ISO state utility commissioners are also doing an expanded survey and agreed to share responses with MGA once they are complete in January, 2009.

Transmission cost sharing MGA deliverable:

- Upper Midwest Transmission Development Initiative (UMTDI) is working to complete a cost sharing agreement by April based on the recommendations of the RGOS study for 5 states-ND,SD,MN,IO,WIS.
- OMS is starting up a work group to see if they can agree on a cost sharing proposal for recommendation to Midwest ISO. We will be part of that work group (not a voting member).
- Midwest ISO is starting up another transmission cost sharing tariff task force which will meet in February to determine their charter and work schedule. We will also be a party to that process.

# General Comments on the Policy Options Document

- The goal for the policy options document is to have it close to complete by the January meeting. In terms of data, there will be ongoing work on the quantification aspect and will continue to gather feedback.
- We will need to decide which of the policy options should be pursued immediately for implementation. Decide what we would recommend MGA to prioritize options within the document.
- Brad – ask the group to think about areas in the policy options document (e.g., wind siting, model rule, etc.) that are not part of the deliverable.
- Within a number of the RE policies there are a number of deliverables. As we look to the January meeting, we should be thinking about what policies should be brought to the forefront.

# General Comments on the Policy Options Document

Introduction and update on quantification work from Greg Powell

- Greg is building on the same framework that Bill D. had introduced to the group.

Policy Options Document

- Comments on significant issues with each policy option – request to the advisory group for continued updates.

# Renewable Electricity – 1

MI and OH have passed portfolio standards (OH has doubled theirs)

Question: are you planning to quantify this from the starting point of zero?

A: It will be incremental.

# Renewable Electricity

RE-2

- No comments.

RE-3

- No comments.

RE-4

- No comments.

# Renewable Electricity - 5

- The initial work that MISO has done with the NREL data and the 60 renewable energy zones, is a significant piece of work – the identification of these zones. This will provide significantly good data for states to utilize and will help states prep for siting.
- Comment: Michigan should be referenced – wind siting board working on similar objectives to the MISO study. Figuring out what needs to be done with transmission build, permitting issues, etc.

# Renewable Electricity - 6

- Local ownership issues: we are talking about local ownership in a way that everyone feels comfortable with. The early efforts generating local ownership were highly successful but very costly. The new approaches don't cost as much money and are viewed in a mixed way.
- Implementation mechanisms focus now on biomass to power. Does this fit in this section?
  - These do stand out and that they do need to be fleshed out more.
  - The feed-in tariff approach on local projects is being developed in a couple of states.
  - Develop few bullet points to bridge the wind-biomass-solar and local ownership.
    - Mike B., Nathaniel, and Brian will work on this together.

# Renewable Electricity

## RE-7

- No comments

## RE-8

- Could be fleshed out and emphasize the job creation potential while continuing to reference the economic incentives.
- We should highlight the economic development happening in states and improvements on the supply chain work – Duluth manufacturing/supply chain activities, Iowa also (Nathaniel looking up). Larry tracking down the point person from Minnesota.
- We need to be re-tooling existing manufacturers, not just creating new companies.

# Advanced Coal with CCS - 1

Concern expressed on the state of carbon storage technology and how to better characterize it in the policy options document.

- Acknowledge that oil and gas formation storage is mature and that saline aquifer demonstration is well advanced.
- Tom S. and Tom G. are going to work on language to characterize the status of carbon storage technologies in advance of Indianapolis.
- Natural gas storage reference is not widely seen as accurate. The reference to natural gas storage as an analogy should be in terms of policy – not in terms of physical storage.

# Advanced Coal with CCS - 1

MI legislation creates a category of special energy facilities including advanced coal with CCS, reductions by 85%. Tom S. could add this.

- North Dakota – introduced legislation –
- Kansas Corporation Commission has introduced rules.
- Ohio's RPS program has some coal related items in the RPS.
  - It is an advanced energy standard. Kristy can forward a short description of this to Wick.

No Comments on AC - 2

# Conclusion

Setting up next conference call:  
January 7<sup>th</sup>, 2:00 (Eastern)