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MEETING SUMMARY
ARKANSAS GOVERNOR'S COMMISSION ON GLOBAL WARMING
Agriculture, Forestry and Waste (AFW) Technical Work Group (TWG)
Call #7, May 6, 2008

Attendees:

TWG Members: Miles Goggans; Pearlie Reed; Richard Ford, PhD; Aubra Anthony; Jerry Farris, PhD.

Advisory Body Members: John Shannon, Richard Bell, Marcus Tilley (for Teresa Marks, ADEQ) and Adrian Baber (for Randy Young, DNR)

Arkansas Department of Governor's Office: Jillian Hicks

Center for Climate Strategies: Joe Pryor, Steve Roe, Jackson Schreiber, Jen Jenkins

Members of the Public: Dennis Marshall

Background Documents: (all posted at www.arclimatechange.us/AFW.cfm)

- Summary of Call #6
- Meeting Notice and Agenda
- PowerPoint for Meeting
- AFW Straw Proposal Document
- Draft Inventory and Forecast for AFW Sectors
 - Agriculture
 - Waste
 - Forestry

Agenda:

1. Introductions
2. Review and Approval of Prior Call Summary
3. GCGW Process Progress
4. Consider Goals for GCGW Meeting #6 (May 19, 2008)
5. Discuss Potential Policy Option Goals
6. Discuss Next Steps in Developing Straw Proposals
7. Review of Next Steps for TWG
8. Agenda, Date and Time for Next Meetings
9. Public Comments and Announcements

Discussion and Conclusions:

Introductions

No Comments

Review and Approval of Prior Call Summary

The Previous Call Summary was approved.

GCGW Process Progress

No Comments

Consider Goals for GCGW Meeting #6 (May 19, 2008)

No Comments

Review Example Policy Options and Potential Goals

In the event that TWG members do not feel comfortable with providing goals, CCS will provide “default” goals based on the goals of similar policies in other states to serve as a starting point for discussion.

Discuss Next Steps in Developing Straw Proposals

1. General Concerns expressed by the TWG

- a. Concern were raised that these goals were being created without the necessary analytical background in order to make a more informed decision. The GCGW should be presented with information that is backed by strong technical input, rather than just what has been done in other states. The timing of this is continuing to be a problem in terms of making realistic goals.
 - i. CCS responded that it is not uncommon to have difficulty in making quantifiable goals this early in the process. TWG members should keep in mind that any goals can be modified once more quantification has been done if they feel that is appropriate. Additionally, an initial goal needs to be set in order to move forward with the quantification process (which will in turn provide insights into the appropriate level of goals).
 - ii. It was agreed to proceed with the current approach, but we’ll note to the GCGW that concerns have been raised and that the appropriateness of the goal may be reviewed and modified (as needed) as new information comes to hand.
- b. There was discussion of whether we should be looking at the marginal costs and the marginal benefits of each ton of carbon in the atmosphere and the economic impact of that ton on an Arkansan citizen. It was suggested that by looking at the marginal costs vs. the marginal benefits, the TWG can determine the best options for Arkansas to implement. A study from the Copenhagen Consensus (founded by Bjorn Lomborg) was referenced as an example of the individual costs and benefits of GHG reductions.
 - i. CCS identified that this is beyond the scope of this process and there would need to be a change in the scope of this process to include an analysis such as this. This change in scope would need to be raised and agreed to at the GCGW level.

2. AFW 1 Manure Management

- a. Many TWG members felt that there is a lack of information about the potential scope of this type of policy which makes it difficult to define a goal at this time.
- b. In another state, a goal was set to reduce emissions from manure by 50%. Since poultry litter is a larger component of Arkansas’s manure than other states that may change the appropriate level.

- c. CH₄ is less of a problem for chicken litter, though N₂O from chicken litter can still be a problem.
 - d. It is very possible that emissions are going to be declining in AR simply because the agriculture industry in the state is in economic decline.
 - e. The draft Inventory and Forecast indicates that 1.6 MMtCO₂e come from manure management in the state of Arkansas in 2005. Poultry litter is providing more than half of the N₂O and about half of the CH₄ within this manure management category.
 - f. The goal of reducing methane emissions by 50% was discussed as a placeholder because that goal has been used in other states for similar options. This number seemed optimistic, so there was discussion regarding the appropriate reductions goal for Arkansas. The goal of a 40% reduction was agreed to by the TWG as an appropriate draft goal.
 - g. The draft goal for AFW-1 will be:
 - i. “Reduce methane and nitrous oxide emissions from dairies, hog and poultry operations through improved manure handling and storage practices reducing these emission by 40% by 2025.”
3. *AFW 2 Promotion of Farming Practices that Achieve GHG Benefits*
- a. CCS will do some work offline to determine if an appropriate number of acres can be decided upon, keeping in mind the laws that exist in Arkansas for maintaining a transparent, public dialogue..
 - b. CCS will then use this as a default goal and discuss with AFW members regarding the appropriate level that could be used.
 - c. The 40% level will be used at the moment for the first part of this option. The aggressiveness of the goal will be reconsidered at a later date when more data is available.
 - d. The draft goals for AFW-2 will be:
 - i. By 2025, implement cultivation practices to enhance soil carbon levels on 40% of the acreage that is not already using these practices.
 - ii. By 2025, implement cultivation practices to increase nutrient efficiency by 20%.
4. *AFW 3 Improved Water Management and Use*
- a. The TWG currently has listed only two components of this option, but there is also the issue of storage and recharge. There was discussion of whether this would be a good addition to this policy option. In the end, no new goals were added to this option.
 - b. There was a question raised regarding whether groundwater vs. surface water has significant GHG benefits. This will certainly have other environmental benefits, but the GHG value is mostly from the reduced energy use from pumping water. CCS can get estimates for the amount of water currently being pumped in the state, and the amount of energy being used to pump this water, to estimate the GHG benefits possible through this option. It is difficult to be certain what an appropriate goal is, and if the GHG benefits are going to be significant.
 - c. The draft goal for AFW-3 will be:

- i. Increase use of surface water for irrigation by 10% by 2025 compared to business as usual (reducing energy consumption associated with ground water pumping)
 - ii. Decrease energy use for water purification by 20% in 2025 compared to business as usual (includes efficiency gains reducing water and energy consumption).
5. *AFW 4 Expanded Use of Agriculture and Forestry Biomass Feedstocks for Electricity, Heat, or Steam Production*
 - a. Poultry litter could be addressed here as well.
 - b. There was a discussion regarding whether there should be an assumed split of 50/50 between biofuels and biomass for electricity use. There is a lot of biomass available that is not currently being used, because biomass collection can be very difficult.
 - c. The truth is that “forest residues” are not economically feasible to remove, so it is unlikely that those are practical to be gathered and used as biomass.
 - d. For agriculture residue, it would seem that more of these residues would be going towards AFW5, whereas forestry could be used for this option (AFW4).
 - e. There is a study by Potter et al for the state of Arkansas from 2007 on the amount of feasible marginal agricultural land for the production of energy crops. It could be difficult to determine what an appropriate definition of “marginal” crops.
 - f. There were questions of scale regarding this option with regard to capture of waste heat. This is not a common practice in the state, and a practical option will need to be relatively small.
 - g. The draft goal for AFW-4 will be:
 - i. Agricultural Residues: Increase agricultural residues use for electricity, steam, and heat generation to utilize 5% of available in-state agricultural residue biomass by 2015, 10% of available biomass by 2025.
 - ii. Forest Residues: Increase forest residues use for electricity, steam, and heat generation to utilize 5% of available biomass by 2015, 10% of available in-state forest residue by 2025.
 - iii. Energy Crops: Increase the production of energy crops to produce biomass feedstock for electricity, steam, and heat generation by increasing acreage devoted to energy crops to 10% of marginal agriculture land by 2025.
 - iv. Methane from Livestock Manure and Poultry Litter: By 2025, utilize 10% of available methane from livestock manure and Poultry Litter for renewable electricity, heat and steam generation. [Note potential overlap with AFW-1]
 - v. Capture of waste heat: By 2025, ensure that facilities using biomass are capturing and utilizing 10% of waste heat for use in electricity, heat and steam production.
6. *AFW 5 – Expanded Use of In-State Biofuels*

- a. The group indicated that collection of biomass is probably the limiting factor for most of these biomass/biofuels options.
 - b. The draft goal for AFW-5 will be:
 - i. Maximize the production of liquid biofuels in Arkansas, such that by 2025 the state utilizes approximately 10% of available biomass supply per annum to produce biofuels with significantly lower embedded GHG emissions compared to conventional fuel products (from a life cycle perspective).
7. *AFW 6 Expanded Use of Locally Produced Farm and Forest Products*
- a. Farmers markets can be successful in larger townships in Arkansas, such as the one in Jonesboro, but will be difficult to create in smaller areas.
 - b. It may be difficult to establish local farmers markets, because regional food production and consumption is relatively common practice in Arkansas.
 - c. Change the word “Lumber” to “Wood Products” in goal #3 so as to be more inclusive.
 - d. The draft goal for AFW-6 will be:
 - i. Farmer’s Market: Increase the number of local farmers markets in Arkansas by 10% by 2025.
 - ii. Local Produce: Of the food Arkansans consume, 10% would be grown or produced locally by 2025.
 - iii. Locally Grown and Processed Wood Products: The amount of locally grown and processed wood products would displace imported wood by 15% by 2015 and 30% by 2025.
8. *AFW 7 Forest Management and Establishment for Carbon Sequestration*
- a. The TWG agreed to the text changes to AFW-7 suggested by John Shannon.
 - b. The words “restore and establish” are not enough, and the TWG decided to add in a goal to avoid backsliding. A new goal will be established in AFW 7 with the text: “sustain existing forests to ensure no net loss of existing forests”.
 - c. Arkansas has 18.4 million acres of forest. The TWG felt that they should be aggressive on the sustaining of existing forest goal, because the potential carbon benefits of these forests are quite large.
 - d. The urban tree planting item was highlighted as being particularly important, and will be moved to be the first of the AFW-7 goals.
 - e. Goals for the urban tree component and the restore/establish component were not identified
 - f. John Shannon suggested that he could provide some information on AFW 7 to Aubra Anthony that might aid with the development of a quantifiable goal.
 - g. The draft goals for AFW-7 will be:
 - i. Implement urban tree planting and retention programs to increase the number of urban trees by X by 2015 and by X by 2025.
 - ii. Implement sustainable forest management practices to achieve carbon benefits on 50% of privately owned land by 2025.

- iii. Implement sustainable forest management practices to achieve carbon benefits on 50% of state-owned resource lands by 2025.
 - iv. Restore/establish X,000 acres of forest by 2015 and X,000 acres by 2025.
 - v. Sustain existing forests to ensure no net loss of existing forests
9. AFW 8 *Advanced Recovery and Recycling*
- a. CCS will put together some potential ranges/background information to run by TWG members, keeping in mind the laws that exist in Arkansas for maintaining a transparent, public dialogue.
 - b. ADEQ has previously agreed to assist TWG members with AFW 8 and 9.
10. AFW 9 *End of Use Waste Management Practices*
- a. See AFW 8

Review of Next Steps for TWG

Agenda, Date and Time for Next Meetings

The next meetings for the TWG are outlined below. TWG members should contact CCS with any comments that they might want to make about the proposed schedule:

- AFW TWG Call #8 – May 27, 1:00-2:30pm, Central Time.
- AFW TWG Call #9 – June 3, 1:00-2:30pm
- AFW TWG Call #10 – July 1, 1:00-2:30pm
- AFW TWG Call #11 – July 15, 1:00-2:30pm
- AFW TWG Call #12 – August 12, 1:00-2:30pm
- AFW TWG Call #13 – September 9, 1:00-2:30pm

Public Comments and Announcements

Dennis Marshall had a comment to make regarding federal burning. There is a lot of prescribed burning on national forest and national parks service land, both of which are federally managed. This could have potential GHG impacts both in terms of the carbon dioxide released and in terms of the carbon sequestration that is no longer occurring. It was suggested that the TWG could consider scaling back this practice under AFW-7.