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**MEETING SUMMARY
MICHIGAN CLIMATE ACTION COUNCIL**

**Agriculture, Forestry, and Waste Technical Work Group (TWG)
(AFW TWG)**

Call #3, February 28, 2008, 1:00 PM – 3:00 PM EST

Attendance:

1. Technical Working Group members:
Ken Dahlberg, Jordan Devries, Dana Kirk, Andrew Kok, Gary Wyckoff (in place of Pete Madden), Ryan Moffitt and Mary Ryan (in place of Doug Parks), Lisa Scramlin, Steve Shine, Michael Toth-Purcell, Carrie Vollmer-Sanders, Brian Warner, Anne Woiwode
2. Center for Climate Strategies (CCS) staff:
Steve Roe, Rachel Anderson
3. Michigan Department of Environmental Quality:
Terri Novak, Jim Ostrowski, Steve Kulesia
4. State Agency Participants: Liesl Clark, Jan Patrick, Shauna Tonsor, Tom Stanton, Steve Kulesia, Gordon Wenk, Michelle Crook, Scott Heather and Larry Pedersen (for Donna LaCourt)
5. Public Attendees: none

Background documents:

(all posted at <http://www.miclimatechange.us/AFW.cfm>)

1. Meeting Notice and Agenda
2. PowerPoint for Teleconference
3. Draft Michigan AFW Options Description
4. Draft Michigan AFW Catalog
5. Summary of Call #2

Discussion items and key issues:

1. Steve Roe called the meeting to order, Rachel Anderson completed the roll call, and Steve reviewed the agenda and plans for the call.

2. Steve reviewed the goals for the next MCAC meeting. In addition to reviewing priorities from TWGs, the Action Council will begin reviewing options for establishing state level goals and GHG reduction targets.
3. CCS reviewed Call #2 minutes and provided an opportunity for TWG members to provide feedback. No revisions or comments were offered by TWG.
4. CCS initiated a review of the AFW inventory and forecast (I&F) to get a better sense of the emission reduction potential in each sector. He noted that we will continue to improve the I&F with comments and additions from TWG members, particularly Michigan-specific data and forecasts.
5. CCS began with gross emissions, explaining that it does not include carbon sinks. A TWG member asked a question about how sectors were derived and why they were not divided by systems like food systems. Steve explained that the I&F is developed to be consistent with international and national inventories like those used by EPA and IPCC. Electricity is consumption-based (emissions associated with electricity consumed in the state). Agricultural machinery is actually part of Residential, Commercial, Industrial (RCI) fuel use. The Agriculture sector itself is primarily non-combustion emissions associated with livestock & crop production. ODS substitutes are ozone-depleting substance substitutes that are often used in manufacturing or refrigeration. Other industrial processes include non-combustion industrial emissions, such as those produced during cement manufacture and other industries. It is important for the TWG to understand what the policies explored in the AFW sector address emissions within the sector, as well as those occurring in other sectors (e.g. RCI fuel consumption, transportation).
6. A question arose about ethanol fermentation – where are the emissions inventoried? Steve noted that CO₂ from ethanol fermentation is biogenic so is not included in this type of inventory but methane would be. The CO₂ would not need to be included based on IPCC protocols. Biogenic carbon is treated differently from fossil-based carbon. Later in the call, a member noted that GHG emissions from ethanol production facilities are covered in the RCI workgroup catalog, section 7, which covers efficiency improvements for process related GHG emissions including ethanol. A member asked if MCAC will pick 10 choices from each TWG or will they assess what are the most important 40 of 50 across all sectors since AFW make up a smaller fraction of total emissions. What are the criteria for selecting the policies to be considered? Steve noted that even though AFW contributes a small fraction to the GHG I&F, we have policies that take emission out of other sectors (e.g. fuel use in the industrial or transportation sectors; electricity consumption). For example, source reduction, recycling, and reuse will save emissions not only from landfilled waste but also from product/packaging lifecycle emissions – that includes embedded energy from the manufacturing and transportation of these materials.
7. CCS reviewed the Ag section of the inventory. In Michigan soil carbon is a net source, not a net sink as in many other states. This designation is limited because it is based on a 1997 USDA inventory. That data should be updated for the 2002 inventory, but CCS has not received an indication from the USDA on when that

- will be available. Ag soil carbon category includes some CO₂ sequestration but overall is a net source in MI. A question arose – where is the ag data from? Most of it is USDA NASS. There are some MI data sources that might be preferable to NASS and TWG members are encouraged to share data and state-level forecasts they have access to. A member asked why there is a spike in 1993? Steve noted we'll have to delve into the appendix and underlying data. The spike appears to be in Ag soils – livestock and Ag soils – crops. CCS will report back to the group on this.
8. Next the waste inventory was reviewed. Steve noted that in the next iteration of the I&F, CCS has developed separate estimates for landfill gas to energy (LFGTE), flared, and uncontrolled landfills. The new projection using the state solid waste data is ~10 MMtCO₂e in 2020 compared to 15 MMtCO₂e from the previous forecast. Steve noted that the EPA Waste Resource Management (WARM) model can show what reductions are achieved by different waste management practices (source reduction, recycling, composting). He noted that currently no Michigan data are available for industrial wastewater treatment for the fruit & vegetables and pulp & paper sectors.
 9. The forestry inventory was next. Steve noted it is a complex topic with associated data challenges. TWG members offered up the name of Todd Parker with the Delta Institute as someone who has worked with DNR and farmers/landowners in the UK. The Delta Institute has two carbon offset projects they are working on with the state of MI. Steve walked through the types of forestry data including the different forest carbon pools: live tree-above ground, live tree-below ground, forest floor, dead wood, soil carbon, etc. The historical data are fairly noisy – as seen in other states (potentially due to methodological differences in Forest Inventory and Analysis (FIA) surveys). We need people with good knowledge of state FIA data. DNR stated that methodology changes in the last few years are too small to account for the large fluctuations in data. The TWG needs state level projections on forest management (e.g. projected losses or gains in forested lands) to improve upon the current assumption of no future change in forest carbon flux levels.
 10. CCS began the process for identifying initial priorities for analysis. Catalog input on rankings and associated additions are due by March 7. The ballots will then be sent to the TWG members. Ballots due back by 17th. CCS will turn around balloting results by 20th, when they will be posted for the next workgroup call, which is March 27th. Priorities will be discussed during the next call and prepared for review by the MCAC at their April meeting.
 11. CCS began reviewing the ratings for emission reductions. A TWG member mentioned we should have a negative rating for those policies that will increase emissions. If the TWG feels that an option could produce net GHG emissions, then this needs to be noted in the catalog or the option removed. In the case of biofuels, there are a wide variety of implementation scenarios that could achieve a wide array of benefits. New research suggests that biofuels options directed at displacing food crops with energy crops will have net negative GHG impacts (due to additional new cropland being put into place to make up for lost production

(potentially even in other parts of the world). The notional rating in the catalog refers to biofuel production using GHG-superior feedstocks and production methods (superior to current national methods; which are primarily corn-based ethanol and soy-based biodiesel). CCS explained that notional ratings were taken from policies quantified in other states, particularly MN, which is a neighbor to MI. The draft assignments tend to be based on full implementation of policies (e.g. maximum use of resources considering sustainable production; maximum feasible levels of waste management, etc.). A member asked if when the TWG is quantifying benefits/costs, do they look at how the policy will impact other choices, i.e. choosing one over another? CCS noted that at this point in the process, we are focused on individual policies, but as we enter the policy design phase, we will want to look at choices and impacts relative to other selected priorities (both within the TWG and across to other TWGs).

12. In response to questions about where the data came from for the notional ratings, Steve noted that we don't have time/resources to go into detailed analysis of every option. We are at a stage where we are identifying broad policy ideas that should be a priority to analyze during this process. We are trying to incorporate data that TWG members have access to in order to aid prioritization. In the next step, policy details can be formulated in the straw proposals that provide details about the structure, coverage and goals of the policy. For example, in looking at biofuels – at the straw proposal stage we can specify feedstocks, types of fuels, etc. Steve noted that every previous state that CCS has worked with has had biofuels production option (in addition to demand-side options in the TLU sector) – and none have offered incentives for conventional biofuel production. A member asked what definition are we using for biomass, noting that there are two legal definitions in MI. The member was asked to provide information on those definitions. Another member questioned the transportation and road costs of moving biomass? In assessments that CCS has done, there has been effort made to develop lifecycle GHG benefits estimates, which take these issues into account. It was agreed that we need to look at these issues for options recommended as priorities to the MCAC .
13. CCS began the discussion of the catalog. Due to time constraints a full discussion of each option was not possible. CCS noted that members were encouraged to continue to weigh in on the options after the call and were encouraged to provide any data or input that would help in the rating process.
 - a. AFW-1: A member noted that for 1.3, industrial scale CAFOs have significant air, water quality, and health issues. Another noted that we should label the catalog as DRAFT since it is on internet, and we don't want readers to think it is a final draft. CCS will take this back for discussion with facilitators of the other TWGs.
 - b. AFW-2: A member asked why 2.4 biofilters has a M-H GHG reduction and other animal waste options do not. Steve noted that manure digesters may capture only 20-50 of emissions from manure. Also, biofilters may capture emissions from both manure and enteric fermentation.

- c. AFW-3: A member suggested collapsing 3.1 into 5.2. If 5.2 becomes too broad it may be hard to approach. Other members noted they didn't want to modify the catalog at this juncture and it was decided to hold off collapsing options knowing that after balloting, we can bundle some options together.
 - d. AFW-4: 4.1 was changed from Grassland Cover to Permanent Cover because members noted that there wasn't a lot of grassland in MI and untouched areas grew trees.
 - e. AFW-5: There was more discussion on organics and potential benefits from organic practices over other practices.
 - f. AFW-6: It was noted that for 6.1 the understanding is that this could be waste wood or forest residue or energy crops.
 - g. AFW-7: A member noted that broader MI programs and current activities could be added to the "Notes/Related Actions in Michigan" section of the forestry options that may be better than the landowner credits program. CCS requests and specific additions sought by TWG members.
 - h. AFW-8: No comments.
 - i. AFW-9: For 9.4 a member wanted the Bronco Biodiesel and recycled restaurant grease included as these are organic waste streams that can be managed. Steve noted that a lot of organics programs focus on compostable waste streams such as leaves and trimmings. Members noted that MI already prohibits these from going into landfills.
14. CCS reviewed the balloting process. Each member can choose ten options with one choice per option. TWG members can provide additional input in a text box next to each option. For example, if a TWG member feels that the option they are selecting should be combined with another option, this input can be provided to CCS and will be taken into consideration when CCS consolidates the balloting results.
15. TWG members were reminded to send any catalog updates to Rachel within the next week, by March 7th (rachel.anderson@pechan.com).
16. The next AFW TWG call is scheduled for Mar 27 from 1-3 PM.
17. Public input: none.

Next steps and agreements:

- 1. The next TWG meeting will be held on Thursday, March 27th, from 1:00 - 3:00 pm. Please RSVP to Terri Novak novaktl@michigan.gov 517.930.3170, if you will be attending in person at DEQ Constitution Hall conference room.

2. TWG members should review and make final contributions to the notional ratings in the Catalog by Friday, March 7th. TWG members should send in comments/additions to Rachel Anderson (rachel.anderson@pechan.com).
3. CCS will send out ballots via email on March 7th. These should be returned to Rachel by March 17th.
4. CCS will post the balloting results along with the rest of the call materials for the March 27 call by March 20.
5. Dates for upcoming TWG conference calls:
 - a. March 27th, 1-3 PM
 - b. May 1st, 1-3 PM
 - c. May 29th, 1-3 PM
 - d. June 26th, 1-3 PM
 - e. August 7th, 1-3 PM
 - f. September 25th, 1-3 PM
 - g. October 30th, 1-3 PM.