

MEETING NOTICE

Governor's Task Force on Global Warming Joint Meeting of Technical Advisory Group and Carbon Tax/Cap and Trade Work Group

Date: Tuesday, August 14, 2007, 9:00 a.m. to 11:00 a.m.

**Location: Wisconsin Energy Conservation Corporation (WECC)
Training Room
431 Charmany Drive, Madison, Wisconsin**

- 1) Welcome
- 2) Carbon Tax/Trading Group presentation to the Technical Advisory Group
 - a. provide an overview of the policy directions that you are honing in on (e.g., a state only cap and trading program and a regional cap and trading program)
 - b. the kinds of modeling runs you think you may want
 - c. data needs that TAG should be aware of
- 3) Technical Advisory Group presentation to the Carbon Tax/Trading Group
 - a. provide an overview of ENERGY 2020 and REMI
 - reference case
 - policy runs
 - b. process/timing, etc.
- 4) UW and other support available to help the Carbon Group (Paul and Lewis)
- 5) Evaluation: Was a joint meeting worthwhile? How might we deal with the large overlap in membership between the two groups?

Carbon Tax/Cap and Trade Work Group Meeting (continues independently)

**Location: Wisconsin Energy Conservation Corporation (WECC)
First Floor Board Room
11:00 a.m. to 12:00 p.m.**

- 1) Further defining and planning specific carbon policies
- 2) Other business
- 3) Public comment

Technical Advisory Work Group Meeting (continues independently)
Location: Wisconsin Energy Conservation Corporation (WECC)
Training Room
11:00 a.m. to 3:00 p.m.

- 1) Document rationale for recommendation on a modeling consultant
- 2) Begin discussion of data needs for reference case, including category of inputs and data sources
- 3) Other business

These meetings are open to the public.

If you have any questions or need special accommodations, please contact Lisa Stefanik at the Public Service Commission of Wisconsin by telephone at (608) 266-1125 or via e-mail at lisa.stefanik@psc.state.wi.us.

**Carbon / Technical Advisory Group
Joint Meeting – 8.14.2007
Wisconsin Energy Conservation Corporation**

Carbon Group

What policies are we currently exploring?

Step 1: We mapped out broad policies

Step 2: We drilled down to look at various characteristics of the policies.

- Carbon offset mitigation
- Carbon tax
- State level cap & trade program
- Existing volunteer DNR registry / reduction programs
- Seek federal funds and other fed incentives to encourage greenhouse gas reductions.

Keith reviews characteristics of each policy option. Carbon group indicates it needs more information from Tech Advisory Group on data availability, modeling capability, etc.

Technical Group

Examined WI Emissions Inventory – feels the data ‘snapshot’ of 2003 was sufficient for our needs at this time. The group is less sure about using this data to build projections.

- The noted exception was the agriculture data, which will hopefully be filled in using WINROCK.
- Separate calculation should be made of GHG emissions with imports.

Reference case:

Technical Advisory Group initially discussed it at our last meeting. Group also examined a modeler for the overall Task Force. The Group took a few meetings to do that and have made a recommendation, after developing criteria to examine the modelers.

Discussion of recommended modeler, ICF as an integrated modeling choice.

Could we flip the modeling around and favor using the REMI modeling for cap & trade modeling, instead of using an economic model?

Using ICF (same modeler as IL) will allow us to look at some of their runs and products to anticipate what WI policies might look like. Keep in mind also that we are using the model for policy analysis, not regulatory program building.

The Technical Advisory Group has proposed it use the state’s REMI model to help save some money and use state staff. The Carbon Group is asked to think about whether or not it will work for its needs.

IL has used ENERGY 2020 (ICF) to examine emissions, but they then put ENERGY 2020's product through their state's REMI system iteratively to expand analysis.

Base Case Design elements:

- Technical Advisory Group (TAG) will need to look at more than just the WI Emissions inventory numbers.
- TAG will look at more than the numbers to establish projections – this could include economic growth, population growth, and more.
- If you look at just emissions numbers, it looks like GHG emissions are going to be flat. This is not the case.
- TAG has moved away from a “business as usual” case and are building a reference case.
- TAG is working hard to know what data is available. It currently works with Jim Mapp's Wisconsin Energy Statistics book.
- Transportation group gave TAG their ‘wish list’ of information they wish they had to do their work. This was very helpful to TAG and TAG is now working to accommodate them.
- What TAG is going to try to model is what we know is going to happen. We have not enumerated all the sectors yet. What we have learned is if a sector is taxed, it's easier to learn about it, as data is more widely available.
- TAG will be examining what the state's REMI model reference case will look like.

WRI on the phone

- What is the actual policy modeled in IL?
- What are the assumptions behind it?
- How does the model work with regard to the sectors? In the reference case and in the sector case? What does it deliver?
- What issues have IL had?

Cap & Trade group in IL ultimately agreed a point source Cap and Trade program that includes all electric generation in IL and very large industrial emitters (heat and process combustion).

A cap starts at 2011 levels and goes back to 1990's levels in 8 years. There's an offset provisions (10% can be met with offset), banking of offsets is allowed, and we do allow for early action between '07 and 2011. Allocation: 85% of the allowances are auctioned to highest bidder, and 15% are given away for free (grandfather).

Policy describes that revenue should be used for public benefit programs – renewable energy deployment, carbon capture & storage, energy efficiency, low income, etc.

Model is put into general treasury and not spent in modeling exercise. If you have this influx of money coming in during modeling, it's much more difficult to see the effect of other policies.

WRI suggested an analysis of a state-only program (per the governor's mandate in IL) with an available link to the RGGI program that definitely exists. In the link, we assume the maximum RGGI price. If IL price is lower than RGGI, it's selling credits to RGGI. If IL price is higher than RGGI, it's buying credits.

If you want to do regional Cap & Trade analysis, build a regional reference case. IL did it by growing an IL case, and a case that has everything but IL.

If we do this in WI, we need a program with a boundary for Wisconsin, a boundary for a region, and then consider everything outside the region.

John reviews 4 models that they are running in IL. They include:

- All policies, but not cap & trade
- All policies, plus cap & trade
- All policies, cap & trade program with regional rggi link.
- High Energy Price scenario

Example of policies in play in IL.

- Expansion of mass transit / incorporate smart growth policies
- Low carbon fuel standard (currently being implemented in CA)
- Incentives for fuel efficiency vehicles
- Incentives for State Government purchases.

Industrial:

- Combined heat & power deployment
- Potent GHGs such as HFCs, CFCs, etc.

Ag:

- Anaerobic digestion
- No-till ag policy to encourage more state-bought no-till land from farmers
- No net loss of forest and grasslands due to development.

Electric power

- EERS
- Appliance Efficiency Standards for 12 products
- Standards for lighting
- Building codes for business & residential

Electric power generation side:

- Larger renewable energy portfolio standard (25% by 2025)
- Carbon performance standard for new electric power plants
- Energy eff. And conservation for state facilities

What's the minimum info for carbon tax or cap & trade modeling?

Getting the reference case right in the state is key to moving the process along.

The carbon group and the tech advisory group need to agree on historic energy and emissions numbers for the state of WI.

You could use the WI emissions inventory, you could use EIA data found in Energy 2020. The more basic reference case numbers that energy 2020 has built into it that can be used will save you time, but you need to evaluate them to be sure they work for your group & state.

Be comfortable with the historical data and where it will come from – for all sectors – and what kind of energy cost numbers you are comfortable with going forward.

Something that will be important for the Carbon Group to weigh in on is an agreed-upon base case of projected new builds (every piece of new generation – go ahead and include renewables) in WI.

IL was comfortable using some LADCO information (in cooperation with others), but we need to find our comfort level with this information.

We'll need to nail down what is coming off-line in Wisconsin as well.

Does the PSC / DNR have abatement plans for plants? Do you know about upcoming scrubbers? The model will shut down certain plants if it does not make changes as it nears future year landmarks.

Summary:

- Agree on where the data come from
- Agree on what the data says.

Minimum amount of info from carbon group to make it happen.

- Covered sources
- A threshold is also needed. This is important because it's an administrative nightmare, looking down the road, to pick out who needs to comply. You need to either pick out who must comply, or say the whole sector has a cap.
- Have a start date
- Have a target and timetables. Will you pick an endpoint for modeling? Will it be 2020? 2030? 2050? IL picked an endpoint of 2020 to target its efforts on that end point
- Have a description of early action

- Have a description of offsets and their geographic regions. Will they be Wisconsin only? National? International? We could also do 50% of offsets from WI, 50% can come from anywhere else.
- Allocation exercise is important. No net impact on GHG; However, to gauge how regulated entities react, you need to have some accurate discussion around how allowances are allocated. How many are auctions / how many for free?
- Consider linkages to other programs.
- Banking / Borrowing of credits. – IL could bank them in an unlimited amt, but must spend them by 2020. We did not address borrowing.

Summary of joint meeting:

- Appropriate reference case construction paramount
- List of information from Carbon group that would be needed in a reference case should be finalized.

Break OUT:

We probably need to develop just one policy out of our group.

We need to likely break out to examine what a tax policy would look like, an offset program would look like, etc.

Examining a cap & trade program exclusively includes offsets as a full group. Hybrid program discussions will likely evolve from this brainstorming. We could discuss this at our next group meeting, and then we could have a group try to write this up post-next meeting.

Next meeting: In depth analysis of what a cap & trade program would look like.