



MEETING SUMMARY
MONTANA CLIMATE CHANGE ADVISORY COMMITTEE (CCAC)
Energy Supply TECHNICAL WORK GROUP
(ES TWG)

Call #3, November 16, 2006, 9:00am to 11:00am

Attendance:

1. Technical Working Group members:
 - Shane Mogensen, Nance Petroleum
 - Bob Green, Rio Tinto Energy America
 - Mary Fitzpatrick, Self-employed
 - Patrick Judge, MT Environmental Information Center
 - Mark Lambrecht, PPL Montana
 - Chuck McGraw, Natural Resources Defense Council
 - Bob Raney, MT Public Service Commission
 - Ken Thornton, Citizens for Clean Energy
 - Sue Dickenson, State Representative
2. Center for Climate Strategies (CCS) staff:
 - Alison Bailie
 - Michael Lazarus
 - David Von Hippel
3. Montana Department of Environment Quality (MT DEQ) Liaison and Attendees:
 - Jeff Blend
 - Jim Boyer
 - Lisa Peterson
4. Public Attendees: None
5. Observers: None

Background documents:

(all posted at http://www.mtclimatechange.us/Energy_Suplly.cfm)

1. Agenda
2. Summary of Energy Supply TWG Call #2, 10/26/06
3. Powerpoint presentation for meeting
4. Revised Catalog of State Climate Mitigation Options

5. Preliminary Results for Assignment of Top Priority Energy Supply Options for Elaboration and Analysis, as of November 13, 2006
6. Option Description Template
7. Sample Straw Proposals

Discussion items and key issues:

1. Call to order and Introduction of TWG members
 Alison Bailie officially started the meeting at 9:05am on November 16, 2006 with a roll call of TWG members and other attendees.
2. Review of Agenda
 Alison reviewed the agenda for and purpose of the Call referring to the PowerPoint presentation prepared for the teleconference.
3. Update on Emissions Inventory and Forecast
 Alison discussed status of additional data collection from electric utilities (DEQ sent data request to utilities and has not yet received input from them) and development of new “high fossil fuel development” scenario for GHG projections (under development). Questions on draft inventory and updates can be directed to Alison (alisonb@pembina.org).
4. Review of Summary of Energy Supply Call #2
 TWG members had no comments on the Summary for Energy Supply Call #2
5. Discussion of GHG reduction Options for Fossil Fuel Production
 Michael Lazarus led a discussion on the 5 options for reducing emissions from Fossil Fuel production. The TWG suggested revisions to the options in the catalog (as indicated in table below) and characterized 2 options as high priority and a third option as medium.
6. Prioritization and review of voting on options.
 TWG members reviewed the voting results and comments and agreed to consider all options receiving 6 or more votes as high priority options. These are indicated in bold below. The group then discussed and commented on other options (as indicated in the table below). Options that the TWG suggests as high priority are noted in bold in the table below, and have been renumbered for input to CCAC meeting.

New Option No.	Option No.	GHG Reduction Policy Option	Comments
ES-1	1.1	Environmental Portfolio Standard (renewables and energy efficiency)	
	1.3	State Purchase of Electricity through Greenpower Renewable Resources Programs	

	1.4	Public Benefit Charge Funds	
ES-2	1.5	Renewable Energy Incentives (biomass, wind, solar, geothermal)	
	1.6	Green Power Purchases and Marketing	
	1.7	Renewable energy development issues (zoning, siting, etc.)	
ES-3	1.8	Research and Development (R&D), including R&D for Energy Storage and Advanced Fossil Fuel Technologies	This option was expanded to include 1.11 (storage technologies) and 3.5 (R&D for fossil fuel production). TWG member emphasized need for university programs to promote options being discussed in this process.
	1.9	Landfill Gas Recovery (see also Waste)	
	1.10	Waste to Energy (see also Waste)	
	1.11	Storage technologies. (in particular compressed natural gas or air).	Included in 1.8
ES-4	2.1	Incentives and barrier removal (including interconnection rules and net metering arrangements) for combined heat and power (CHP) and clean distributed generation (DG)	Option expanded to include 2.4 (Net Metering)
	2.4	Net Metering	Included in 2.1
ES-5	3.1	Incentives for advanced fossil fuel generation (IGCC and/or fuel cells) and carbon capture and storage (CCS), including combined hydrogen and electricity production with carbon sequestration	Option expanded to include 3.4 (Hydrogen/Elec production with sequestration)
	3.4	Combined hydrogen/electricity production from fossil fuels with sequestration	Included in 3.1
	3.5	Research and Development (R&D)	Included in Option 1.8
	4.1	New Nuclear Capacity and Licensing	
	4.2	Nuclear Plant Relicensing	
	4.3	Nuclear Plant Upgrading	
ES-6	5.1	Efficiency Improvements and Repowering Existing Plants	
	5.2	Transmission System Upgrading	Medium priority. TWG members have strong interest in options 5.2, 5.3, and 5.5 but unclear on next steps and didn't feel these were as high priority as other options.
	5.3	Reduce Transmission and Distribution Line Loss	See 5.2
ES-7	5.4	Demand-side Management	High Priority but felt that RCI TWG could take lead for analysis with ES TWG providing review.

	5.5	Portfolio Standard: Linking Transmission Siting with Renewable Energy Delivery (or Portfolio Standard)	See 5.2 above
ES-8	6.1	CO2 Tax	TWG members have strong interest in both 6.1 and 6.2, decided to keep both as high priority for now but will collaborate with RCI TWG on analysis
ES-9	6.2	GHG Cap and Trade	See 6.1
ES-10	6.3	Generation Performance Standards or GHG Mitigation requirements for new (and/or existing) power plants with/without GHG offsets	
	6.6	Voluntary Utility CO2 Targets	
	7.1	Brownfield Re-development	
	7.2	Environmental (emissions) Disclosure	ES TWG members recommend that CCI TWG should consider this option
	7.3	Public Education	ES TWG members recommend that CCI TWG should consider this option
ES-11	8.1	Methane and CO2 Reduction in Oil & Gas Operations, including fuel use and venting/flaring	Includes options 8.1, 8.2, and 8.3 from 10/26 catalog of options
ES-12	8.2	GHG reduction in Refinery Operations, including future coal-to-liquids operations	New option added to address emissions from refineries
ES-13	8.3	CO₂ Capture and Storage or Reuse (CCSR) in O&G operations, including refineries and future coal-to-liquids operations	CCSR at refineries (including potential coal to liquid fuel production) included in this option
	8.4	Methane and fuel use reduction in coal operations	This was option 8.5 in 10/26 catalog Medium priority due to lower potential emission reductions.

7. GHG Mitigation Option template and next steps

The CCS team reviewed the template for description of Mitigation Options and discussed next steps as listed below.

8. Call to the public and Announcements

There was no public input to this meeting, and were no additional announcements

Next steps and agreements:

1. CCS will circulate the above list to solicit TWG volunteers to work with CCS in developing Option Description and Designs (see Option Design Template and Sample Straw Proposals on website).
2. At the next CCAC meeting, scheduled to be on December 14, 2006, the above list of priority options will be reviewed. Subsequent to the meeting, CCS will be in touch with TWG volunteers with a plan to proceed in drafting the option descriptions. This may occur via email exchange and/or in small group calls. CCS will provide TWG volunteers

with information as available on how similar options have been pursued in other states and regions.

3. TWG volunteers and the CCS team will develop draft descriptions of the priority options approved by the CCAC. The goal is to have draft descriptions available by early/mid January.
4. The next Teleconference Meeting of the Energy Supply Technical Working group will be scheduled approximately one week after this description “due date”, most likely during the week of January 22-26. The main agenda items for TWG meeting #4 will be the review and revision, as necessary, of the draft descriptions and review of the updates to the inventory and projections.