



**MINNESOTA**  
Climate Change  
Advisory Group



# Minnesota Climate Change Advisory Group

Meeting #4

September 27, 2007

Minnesota Department of Commerce  
Minnesota Pollution Control Agency  
The Center for Climate Strategies

# Welcome and Introductions

- State of Minnesota
- Minnesota Climate Change Advisory Group (MCCAG)
- Members of the Public
- Center for Climate Strategies

# Agenda

9:00 am	Introductions and Review of Day's Agenda
9:10	Approval of Draft Summary of MCCAG Meeting #3
9:15	Review of MCCAG Progress and Next Steps
9:20	Public Comment
9:30	Review and Approval of Straw Policy Design Proposals for Draft Policy Options: Overview
9:45	<ul style="list-style-type: none"><li>• Agriculture, Forestry and Waste</li></ul>
10:35	<ul style="list-style-type: none"><li>• Transportation and Land Use</li></ul>
11:25	<ul style="list-style-type: none"><li>• Residential, Commercial and Industrial</li></ul>
12:10	Lunch Break
12:45 pm	<ul style="list-style-type: none"><li>• Residential, Commercial and Industrial, Continued</li></ul>
1:35	<ul style="list-style-type: none"><li>• Energy Supply</li></ul>
2:25	<ul style="list-style-type: none"><li>• Cross Cutting Issues, Including Cap and Trade</li></ul>
3:30	Review and Discussion Of Minnesota's Draft GHG Inventory and Forecast
3:45	Next Steps for MCCAG and Technical Work Groups (TWGs)
3:50	Agenda, Time and Date for Next Meeting(s)
3:55	Public Input and Announcements
4:00	Adjourn

# Stepwise Planning Process

1. Develop inventory and forecast of statewide GHG emissions
2. Identify a full range of possible actions
3. Identify initial priorities for analysis
4. Develop straw proposals for draft priorities for analysis
5. Quantify GHG reductions and costs/savings
6. Evaluate externalities, feasibility issues as needed
7. Develop alternatives to address barriers as needed and iterate to final agreements on policy recommendations
8. Finalize the statewide inventory and forecast of emissions
9. Aggregate results
10. Finalize and report recommendations

# Public Comment

# Review and Approval of Draft Priorities for Analysis

- 300+ possible actions developed by TWGs and MCCAG
- 55 initial draft priorities for analysis recommended by TWGs
- MCCAG approved 55 options as priorities for analysis
- TWGs formulate straw proposals for policy design, quantification

# AFW

- Agricultural Crop Management
- Land Use Management Approaches for Protection and Enrichment of Soil Carbon
- In-State Liquid Biofuels Production
- Expanded Use of Biomass Feedstocks for Electricity, Heat, or Steam Production
- Forestry Management Programs to Enhance GHG Benefits
- Forest Protection – Reduced Clearing and Conversion to Nonforest Cover
- Integrated Waste Management
- End of Use Waste Management Practices

# TLU

- Improved Planning and Development Strategies
- Improved Infrastructure
- Biofuels (Potential overlap with ES-2 and AFW-7)
- Infrastructure Management
- Climate-Friendly Transportation Fees
- Adopt CA Clean Car Standards
- “Fix-it-First” (Repair before new infrastructure)
- Update Road Standards
- Commuter Choice/Parking Cash Out/required employer TDM plans
- Congestion Pricing (or tolls) (w/ targeted use of revenue towards travel alternatives)
- Truck Stop Electrification
- Mobile Source Emissions Reduction
- Reduced Speed Limits

# RCI

- Maximize Savings from Utility Conservation Improvement Program (CIP)
- Improved Uniform Statewide Building Codes
- Green Building Guidelines and Standards Based on Architecture 2030
- Incentives & Resources to Promote Combined Heat and Power (CHP)
- Program to reduce emissions of non-fuel, high-global-warming-potential GHGs
- Non-utility Strategies and Incentives to Encourage Energy Efficiency and Reduce GHG Emissions
- Conservation Improvement-Type Program for Propane and Fuel Oil Efficiency
- Energy Performance Disclosure
- Promote Technology-Specific Applications to Reduce GHG Emissions
- Support Strong Federal Appliance Standards and Require High State Standards in the Absence of Federal Standards

# Break



# ES

- Generation Performance Standards or Mitigation Requirements
- Improve the GHG Profile of Biofuels and Fossil Fuels (e.g., Low Carbon Fuel Standard, Biofuel Production)
- Efficiency Improvements, Repowering and other Upgrades to Existing Plants
- Transmission System Upgrading, incl. reducing transmission and distribution line loss
- Renewable and/or Environmental Portfolio Standard
- Nuclear Power Support and Incentives
- Incentives for Advanced Fossil Fuel Generation and Carbon Capture and Storage (CCS), Including Combined Hydrogen and Electricity Production with Carbon Sequestration
- Carbon Capture and Storage and/or Reuse Policies
- Large-scale, supply-oriented Combined Heat and Power (CHP) & Geothermal Incentives and/or Barrier Removal
- Voluntary GHG targets
- Carbon (GHG) tax
- Distributed Renewable Energy Incentives and/or Barrier Removal
- Technology-based approaches, including research & development, fuel cells, energy storage, distributed renewable energy technologies, etc.
- GHG Cap-and-Trade (Tracks 1, 2, and 3 - Sensitivity Analyses)

# CC

- GHG Inventories, Forecasting, Reporting, and Registry
- Statewide GHG Reduction Goals and Targets
- State and Local Government GHG Emissions (Lead-by-Example)
- Public Education and Outreach
- Tax and Cap Policies
- Adaptation and Vulnerability
- Participate in Regional and Multi-State GHG Reduction Efforts
- Encourage the Creation of a Business-Oriented Organization to Share Information and Strategies, Recognize Successes, and Support Aggressive GHG Reduction Goals
- Dedicate Greater Public Investment to Climate Data and Analysis
- Facilitate the Development of an Effective Carbon Credit System for MN
- Create a Market Advisory Group

# Cap and Trade TWG

- New TWG
  - Identify interested TWG members
  - Identify key information/education needs
  - Identify key design elements, scenarios, integration needs
  - Identify key quantification inputs
    - Geographic coverage, sectors/sources, caps/targets, supply curves, emissions baselines, accounting systems (production v. consumption), timing, other assumptions
  - Formulate recommendations for CCAG consideration, potentially including future process and or policy design

# Break



# MN Inventory & Forecast Update

- Approach
  - Extend forecast to 2025 (BAU baseline)
  - Estimate requirements of New Generation Energy Act relative to BAU (Wedges)
    - Energy efficiency and conservation requirements
    - Renewable energy standards
- Quantification of Priority Policy Options
  - Analyze incremental to Wedges

# Next Steps

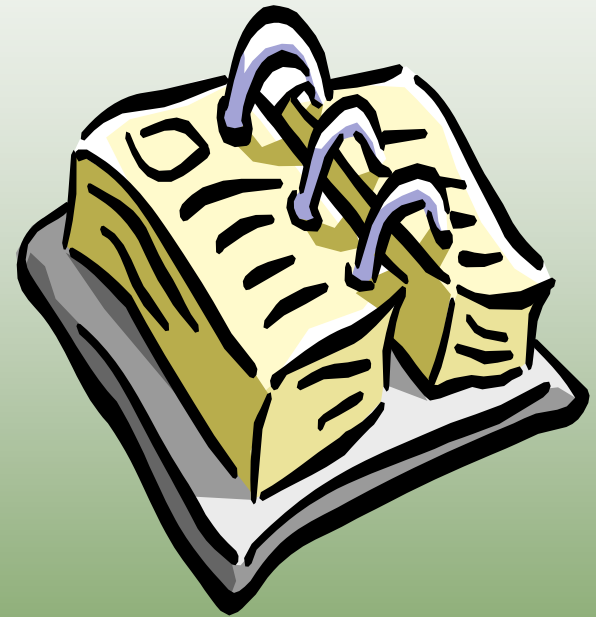
- TWGs
  - Refine straw proposals for priority policy options based on MCCAG input
  - Develop initial GHG reduction estimates and costs/savings for priority policy options, as well as other elements of the policy template
  - Review and continue updates to the draft inventory and forecast
- MCCAG
  - Review and approve initial TWG quantification of GHG reductions and costs/savings of priority policy options
  - Review and approve proposed revisions to the inventory and forecast with modifications if/as needed

# Policy Option Template

- Policy Description
- Policy Design (Goals, Timing, Coverage)
- Implementation Mechanisms
- Related Policies/Programs in Place (BAU)
- Type(s) of GHG Reductions
- Estimated GHG Reductions and Net Costs or Cost Savings
- Key Uncertainties
- Additional (non-GHG) Benefits and Costs, as Needed
- Feasibility Issues, if Needed
- Status Of Group Approval
- Level of Group Support
- Barriers to Consensus, if any

# Next MCCAG Meeting

- Date: November 8, 2007
- Agenda:
  - Begin review and approval of final CCAG recommended policy options; identify barriers to consensus for not yet approved options
  - Review TWG suggested updates to the Minnesota emissions inventory and projection



# Public Input, Announcements