Cross-Cutting Issues
Technical Working Group of the
Alaska Climate Change Mitigation
Advisory Group

Meeting #1: June 17, 2008, Noon-2:00 PM

Governor’s Climate Change Sub-Cabinet
Center for Climate Strategies
Call Agenda

• Welcome and Introductions
• Purpose and goals
• Part 1: AK Climate Change Mitigation Advisory Group and Technical Working Group Process
• Part 2: Review Alaska Greenhouse Gas Emissions Inventory and Forecast
• Part 3: Review and Discuss Catalog of State Actions
• Next steps for CC TWG
• Public Input and Announcements
Welcome and Introductions

- Alaska Climate Change Mitigation Advisory Group members
- Cross-Cutting (CC) Issues Technical Working Group (TWG) members
- Center for Climate Strategies TWG Facilitation Team
- Members of the Public
• **Purpose**
  – Achieve Administrative Order #238
• **Goals**
  – Review and approve current and comprehensive inventory and forecast of greenhouse gas (GHG) emissions in Alaska from 1990 to 2020;
  – Develop and recommend a comprehensive set of specific policy recommendations and associated analyses to reduce GHG emissions and enhance energy and economic policy in Alaska by 2020 and beyond;
  – Develop and recommend a set of recommended statewide GHG reduction goals and targets for implementation of these actions; and
  – Issue recommendations in the form of a final report to the Climate Change Subcommittee convened by the Governor.
Part 1:
Structure, Roles, and Processes
A Climate Change Sub-Cabinet (CCSC) was convened by Governor Palin to provide advice to the Office of the Governor.

The CCSC oversees and coordinates the process of responding to Administrative Order No. 238.

The CCSC established a Mitigation Advisory Group (MAG) and an Adaptation Advisory Group (AAG).

The AGs make recommendations on policy options and activities for mitigation and adaptation to the CCSC.

The AGs provide guidance to and receive input from the Technical Working Groups (TWG).
MAG Members

- **Scott Anaya**, AK Building Science Network
- **Bob Batch**, BP
- **Steve Colt**, UAA
- **Jeff Cook**, Flint Hills Resources
- **Brian Davies**, Nature Conservancy
- **Steve Denton**, Usibelli Coal Mine
- **Karen Ellis**, FedEx
- **Byron Mallott**, FAI (former AK Perm Fund and First Alaskan Institute)
- **Greg Peters**, Ayeska Seafoods
- **Chris Rose**, Renewable Energy Alaska Project
- **John Rubini**, JL Properties
- **Sean Skaling**, Green Star
- **Jamie Spell**, 3nd Wing Elmendorf AFB
- **Stan Stephens**, Stan Stephens Charters
- **Curt Stoner**, Totem Ocean
- **Kate Troll**, Alaska Conservation Alliance
- **Kathy Wasserman**, Alaska Municipal League
- **Randy Virgin**, Municipality of Anchorage
- **Dan White**, UAF
- **Joe Everhart**, Wells Fargo
- **Rick Harris**, Sealaska
- **Jack Hébert**, Cold Climate Research Center and Hébert Homes
- **David Hite**, Hite Consulting
- **Kate Lamal**, Golden Valley Electric
- **Meera Kohler**, Alaska Village Electric Coop
- **Paul Klitzke**, St. David’s Episcopal Church and Interfaith Light & Power
Technical Work Groups for Mitigation Advisory Group

Governor's Sub-Cabinet on Climate Change

- Governor Palin
- Immediate Action Work Group
- Adaptation Advisory Group
- Research Needs Work Group

Climate Change Mitigation Advisory Group

- Oil & Gas Technical Work Group
  - Appointed Members
  - Interested Parties
  - Technical Experts
  - Public

- Energy Supply & Demand Technical Work Group
  - Appointed Members
  - Interested Parties
  - Technical Experts
  - Public

- Transportation & Land Use Technical Work Group
  - Appointed Members
  - Interested Parties
  - Technical Experts
  - Public

- Forestry, Agriculture, & Waste Technical Work Group
  - Appointed Members
  - Interested Parties
  - Technical Experts
  - Public

- Cross-Cutting Issues Technical Work Group
  - Appointed Members
  - Interested Parties
  - Technical Experts
  - Public
MAG and TWGs

• Mitigation Advisory Group (MAG)
  – Review existing and planned state actions
  – Identify 30-40 potential options for design and priorities for analysis
  – Recommend actions to achieve the Administrative Order goals

• Technical Working Groups (TWG)
  – Analysis, review and early ranking of options
  – Develop initial straw proposals for design
  – Input to and review of MAG recommendations and reports
  – Review state GHG inventory and forecast

• TWG process is fully integrated with the MAG
  – TWGs serve in an advisory role to MAG
  – MAG members serve on the Technical Working Groups
MAG TWG Focus Areas

• Oil and Gas
  – Exploration, production and refining / processing

• Energy Supply and Demand
  – Clean and renewable energy, combined heat & power, etc.
  – Energy efficiency and conservation, industrial processes, water supply and treatment, etc.

• Transportation & Land Use
  – Vehicle efficiency, alternative fuels and demand-reduction programs

• Forestry, Agriculture, and Waste Management
  – Forest management, forest restoration, land protection, bioenergy, wood products, waste reduction, recycling

• Cross-Cutting Issues
  – Government lead by example, public outreach, education
TWG Roles

• Assist CCMAG
  – Review and assist with the GHG inventory and forecast
  – Identify potential state actions
  – Identify potential priorities for analysis
  – Suggest straw policy designs
  – Assist with analysis and review of options
  – Assist with development of policy alternatives
  – Assist with input to and review of MAG reports
Timing

• MAG meetings – every two months approximately
  – Next meeting is July 15, 2008 (Fairbanks)
  – September 22, 2008 (details coming)

• TWG calls
  – Regularly scheduled
  – Two 2 hour calls between MAG meetings

• Final Product of MAG
  – Report to Climate Change Sub-Cabinet in April 2009
Final Report from MAG to CCSC

- Executive Summary
- Background, Purpose & Goals
- Emissions Inventory & Forecast
- Impacts Analysis
- Climate Change Mitigation Recommendations
- Appendices
Stepwise Planning Process For Mitigation

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

- Comprehensive
- Stepwise
- Fact based
- Transparent
- Inclusive
- Collaborative
- Consensus driven
Ground Rules

• Supportive of the process
• Attendance at meetings
• Equal footing
• Stay current with information
• No backsliding
• Do not represent the MAG or TWGs
• Make objective contributions
Part 2:
Review Alaska Draft Greenhouse Gas Emissions Inventory and Forecast
Inventory Approach

- Standard US EPA and UN methodologies, guidelines, and tools
- Emphasis on transparency, consistency, and significance
- Preference for Alaska data, where available
- Consumption and production-basis emissions from electricity generation
  - Very simplified approach used for initial analysis
Projection Approach

• Reference case assumes no major changes from business-as-usual (BAU)
  – Includes approved policies and actions to the extent possible

• Growth assumptions from existing sources
  – State population and employment forecasts
  – US Census and Bureau of Labor & Statistics
  – US Energy Information Administration
Coverage

• Six gases per USEPA and UNFCCC guidelines
  – Carbon Dioxide (CO2), Methane (CH4), Nitrous Oxide (N2O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur Hexafluoride (SF6)

• All major emitting sectors
  – Electricity Supply & Demand (Consumption Based)
  – Residential, Commercial, Industrial (RCI) Fuel Use
  – Industrial Non-Fuel Use Processes
  – Transportation (onroad and nonroad)
  – Natural gas pipeline transmission & distribution
  – Agriculture, Forestry, and Waste

• Emissions expressed as CO2 equivalent
  – 100-year global warming potentials
    • CO2 = 1; CH4 = 21; N2O = 310; HFC-23 = 11,700; SF6 = 23,900
Key Points

- Preliminary draft for MAG and TWG review and revision, as needed
- Helpful for diagnosis of GHG emissions, but not a baseline for modeling or compliance for individual options
- Consumption and Production methods
- Net and Gross methods
Per Capita and GSP/GDP Gross GHG Emissions, 1990-2005
Alaska Gross GHG Emissions By Sector, 1990-2020
Alaska Gross Emissions Growth (MMtCO2e Basis)
Part 3: Catalog of State Actions and Potential Cross-Cutting GHG Mitigation Options
Catalog of Mitigation Actions

- Center for Climate Strategies has Complied Over 300 actions taken by US states
- Existing, planned and proposed state level actions
- Wide variety of US states
- All sectors
- Wide variety of implementation mechanisms
- Includes key Alaska actions
- MAG and TWG’s will add new potential actions
- Starting place for identification of MAG priorities
Mitigation Decision Criteria

- GHG Reduction Potential (MMtCO2e)
- Cost or Cost Saved Per Ton GHG Removed
- Co-benefits
- Feasibility Issues
### Screening of Potential Actions - Agriculture Sample

<table>
<thead>
<tr>
<th>Option No.</th>
<th>Climate Mitigation Option</th>
<th>Priority for Analysis</th>
<th>Potential GHG Emissions Reduction</th>
<th>Potential Cost or Cost Savings</th>
<th>Additional Impacts, Feasibility Considerations</th>
<th>Notes</th>
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<tbody>
<tr>
<td>AFW-1</td>
<td>AGRICULTURE – PRODUCTION OF FUELS AND ELECTRICITY</td>
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<td>1.1</td>
<td>Manure Digesters/Other Waste Energy Utilization**</td>
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<td>1.2</td>
<td>Biodiesel Production (incentives for feedstocks and production plants)</td>
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<td>1.3</td>
<td>Biomass Feedstocks for Electricity or Steam Production**</td>
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<td>1.4</td>
<td>Ethanol Production</td>
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<td><strong>Policy Template</strong></td>
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<td>- Timing:</td>
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<td>- Coverage of Parties:</td>
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<th><strong>Implementation Methods:</strong></th>
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<th><strong>Related Policies/Programs in Place:</strong></th>
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<th><strong>Estimated GHG Savings and Costs per tCO2e:</strong></th>
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<td>- Data Sources:</td>
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<td>- Quantification Methods:</td>
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<td>- Key Assumptions:</td>
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<th><strong>Key Uncertainties:</strong></th>
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<th><strong>Additional Benefits and Costs:</strong></th>
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<th><strong>Feasibility Issues:</strong></th>
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<th><strong>Barriers to Consensus:</strong></th>
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Cross-Cutting Issues TWG Catalog of Actions

- Please see separate Catalog handout.
Questions?
Public Input
Cross-Cutting TWG Next Steps

- Between now and next call
  - Review Alaska GHG inventory and forecast, and suggest revisions, as needed
  - Identify “priorities for analysis” from Catalog of Actions
    - Add existing and new options as needed
    - Rank and screen options
- Suggest initial “priorities for analysis” to the MAG on July 15th
Next CC TWG Call

Proposed date/time for Call #2:
Tuesday, July 1, 11:00 a.m.–1:00 p.m.