



## **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

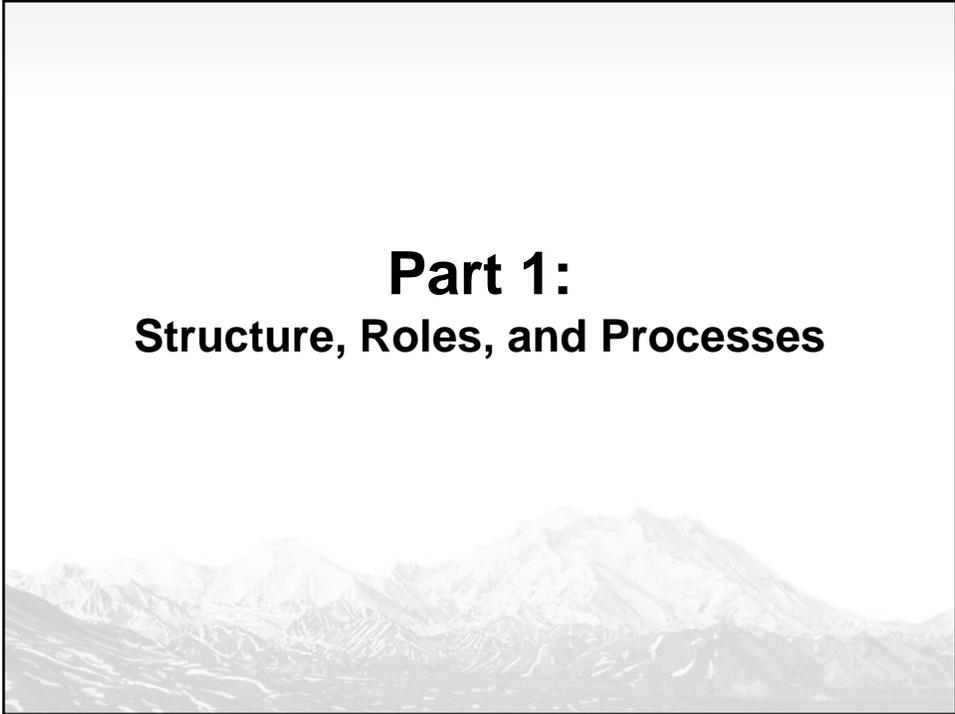
- Alaska Climate Change Mitigation Advisory Group members
- Cross-Cutting (CC) Issues Technical Working Group (TWG) members
- Center for Climate Strategies TWG Facilitation Team
- Members of the Public

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## Purpose & Goals

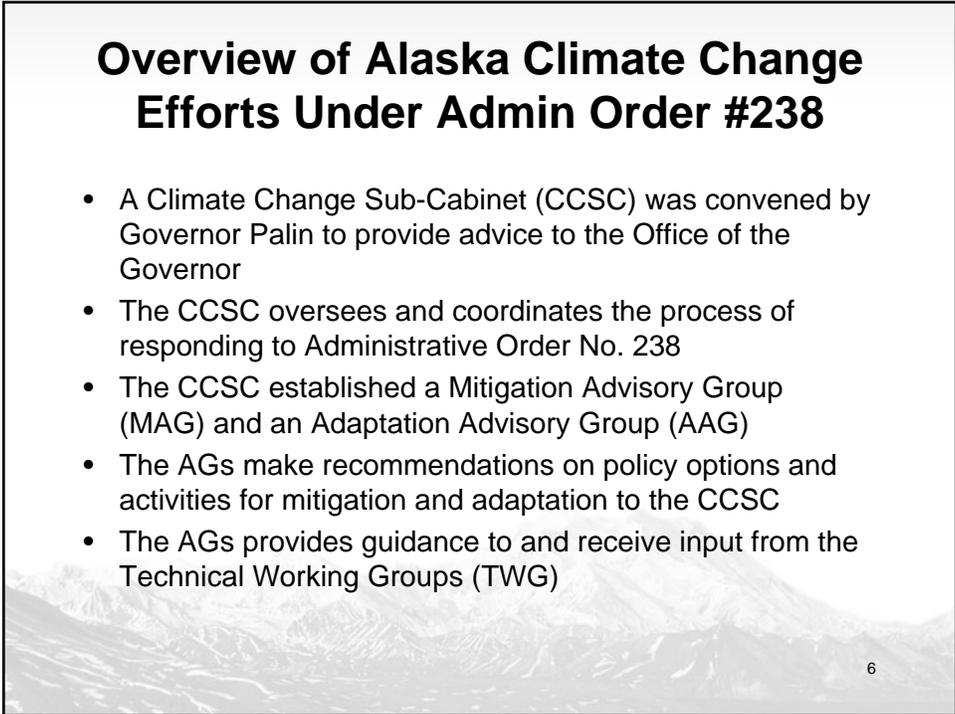
- Purpose
  - Achieve Administrative Order #238
- Goals
  - Review and approve current and comprehensive inventory and forecast of greenhouse gas (GHG) emissions in Alaska from 1990 to 2020;
  - Develop and recommend a comprehensive set of specific policy recommendations and associated analyses to reduce 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.

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# **Part 1:**

## **Structure, Roles, and Processes**



### **Overview of Alaska Climate Change Efforts Under Admin Order #238**

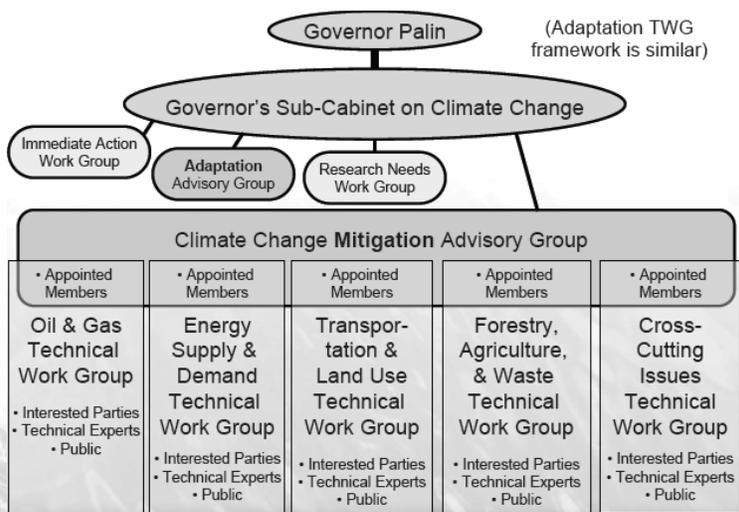
- A Climate Change Sub-Cabinet (CCSC) was convened by Governor Palin to provide advice to the Office of the Governor
- The CCSC oversees and coordinates the process of responding to Administrative Order No. 238
- The CCSC established a Mitigation Advisory Group (MAG) and an Adaptation Advisory Group (AAG)
- The AGs make recommendations on policy options and activities for mitigation and adaptation to the CCSC
- The AGs provides 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
- **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
- **Byron Mallott**, FAI (former AK Perm Fund and First Alaskan Institute)
- **Greg Peters**, Alyeska Seafoods
- **Chris Rose**, Renewable Energy Alaska Project
- **John Rubini**, JL Properties
- **Sean Skaling**, Green Star
- **Jamie Spell**, 3rd 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

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## Technical Work Groups for Mitigation Advisory Group



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## 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

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## 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

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## 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

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## 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

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## **Final Report from MAG to CCSC**

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

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## **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

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## Key Components of the Process

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

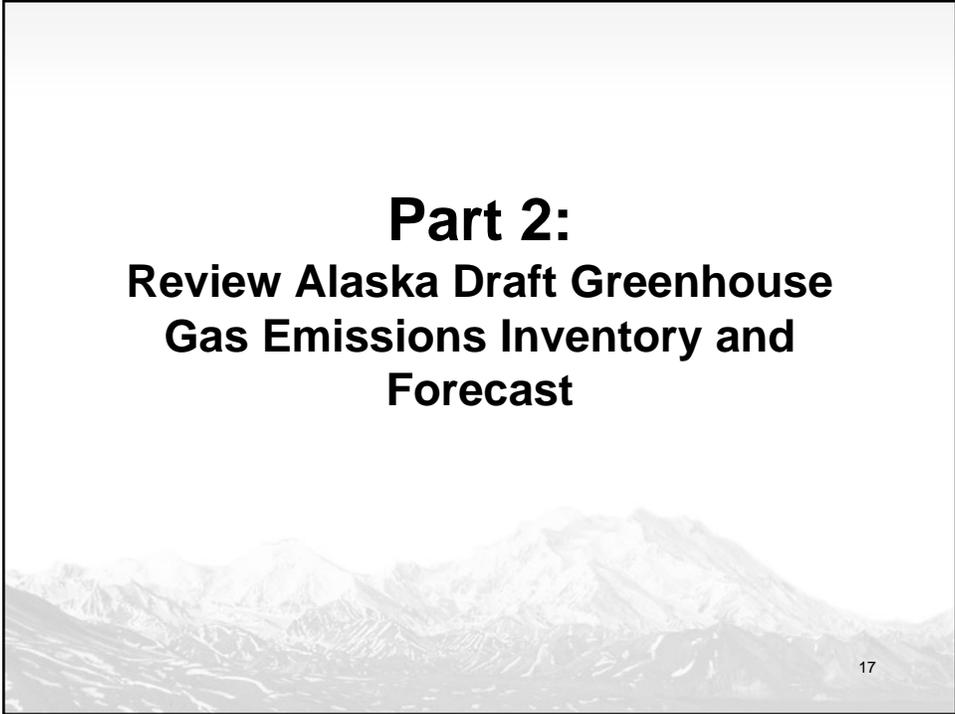


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## Ground Rules

- 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

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## **Part 2:**

### **Review Alaska Draft Greenhouse Gas Emissions Inventory and Forecast**

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### **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

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## 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

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## Coverage

- Six gases per USEPA and UNFCCC guidelines
  - Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur Hexafluoride (SF<sub>6</sub>)
- 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 CO<sub>2</sub> equivalent
  - 100-year global warming potentials
    - CO<sub>2</sub> = 1; CH<sub>4</sub> = 21; N<sub>2</sub>O = 310; HFC-23 = 11,700; SF<sub>6</sub> = 23,900

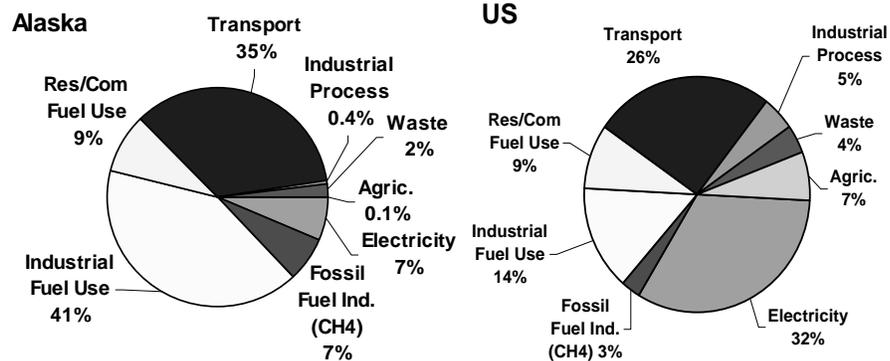
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## Key Points

- 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

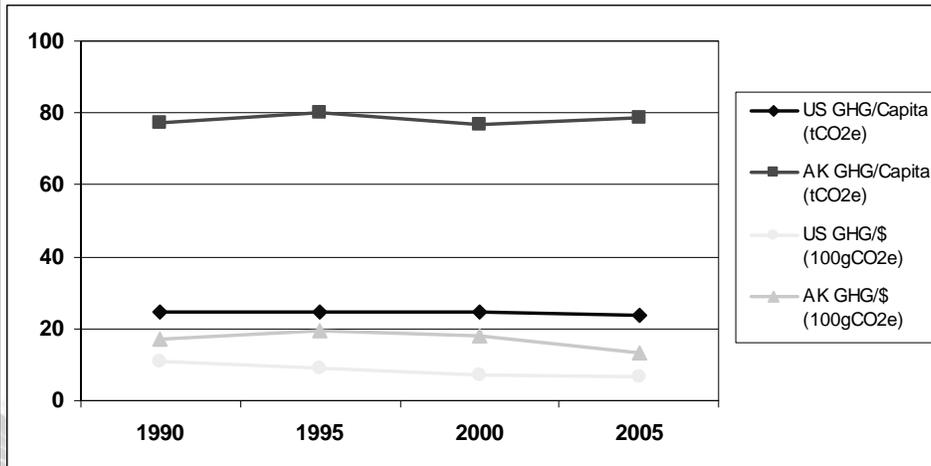
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## Alaska & US Gross Emissions by Sector, 2000



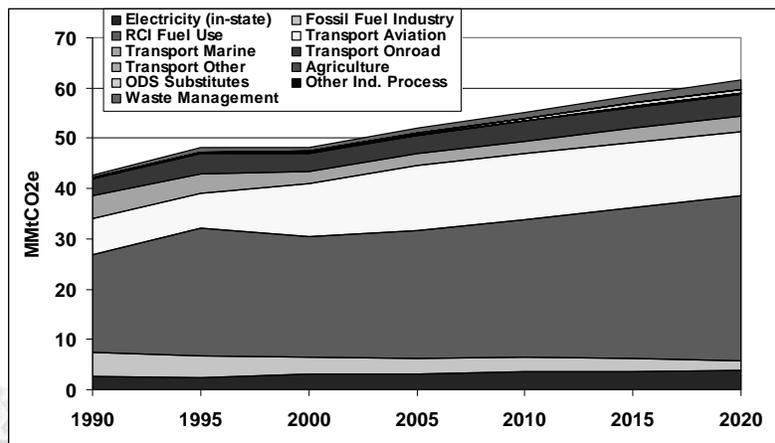
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## Per Capita and GSP/GDP Gross GHG Emissions, 1990-2005



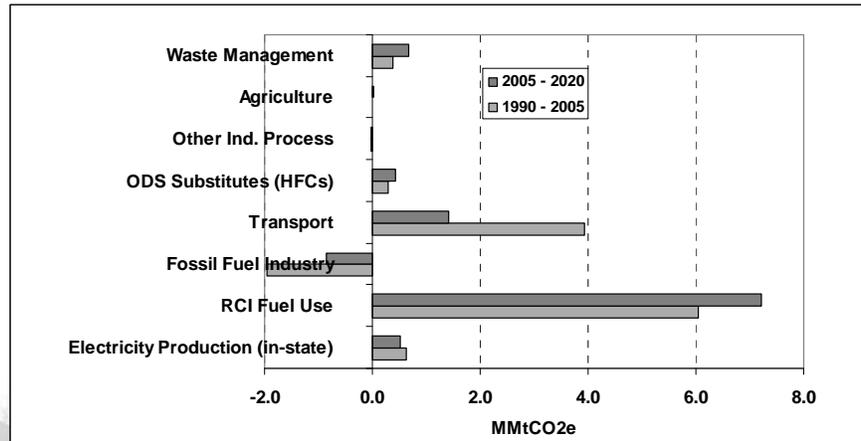
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## Alaska Gross GHG Emissions By Sector, 1990-2020



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## Alaska Gross Emissions Growth (MMtCO<sub>2</sub>e Basis)



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## Part 3: Catalog of State Actions and Potential Cross-Cutting GHG Mitigation Options

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## Catalog of Mitigation Actions

- Center for Climate Strategies has Compiled 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

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## Mitigation Decision Criteria

- GHG Reduction Potential (MMtCO<sub>2</sub>e)
- Cost or Cost Saved Per Ton GHG Removed
- Co-benefits
- Feasibility Issues

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## Screening of Potential Actions - Agriculture Sample

Option No.	Climate Mitigation Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Additional Impacts, Feasibility Considerations	Notes
<b>AFW-1</b>	<b>AGRICULTURE – PRODUCTION OF FUELS AND ELECTRICITY</b>					
1.1	Manure Digesters/Other Waste Energy Utilization**					
1.2	Biodiesel Production (incentives for feedstocks and production plants)					
1.3	Biomass Feedstocks for Electricity or Steam Production**					
1.4	Ethanol Production					

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## Policy Template



**Policy Description:** \_\_\_\_\_

**Policy Design:** \_\_\_\_\_

- Goals:
- Timing:
- Coverage of Parties:

**Implementation Methods:** \_\_\_\_\_

**Related Policies/Programs in Place:** \_\_\_\_\_

**Estimated GHG Savings and Costs per tCO<sub>2</sub>e:** \_\_\_\_\_

- Data Sources:
- Quantification Methods:
- Key Assumptions:

**Key Uncertainties:** \_\_\_\_\_

**Additional Benefits and Costs:** \_\_\_\_\_

**Feasibility Issues:** \_\_\_\_\_

**Status of Group Approval:** \_\_\_\_\_

**Level of Group Support:** \_\_\_\_\_

**Barriers to Consensus:** \_\_\_\_\_

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## **Cross-Cutting Issues TWG Catalog of Actions**

- *Please see separate Catalog handout.*



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## **Questions?**



# Public Input

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## 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

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# **Next CC TWG Call**

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