



Alaska Climate Change Strategy

Photo: J. Hardesty

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 & 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.

Part 1:

Structure, Roles, and Processes



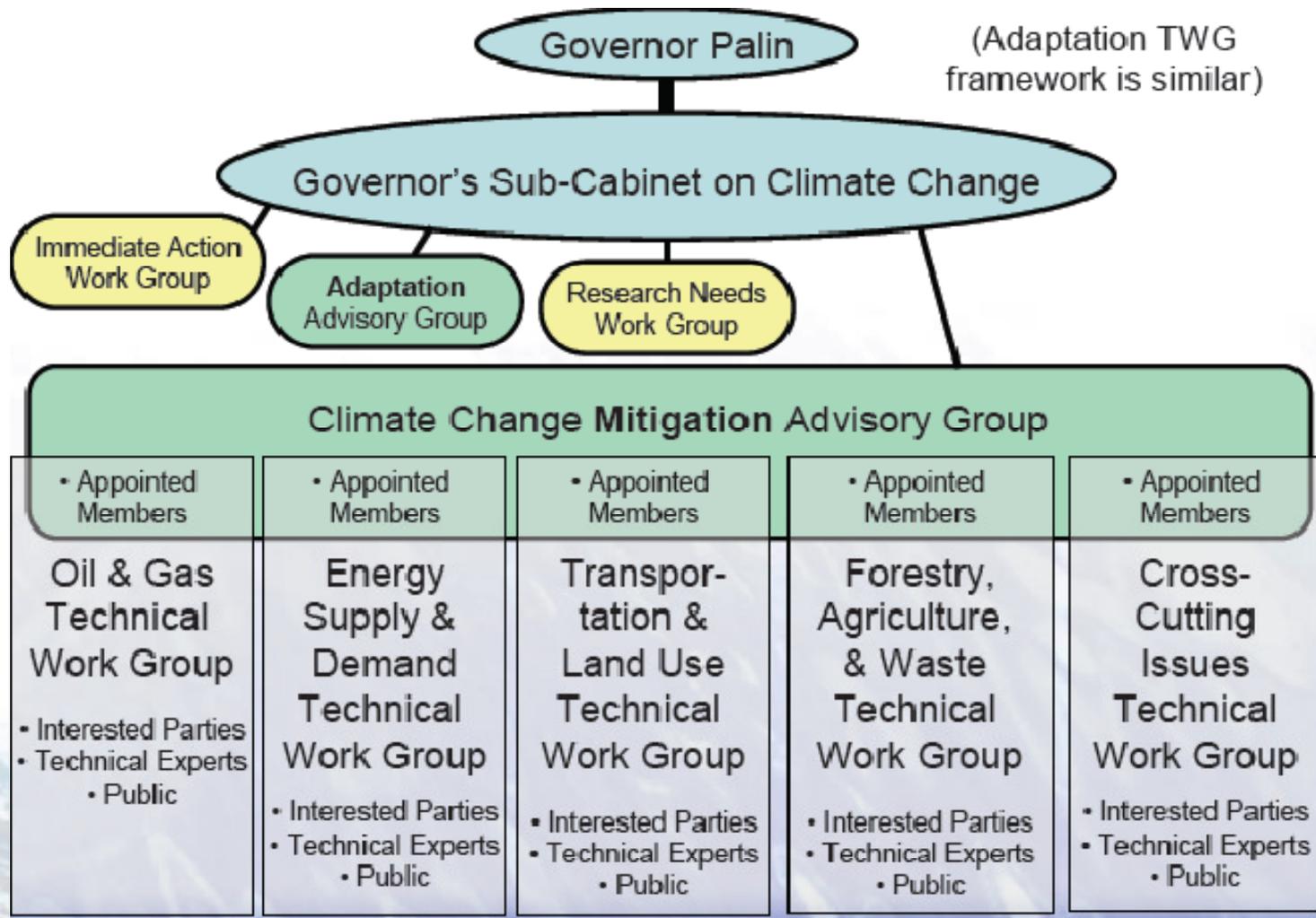
Overview of Alaska Climate Change Efforts Under Admin Order #238

- 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

Technical Work Groups for Mitigation Advisory Group



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

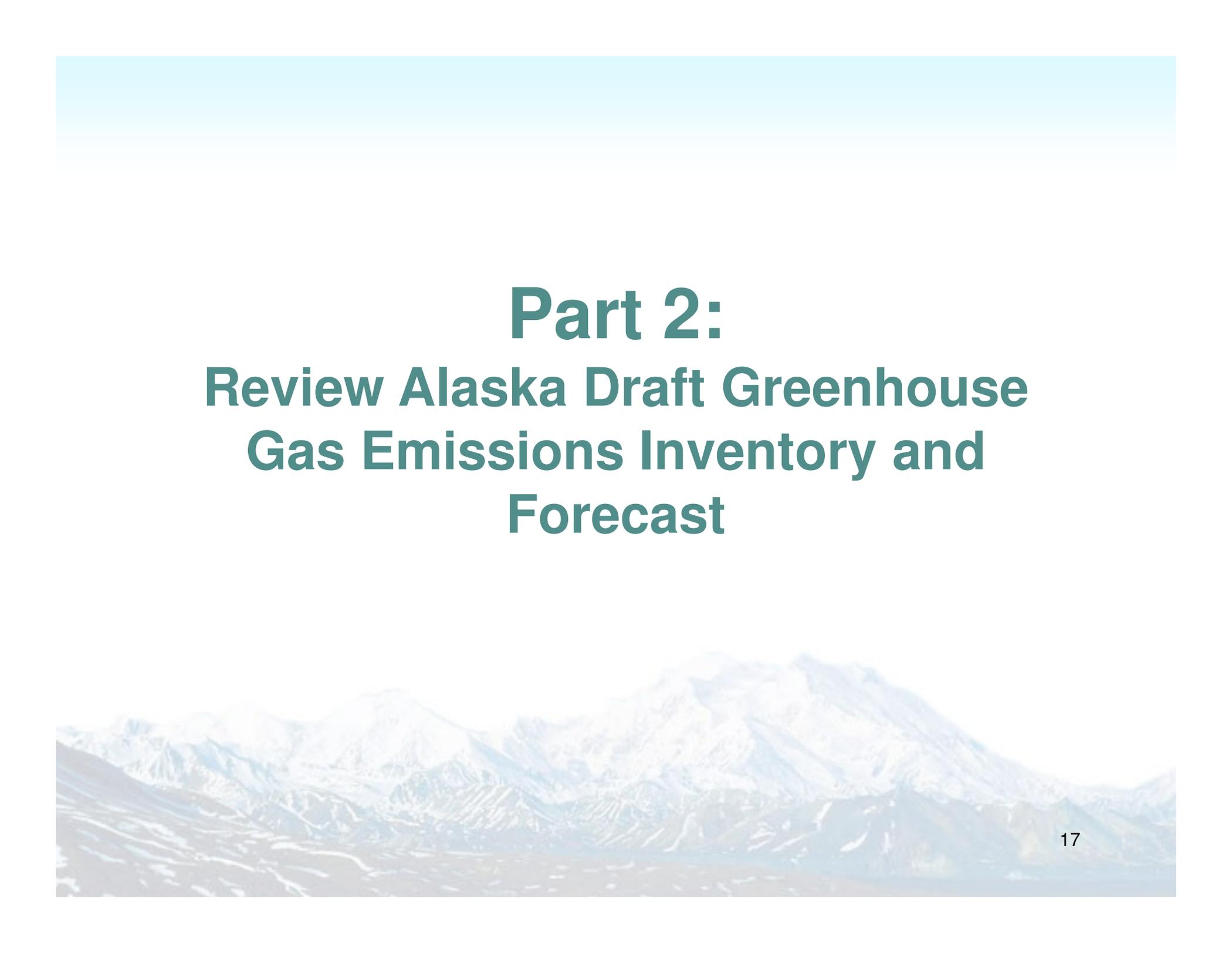
Key Components of the Process

- 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

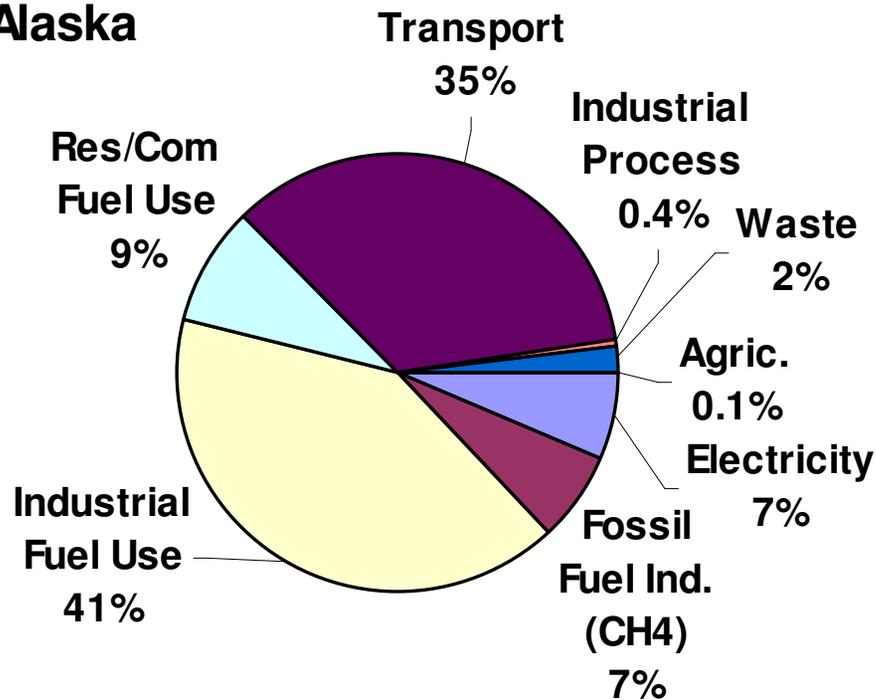
- Six gases per USEPA and UNFCCC guidelines
 - Carbon Dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur Hexafluoride (SF₆)
- All major emitting sectors
 - Electricity Supply & Demand (Consumption Based)
 - Residential, Commercial, Industrial (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

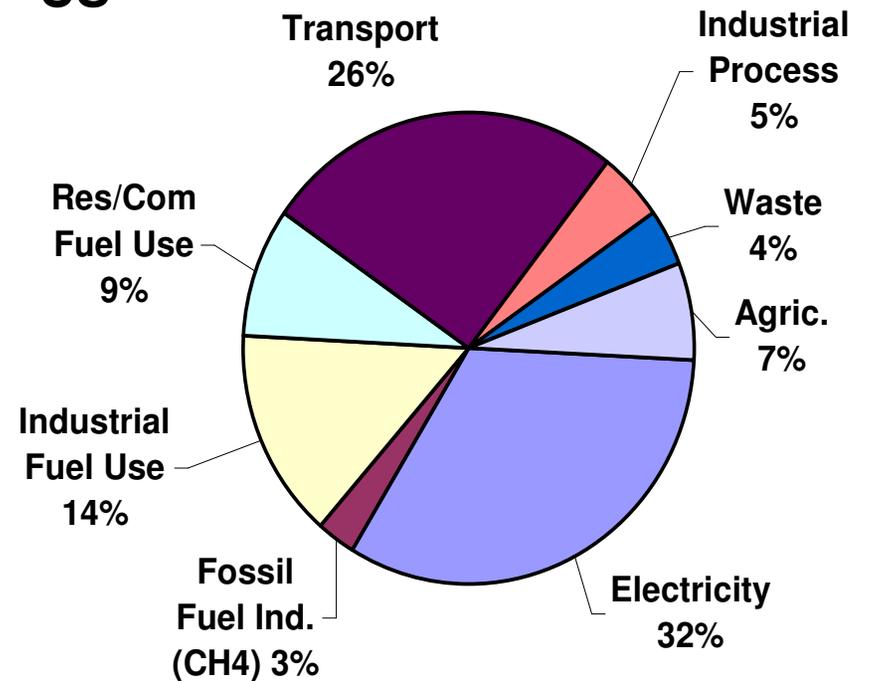
- Preliminary draft for MAG and TWG review and revision, as needed
- Helpful for diagnosis of GHG emissions, but not a baseline for modeling or compliance for individual options
- Consumption and Production methods
- Net and Gross methods

Alaska & US Gross Emissions by Sector, 2000

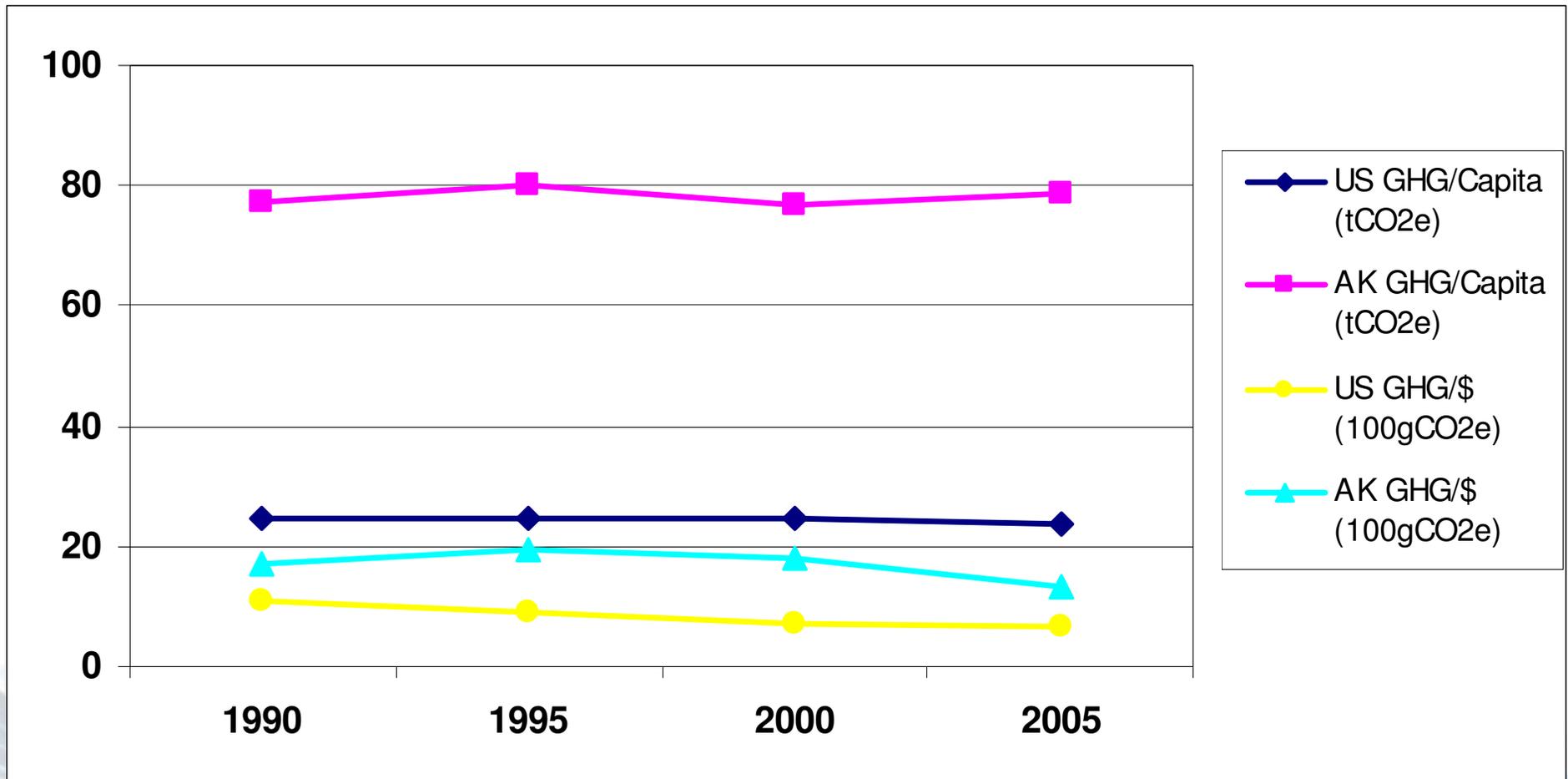
Alaska



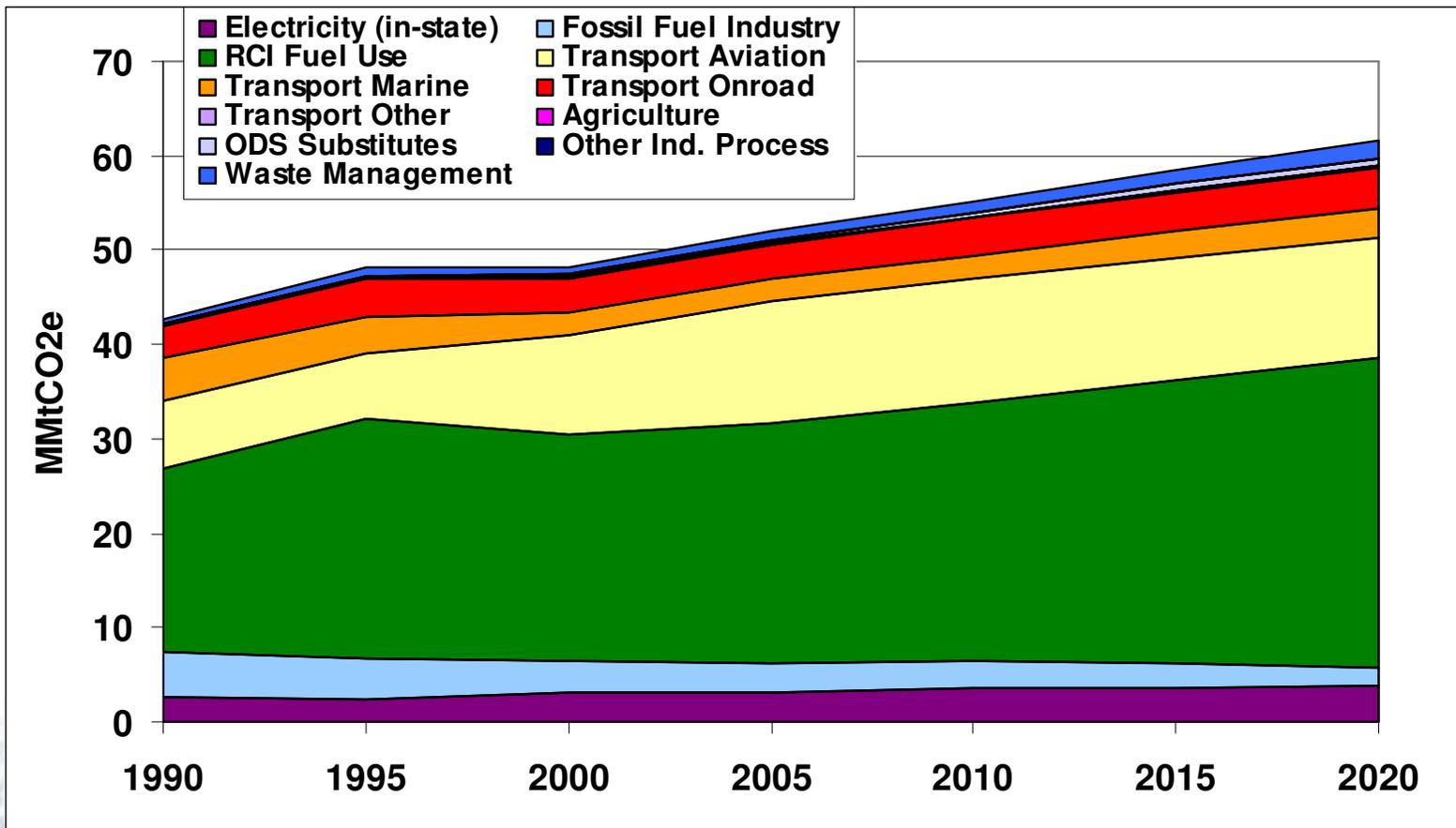
US



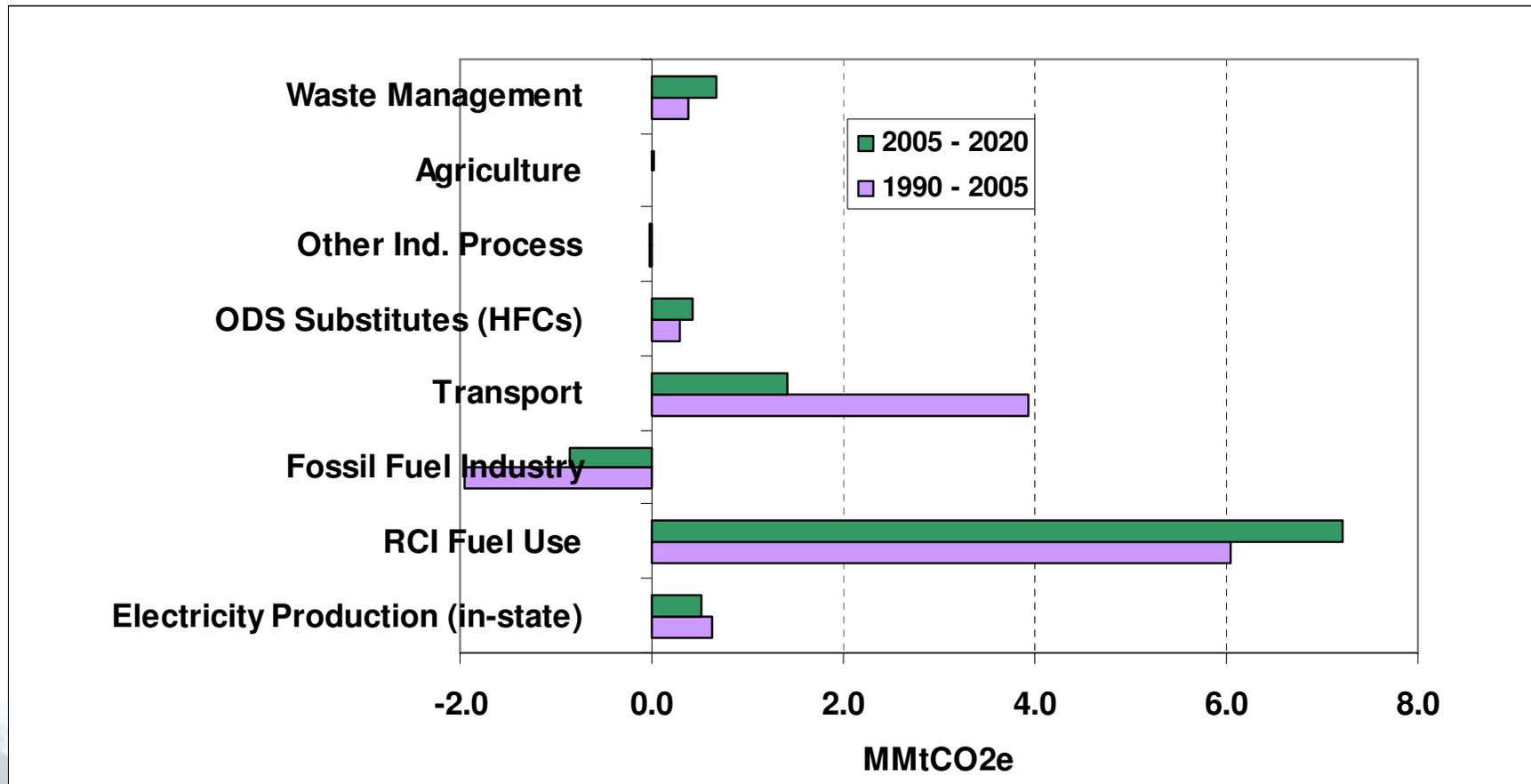
Per Capita and GSP/GDP Gross GHG Emissions, 1990-2005

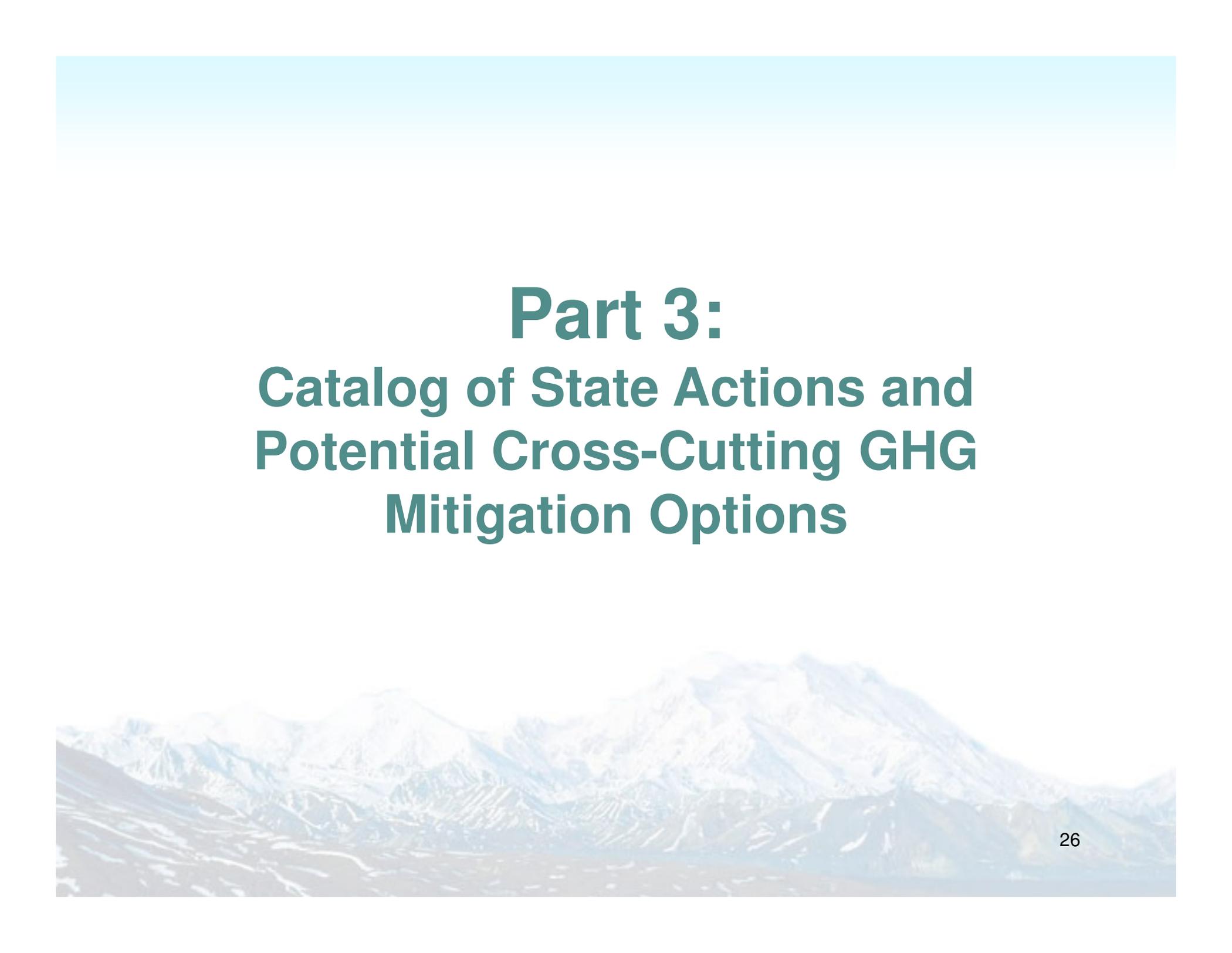


Alaska Gross GHG Emissions By Sector, 1990-2020



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 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

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

Option No.	Climate Mitigation Option	Priority for Analysis	Potential GHG Emissions Reduction	Potential Cost or Cost Savings	Additional Impacts, Feasibility Considerations	Notes
AFW-1	AGRICULTURE – PRODUCTION OF FUELS AND ELECTRICITY					
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					

Policy Template



Policy Description:

Policy Design:

- **Goals:**
- **Timing:**
- **Coverage of Parties:**

Implementation Methods:

Related Policies/Programs in Place:

Estimated GHG Savings and Costs per tCO₂e:

- **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:

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.