



# Energy Supply and Demand TWG Teleconference Meeting #2

July 1, 2008, 9:30 to 11:30 am

Governor's Climate Change Sub-Cabinet  
Center for Climate Strategies

# Today's Agenda

- Roll call
- Review and approval of TWG Call #1 summary
- Review and comments on the draft GHG emission inventory & forecast
- Discussion of process for identifying priority options for analysis
- Review and discussion of the Catalog of State Actions
- Public input and announcements
- Agenda, time and date for next meeting

# Draft GHG Emission Inventory & 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

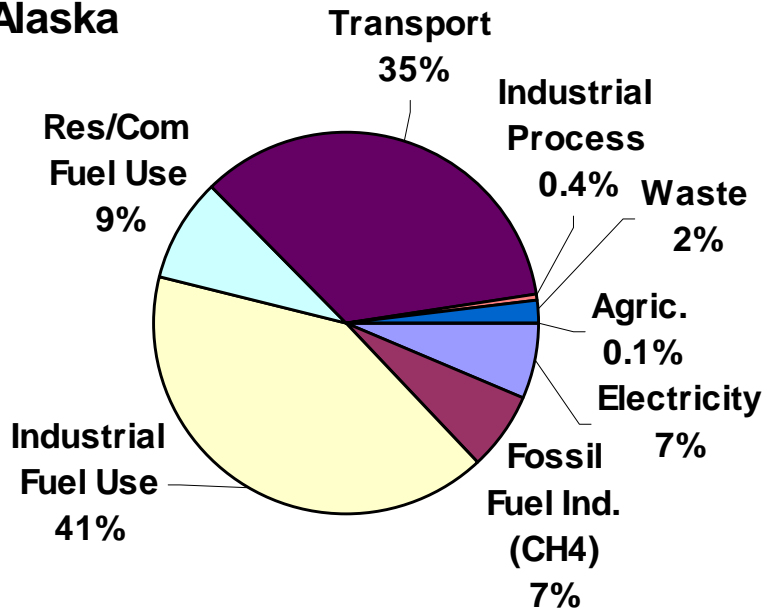
- Reference case assumes no major changes from business-as-usual (BAU)
  - Includes approved policies and actions to the extent possible
- Growth assumptions from existing sources
  - State population and employment forecasts
  - US Census and Bureau of Labor & Statistics
  - US Energy Information Administration

# Coverage

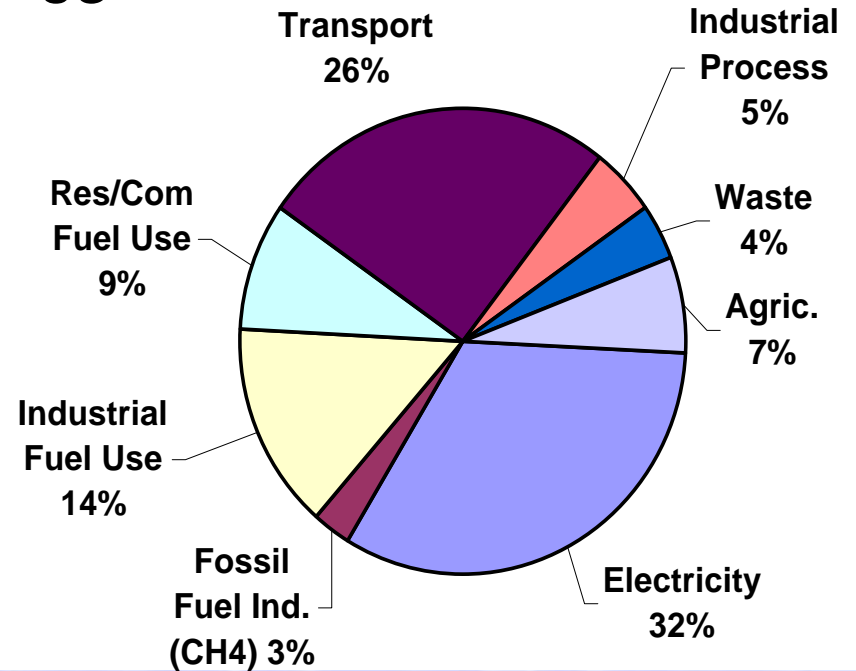
- Six gases per USEPA and UNFCCC guidelines
  - Carbon Dioxide (CO<sub>2</sub>), Methane (CH<sub>4</sub>), Nitrous Oxide (N<sub>2</sub>O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulfur Hexafluoride (SF<sub>6</sub>)
- All major emitting sectors
  - Electricity Supply & Demand (Consumption 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

# Alaska & US Gross Emissions by Sector, Year 2000

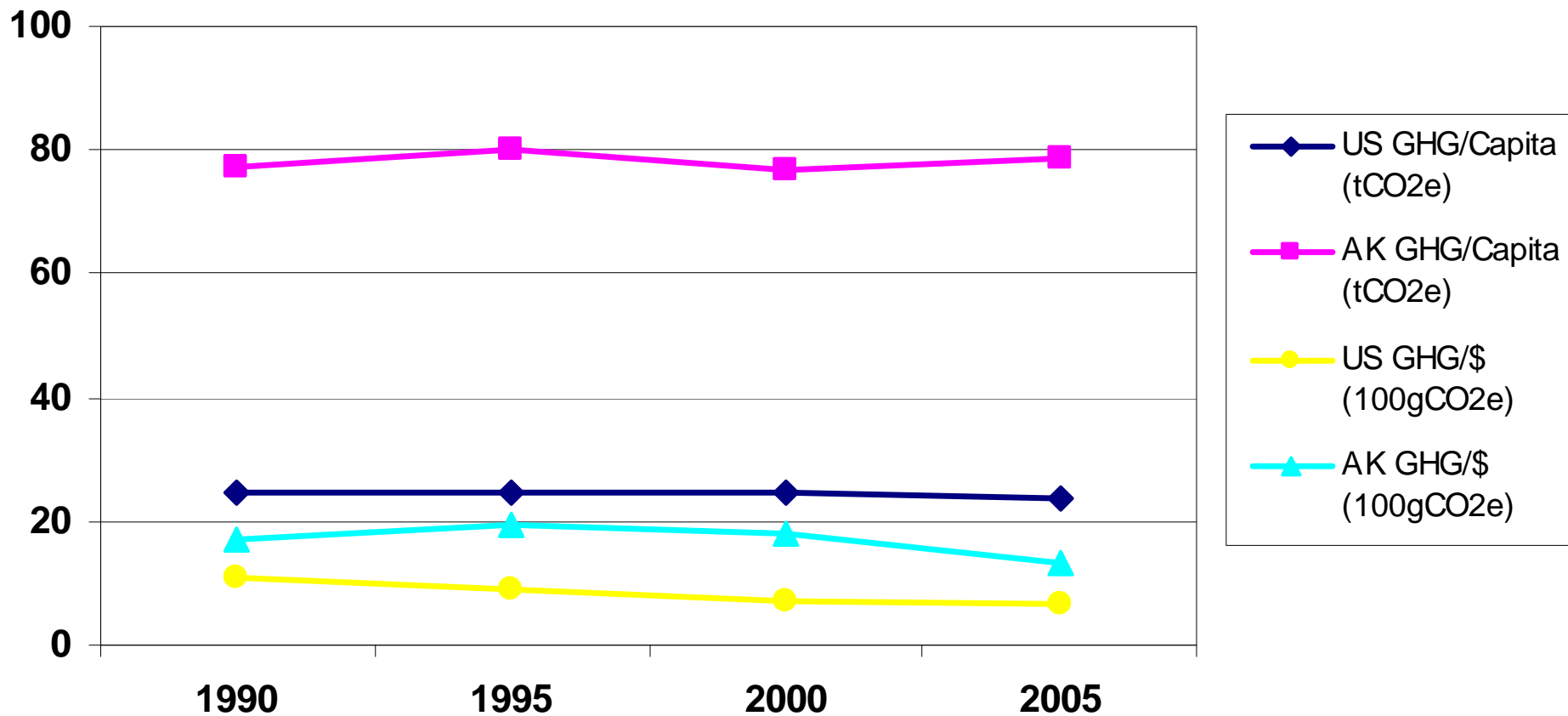
**Alaska**



**US**

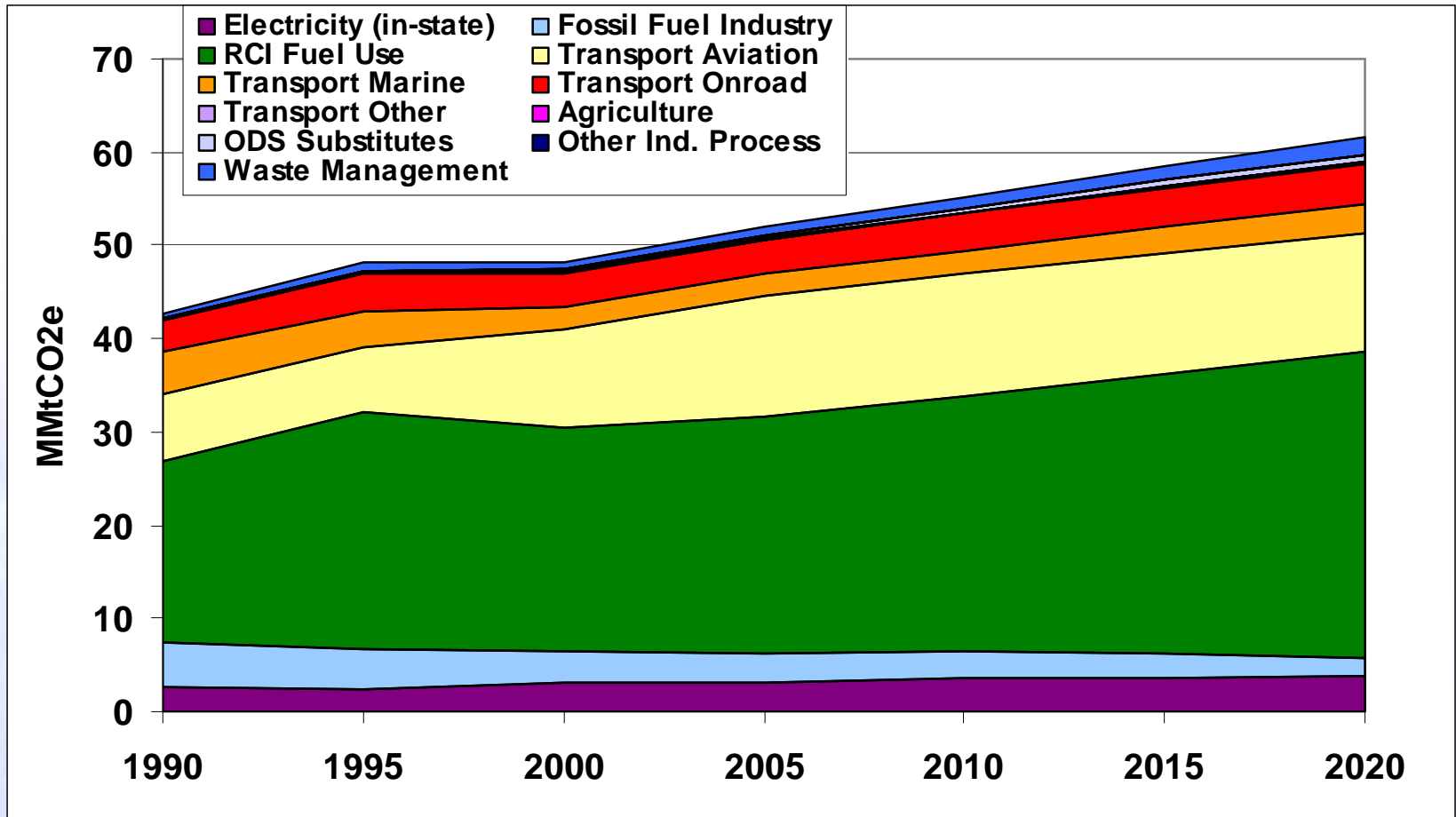


# Per Capita and GSP/GDP Gross GHG Emissions, 1990-2005

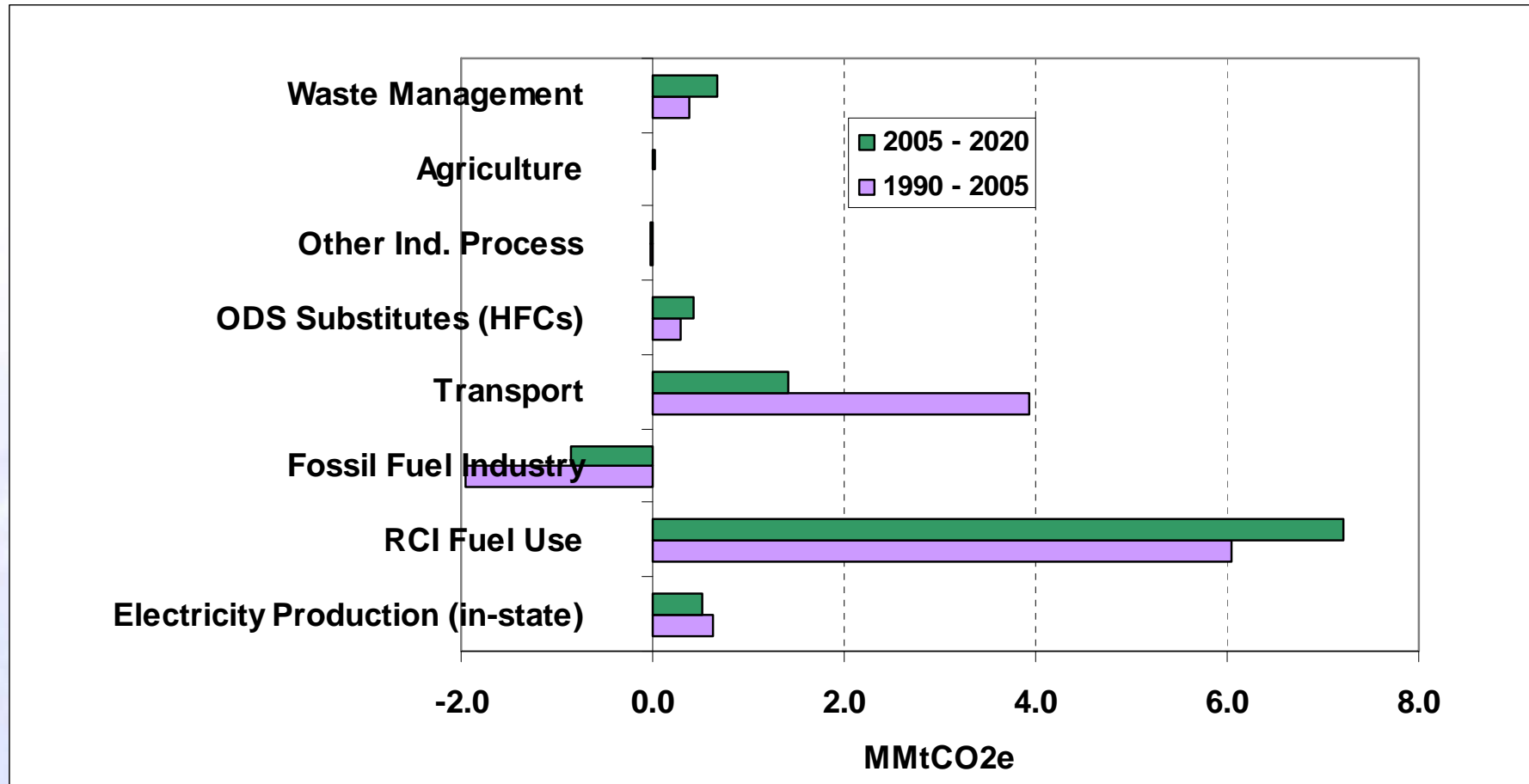




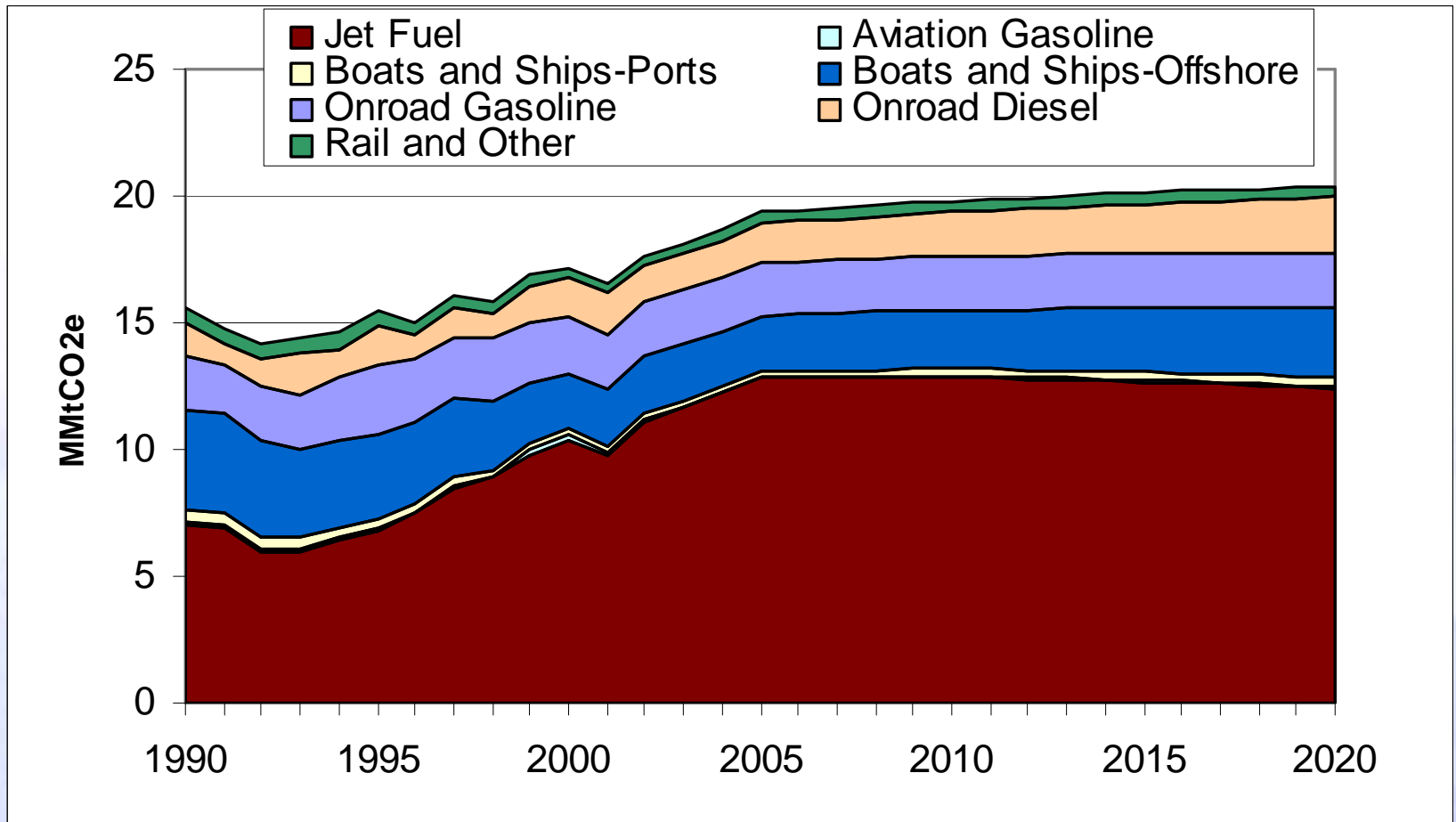
# Alaska Gross GHG Emissions By Sector, 1990-2020



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



# Transportation Inventory & Forecast



# Transportation Inventory & Forecast

- Data Sources
  - Onroad Diesel and Gasoline: Western Region Air Partnership (WRAP) Mobile Source Inventory and EIA AEO2006
  - Other Onroad Fuels: EIA
  - Aviation: jet fuel prime supplier sales volumes in Alaska from EIA
  - Marine Vessels: ADEC commercial marine inventory, Commission for Environmental Cooperation in North America inventory, EIA, EPA's National Emissions Inventory, Waterborne Commerce Statistics Center (Army Corps)
  - Rail and Other: SGIT and fuel consumption from EIA

# Transportation Inventory & Forecast

- Projection Methods
  - Onroad Diesel and Gasoline: Total VMT projections from WRAP, distributed to vehicle types by AEO2006 figures, adjusted by AEO2006 fuel efficiency projections.
  - Other Onroad fuels: regional fuel consumption projections from AEO2006 apportioned by population
  - Aviation: FAA aircraft operations forecasts by facility, adjusted by aviation fuel efficiency forecasts from AEO2006
  - Marine Vessels: projected using historical growth factors from ADEC inventory
  - Rail and Other: Historical trends and USDOE regional projections

# Transportation Inventory & Forecast

- Key Assumptions
  - Ethanol consumption assumed to remain at the 2002 level. Biodiesel and other biofuels not considered.
  - No growth in rail emissions, consistent with historical pattern
- Key Uncertainties
  - Future year vehicle mix
  - Future biofuel consumption
  - Aviation fuel for international travel
  - Aviation fuel efficiency forecasts
  - Consistency of multiple sources for marine fuels

# Identifying Priorities for Analysis

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- TWG reviews and revises catalog of options (today)
- MAG reviews, amends, and approves catalog (July 15)
- TWG identifies a preliminary set of priority options for further analysis by voting process (via email, weeks of July 28 – August 8)
  - Ballot sent by CCS to TWG members
  - Each TWG member identifies a number of priority options, adds comments as needed (for example, with regard to possible consolidation of policies, rationale for priorities, etc.)
- CCS compiles results for discussion at next TWG call



# Catalog of State Actions

- See separate catalog documents (catalog and descriptions)
- Updated based on TWG input

# Public Input and Announcements

# Next TWG Call

- Agenda:
  - Report back from MAG on catalog
  - Discuss approach for choosing priority options for analysis
  - Further review of the emissions inventory and projection if/as needed
- Proposed date/time for Call #3:
  - Tuesday, July 29 or Wednesday July 30

