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
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
Alaska & US Gross Emissions by Sector, Year 2000

Per Capita and GSP/GDP Gross GHG Emissions, 1990-2005
Alaska Gross GHG Emissions By Sector, 1990-2020

Alaska Gross Emissions Growth (MMtCO2e Basis)
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

• 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

• 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