Oil and Gas TWG
Teleconference Meeting #2

June 25, 2008 10:00am - 12noon

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

• Roll call
• Review and approval of TWG Call #1 summary
• Discussion of process for identifying priority options for analysis
• Review and discussion of the Catalog of State Actions
• Update and comments on the draft GHG emissions inventory & forecast
• Public input and announcements
• Agenda, time and date for next meeting
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 23 – August 6)
  – 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.)
  – If helpful, CCS team can suggest preliminary indicators of potential GHG reductions and costs/cost savings to enable TWG member comment (June 26 to July 16)
• CCS compiles results for discussion at next TWG call (August 27 or 28)
Catalog of State Actions

- See separate catalog documents (catalog and descriptions)
- Updated based on TWG input
Update and comments on draft GHG emissions inventory & forecast

• Update on status (if relevant)
• TWG comments
Industrial Sector GHG Emissions from Fuel Consumption

Covers all industry, fuel consumption from oil and gas operations need to be split out

June 25, 2008
Fossil Fuel Production GHG Emissions from Fugitive Sources

Coal mining emissions too small to be seen in chart
Key Points

• Methodology and data gaps currently under review
  – Energy consumption emissions need to be disaggregated from industrial sector (completed for 2002)
  – In other states, discrepancies have been found between EIA estimates and oil and gas industry data on energy consumption
  – Fugitive emissions are based on industry averages
  – Fraction of entrained CO2 in natural gas is uncertain
  – Challenges in projecting future production of fossil fuels

• Projected emissions savings from recent actions to be estimated separately
Key assumptions

• Average annual growth rates in energy consumption (all industry)
  – EIA energy + AK employment projections

<table>
<thead>
<tr>
<th></th>
<th>1990-2004&lt;sup&gt;a&lt;/sup&gt;</th>
<th>2005-2010&lt;sup&gt;b&lt;/sup&gt;</th>
<th>2010-2015&lt;sup&gt;b&lt;/sup&gt;</th>
<th>2015-2020&lt;sup&gt;b&lt;/sup&gt;</th>
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<tbody>
<tr>
<td>Industrial</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>natural gas</td>
<td>2.3%</td>
<td>1.4%</td>
<td>2.0%</td>
<td>2.3%</td>
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<tr>
<td>petroleum</td>
<td>2.2%</td>
<td>3.2%</td>
<td>1.7%</td>
<td>1.1%</td>
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</tbody>
</table>

• Average annual growth rates in fossil fuel production
  – Natural gas production declines 3.9% per year
  – Oil production declines 1.3% through 2015 then 4.8%
  – Source: Alaska Department of Natural Resources Oil and Gas Annual Report 2006
ADEC refinements to Alaska GHG Inventory

• In March 2007, Trustees for Alaska requested ADEC require large emitters of GHG to quantify & report their emissions.
• ADEC committed to refine the GHG emission estimates for major industrial and transportation sources.
• ADEC conducted GHG emissions inventory for Title V (major) air permits in Alaska using 2002 fuel usage data.
ADEC Title V GHG Emissions Inventory Results 2002

<table>
<thead>
<tr>
<th>ADEC Source Category</th>
<th>GHG Emissions (MMT CO₂eq)</th>
<th>Percentage of Total GHG Emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity Production</td>
<td>2.18</td>
<td>11%</td>
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<tr>
<td>Military</td>
<td>0.97</td>
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<td>Mining</td>
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<td>Municipal</td>
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<td>Oil &amp; Gas</td>
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<td>Other</td>
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<td>Seafood</td>
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<tr>
<td>Totals</td>
<td>20.63</td>
<td>100%</td>
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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:
  – Monday, July 23, 10:00am – 12noon