Economic Activities Technical Working Group of the Alaska Climate Change Adaptation Advisory Group

Meeting #1: June 16, 2008, 12:2PM

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

Call Agenda

• Welcome and introductions
• Part 1: Structure/roles/processes
• Part 2: Climate change impact/vulnerability/ opportunity review
• Part 3: Catalog of state adaptation actions/policies
• Public input
• Next steps for TWG
Welcome and Introductions

- Alaska Climate Change Adaptation Advisory Group members
- Economic Activities (EA) Technical Working Group (TWG) members
- Center for Climate Strategies EA TWG Facilitation Team
- Members of the Public

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 provide guidance to and receive input from the Technical Working Groups (TWG).

Members of the AAG

<table>
<thead>
<tr>
<th>Name</th>
<th>Title, Affiliation (Location)</th>
<th>* = member of the EA TWG</th>
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Technical Work Groups for Adaptation Advisory Group

• Adaptation Advisory Group (AAG)
  – 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 (TWGs)
  – Review vulnerabilities, impacts, and opportunities,
  – Analysis, review and early ranking of options
  – Develop initial straw proposals for activities and policies
  – Input to and review of AAG recommendations and reports

• TWG process is fully integrated with the AAG
  – TWGs serve in an advisory role to AAG
  – AAG members serve on the TWGs
### AAG TWG Focus Areas

- **Public Infrastructure**
  - the physical impacts of climate change on the built environment and transportation options

- **Health and Culture**
  - Human health, cultural, recreational and quality of life impacts of climate change

- **Natural Systems**
  - Impacts of climate change on biodiversity, ecosystem health and associated human economic activities

- **Other Economic Activities**
  - Impacts of climate change on aspects of the economy that are not directly dependent on living ecosystems

### EA TWG Focus Areas

- Oil & Gas
- Mining
- Tourism/Recreation
- Ocean Transportation
- Rural Non-Road Ground Transportation
- Boundaries and Ownership
- Energy Demand – Costs to Businesses
- Other Business Impacts (e.g., insurance)
## AAG Technical Working Group Roles

- Review and improve the vulnerability and impact assessment
- Identify potential state actions for a catalog
- Identify potential priorities for analysis
- Develop straw proposals for adaptation actions (costs, timing, geographic area, etc.)
- Assist with analysis and review of options and development of alternatives
- Provide recommendations to the AAG
- Assist with review of AAG final report to the CCSC
- Solicit and respond to public input

## Timing

- **AAG meetings** (every two months approximately).
  - Meeting 1 - May 16 in Anchorage
  - Meeting 2 - July 16 in Fairbanks
  - Meeting 3 - September 23 TBD
  - Meeting 4 - November 7 TBD
  - Meeting 5 - February 6 in Anchorage (may be a weeklong Forum)
  - Meeting 6 - March 20 (tentative) TBD
  - Meeting 7 - April 30 (tentative, if needed) TBD
- **TWG calls**
  - Regularly scheduled
  - Two 2 hour calls between AAG meetings
- **Final Product of AAG**
  - Report to Sub-Cabinet in April 2009
- **See Orientation Document for process and timing on:**
  [http://www.akclimatechange.us/Economic_Activities.cfm](http://www.akclimatechange.us/Economic_Activities.cfm)
Final Report from AAG to CCSC

- Executive Summary
- Background, Purpose, & Goals
- Alaska Vulnerability Assessment (NCEP)
- AAG Recommendations and Results
  - Public Infrastructure
  - Health & Culture
  - Natural Systems & Associated Economies
  - Other Economic Activities
- Appendices

Stepwise Planning Process for Adaptation

- Develop/revise baseline vulnerability assessment and impact focus areas
- Identify a full range of possible actions ("catalog") and programs already in place
- Identify initial priorities for analysis & development
- Develop straw proposals
- Evaluate (and quantify to the extent possible) costs and benefits
- Evaluate feasibility issues; associated issues; linkages
- Develop alternatives if needed to enhance consensus
- Iterate to final agreement
- Finalize and report recommendations

Red font indicates work to be done by July 16th for AAG Meeting
Key Components of the Process

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

Coverage Of Issues

- All impacts related to human health, culture, recreation, and quality of life
- All conceivable adaptation policy responses
- All potential implementation mechanisms
- Short and long term actions
Ground Rules

• Supportive of the process
• Attendance at meetings
• Equal footing
• Maintain currency with the information
• No backsliding
• Do not represent the AAG or TWG
• Make objective contributions

Part 2:
Climate Change Effects, Vulnerabilities, Impacts, and Opportunities in Alaska
Effects of Climate Change in Alaska

- Shorter winters
- Longer and warmer Arctic summers
- Sea level rise
- Coastal erosion
- Thawing permafrost
- Retreating sea ice/glaciers
- Increased forest fires

Examples of Vulnerabilities, Impacts, and Opportunities

- Reduced operation windows for gas and oil exploration during winter (permafrost thaw)
- Pipeline damage (permafrost thaw)
- Economic activities curtailed due to polar bear denning on land (less ice)
- Waste pits breached (sea level rise)
- Stability and seepage issues for tailings dams (permafrost thaw)
- New shipping lanes (less ice)
- Navigation issues (melting glaciers)
- New tourism possibilities (less ice, higher temperatures)
Example: Oil and Gas Impacts, Vulnerabilities, Opportunities

• Current Onshore Operations:
  – reduced operation windows for exploration and development during winter (e.g., between 1970 and 2002, the number of days tundra travel was allowed declined by 50% -- the number increased subsequently due to new standards but is still lower than in the 1970s);
  – reduced efficiency of gas compression and reinjection during warmer months, resulting in reduced production;
  – impacts on seismic and other activities because of animal behavior and distribution changes (e.g., more polar bears denning on land).

• Potential Future Onshore Operations:
  – more reduced ice road, tundra ice travel, and ice platform opportunities;
  – reduced efficiency of gas compression (this issue could be reduced or eliminated once a gas pipeline is constructed);
  – increased rate and amount of animal behavior changes impacting oil and gas activities (e.g., more walruses and polar bears on land);
  – changes in permafrost could result in flooding of gravel pads and the migration of contaminants into the environment.

Example Ocean Transportation Vulnerabilities, Impacts, and Opportunities

• Current ocean transportation:
  – Opening up summer shipping lanes and opportunities (a 10% decline in sea ice per decade since the 1970s); some increase in traffic already observed, including cruise and recreational traffic;
  – Offshore oil and gas exploratory traffic may increase in previously ice-covered ocean areas;
  – Rapidly melting glaciers causing navigation problems (such as Columbia Glacier during the first part of its retreat);
  – More activities resulting in higher risk of marine accidents and oil/fuel spills in Bering Sea, Chukchi Sea, and Arctic Ocean.

• Potential Future ocean transportation:
  – Even greater opening of Arctic Ocean and Bering Sea for longer periods for shipping and marine activities;
  – increased navigation and safety issues and concerns.
EA TWG Task:
Review and Expand List of Impacts, Vulnerabilities, Opportunities

Draft of initial list to be posted at:
http://www.akclimatechange.us/Economic_Activities.cfm

Part 3:
Catalog of State Adaptation Activities/Policies

Focus on policy options and actions that will help Alaska adapt, economically, to new conditions from climate change: proactively minimize economic hardship, maximize opportunities and cushion inevitable shifts
Catalog of State Adaptation Actions/Policies

- Adaptation actions are local, while mitigation actions are global
- Actions considered by a wide variety of US states provide a starting means to consider Alaska actions
- Preliminary Alaska analyses and needs for adaptation have also been conducted and assessed
- Many actions provide GHG reductions coincidentally or as a co-benefit
- Adaptation activities cover all economic sectors and a wide variety of implementation mechanisms

See Draft Initial Catalog in Separate File on the Website

http://www.akclimatechange.us/Economic_Activities.cfm
Catalog of Alaska Adaptation Actions/Policies

- Initial list developed by National Commission on Energy Policy, other states, and Center for Climate Strategies
- Existing, planned and proposed state level actions
- Wide variety of impacts and implementation mechanisms
- AAG and TWG’s will add new potential actions
- Starting place for identification of AAG priorities

**EA TWG Task:**
Review, expand and present to the AAG a Catalog of Alaska Adaptation Actions/ Policies
Future Discussion: Select Adaptation Actions/Policies Based on the Following Criteria

- Benefits and Effectiveness
- Costs
- Feasibility
- System Vulnerability – timing, certainty, capacity, economic and social significance

(Exactly how these will be used is still being discussed)

Future Discussion: Develop Action/Policy Options in Detail
Questions?

Public Input?
EA TWG Next Steps

• Between now and next call (July 27, 8-10AM)
  – Review and revise climate change impact and vulnerability assessment
  – Review the catalog of adaptation actions and policies – modify, add, delete
• Present above at July 16th AAG meeting