



Catalog of Mitigation Options

Cross-Cutting (CC) Issues Technical Working Group

August 21, 2008

A catalog of state-level, GHG-reducing actions and policy options based on actions undertaken or considered by Alaska and other states, including regional, state, local and private actions. Options are numbered solely for the convenience in referencing them; numbers do not reflect a ranking or prioritization of the policy options. Options marked with an asterisk (*) have at least partially been considered or undertaken at some level in Alaska. A brief description of these options is available in a companion document.

Key to Preliminary Rankings of Options in the Tables that Follow:

Definition of “Priorities for Analysis” [these will be assigned by the MAG/TWG as part of this process]:

- **High:** High priority options will be analyzed first.
- **Medium:** Medium priority options will be analyzed next, time and resources permitting.
- **Low:** Low priority options will be analyzed last, time and resources permitting.

Option No.	GHG Reduction Policy Option	Externalities, Feasibility Considerations	Priority for Analysis	Government Lead by Example ¹ ?	Notes
CC-1	BASELINE AND CONTINUED MEASUREMENT				
1.1	Establish GHG emissions inventory and forecasting function*				<ul style="list-style-type: none"> - Preliminary draft inventory and forecast has been prepared - ADEC recommendations for future emissions inventory work in the “Summary Report of Improvements to the Alaska GHG Emissions Inventory” - ADEC will soon post comments received on the inventory - Having an accurate and specific emissions inventory is necessary to implement other recommendations, such as setting GHG goals or joining a cap-and-trade program, but refinements and improvements to the inventory should not delay development of mitigation strategies. - Questions for the MAG: What is the process for refining the inventory? What baseline should the TWGs use? - UAF SNAP (Scenarios Network for Alaska Planning) work might be relevant. - This work may include reviewing sources and availability of renewable energy - See also Scott Sloane’s memo, dated 8-4-2008

¹ Checks in this column indicate activities that government entities at any level might undertake to demonstrate leadership specifically in reducing GHG emissions. Checks do not necessarily represent options that government entities have primary responsibility for or may play a role in implementing.

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1.2	Establish or adopt a mandatory GHG emissions reporting program and establish a regulatory entity that would manage this program				<p>- GHG emissions reporting may be required by future federal legislation: Congress has directed EPA to write a proposed mandatory GHG reporting rule by Sept. 2008, and a final rule by June 2009, using EPA’s authority under the Clean Air Act.</p> <p>-The Climate Registry will possibly be the repository for GHG emissions data in future EPA regulations, so linking to a program that uses this system may make sense.</p> <p>- ADEC Air Quality Division could be this regulatory entity</p> <p>- The Climate Registry will possibly be the repository for GHG emissions data in future EPA regulations, so linking to a program that uses this system may make sense.</p> <p>- It may be necessary to hire additional staff to run the reporting system, provide training concerning reporting methods to affected entities and other assistance, conduct compliance & enforcement activities, and verify emission allowances and their trading</p>

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1.3	Establish or participate in a voluntary GHG emissions reporting program			✓	<ul style="list-style-type: none"> - The Climate Registry will possibly be the repository for GHG emissions data in future EPA regulations, so linking to a program that uses this system may make sense. - It may be necessary to hire additional staff to run the reporting system, provide training concerning reporting methods to affected entities and other assistance, conduct compliance & enforcement activities, and verify emission allowances and their trading - This option may include recruiting additional members to a GHG reporting system - This option could include disaggregating the State's own GHG emissions to the state-office building level
1.4	Institute an accountability program to measure and report progress in reducing GHG emissions.			✓	<ul style="list-style-type: none"> - Purpose is to ensure that overall implementation of the climate plan proceeds toward its targets. - Implementation accountability for individual policy options would be included in policy option straw proposals developed by the TWGs.
CC-2 STATEWIDE ENERGY AND GHG REDUCTION GOALS OR TARGETS					

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2.1	Establish goals or targets for statewide GHG emission reductions, which could include energy efficiency goals, renewable energy generation/consumption goals, waste goals, land use goals, transportation goals and others.			✓	<ul style="list-style-type: none"> - GHG goals may be required by future federal legislation. (E.g., S. 2191, The Climate Security Act) proposes declining emissions caps for several GHG sources). - This goal links to having an accurate GHG emissions inventory in order to set an accurate baseline year - This goal could include setting goals for government owned/operated sources, including public facilities and fleets, energy efficiency standards and practices, renewable energy capacity and use - See also Scott Sloane's memo, dated 8-4-2008
2.2	Develop a list of early-actions the State can implement to meet state goals and targets			✓	<ul style="list-style-type: none"> - Potential to develop this into a State "lead by example" strategic plan laying out early actions as well as potential mid and long-term actions that could be taken across all agencies (this would pull together options detailed in this section as well as others (e.g. including incentives for state agencies to weigh consequences of equipment purchase options) - See also Scott Sloane's memo, dated 8-4-2008
2.3	Create a multi-governmental body (tribal, federal, state and local) to coordinate on-going efforts to reduce public sector emissions*			✓	<ul style="list-style-type: none"> - CCSC established through Administrative Order 238 - This body should develop a Climate Change Strategy for Alaska that includes short-, mid- and long-term actions

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2.4	Coordinate with the State Energy Plan being developed by the Alaska Energy Authority to develop and meet energy goals and targets			✓	- See also Scott Sloane’s memo, dated 8-4-2008
CC-3 FINANCIAL STRATEGIES					
3.1	Institute tax incentives and disincentives for individuals, as well as public and private entities, to encourage GHG reductions or other financial measures, such as revolving loan funds and grants				
3.2	Create a Market Advisory Group to provide guidance to the state on the design of market-based compliance programs to manage GHG emissions, such as cap-and-trade and establish a regulatory entity that would manage an Alaskan cap-and-trade program*				<ul style="list-style-type: none"> - Alaska is an observer to the Western Climate Initiative. - California system is a potential model under its GHG cap law, AB-32. - Objective should include designing a cap-and-trade program to achieve cost-effective emissions reductions, using a systems approach that considers connections across sectors - ADEC Air Quality Division could be this regulatory entity - See also Scott Sloane’s memo, dated 8-4-2008

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3.3	Advocate development of a carbon-credit or other market-based system			✓	<ul style="list-style-type: none"> - This could be a national or state program - E.g. Alaska could purchase carbon credits associated with its own activities, function as a purveyor of credits to others, or act as a certification entity of others carbon exchanges.
3.4	Seek and stimulate funding for implementation of MAG recommendations				
3.5	Design and establish a Carbon Trust for Alaska that would create an incentive fund using carbon emission allowance revenues to encourage carbon reductions in sectors inside and outside the cap				<ul style="list-style-type: none"> - Also supports environmental justice goals, manages the carbon market, and encourages RD&D efforts - Models could include this paper “Central Recommendations: Carbon Trust & Commercialization,” the United Kingdom’s Carbon Trust, or a Carbon Efficiency Board, as described in the Climate Security Act of 2008 - See also Scott Sloane’s memo, dated 8-4-2008
3.6	Request review of the investment strategies used by the Alaska Permanent Fund in light of climate change and promote clean energy innovation, research & development by balancing the Alaska Permanent Fund with investments in renewable and alternative energy technologies			✓	<ul style="list-style-type: none"> - See also Scott Sloane’s memo, dated 8-4-2008

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3.7	Require projects funded with State bonding to be climate-neutral				- See also Scott Sloane’s memo, dated 8-4-2008
3.8	Establish incentives for state employees that can decrease emissions from commuting, such as transit passes, carpooling incentives, flexible schedules and/or telework capabilities				- Several other model activities exist. The CC TWG is collecting resources, which are posted on the AK Climate Change website that are relevant to incentives
3.9	Create One Stop shopping for programs and information on energy efficiency, such as heating, cooling and refrigeration, and financial incentives, etc.				- See recommendations for consolidation in the March 2008 “Alaska Energy Efficiency Program and Policy Recommendations” - Refer to the Oregon Energy Trust as a model - Potential link to CC-4.4

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3.10	Encourage creation of a business-oriented organization to share information and strategies about reducing business GHG emissions, recognize successes, and encourage entrepreneurs to connect with investors on business development opportunities in climate protection				<ul style="list-style-type: none"> - E.g. Promote development of a business-oriented entity to help promote and recognize business efforts to reduce GHG emissions, such as a business council for sustainability. - Green Star offers a voluntary green business certification program based on a series of standards focusing primarily on activities at Anchorage businesses, with some work with North Slope facilities and a small number of other businesses around the state that request assistance. Chapters exist in Kenai and Fairbanks but these are not active in the same programs that the Anchorage Green Star office offers. With resources, Green Star could expand to service the entire state, providing technical assistance to businesses in ways to reduce GHGs.
3.11	Institute a “business incubator” program to attract and support new business development relating to the new energy economy				
3.12	Develop a centralized, state or non-profit, Energy Trust grant & loan program for promoting green technologies and energy efficiency				<ul style="list-style-type: none"> -The Alaska Energy Authority may be the place to house this program because it already administers Alaska’s Renewable Energy Fund - Potential to model this on the Oregon Energy Trust - See also Scott Sloane’s memo, dated 8-4-2008

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CC-4	EDUCATION AND OUTREACH				
4.1	Conduct public polling to benchmark the extent and depth of climate understanding				- Understanding the level of public knowledge and opinion about climate change is an important starting place for directing and tailoring messages.
4.2	Develop a state-based “brand” on climate and use it to promote awareness and action			✓	- A climate brand from the state could help the public understand where messaging is coming from, versus other organizations that build public awareness about climate change or other environmental activities.
4.3	Keep a high profile on climate change issues and actions through regular public mention by Governor and other public leaders			✓	- Possibilities include instituting annual Governor’s Awards, and ongoing Governor public service announcements, to recognize climate action of several types/categories to recognize individual, private and public agency efforts - The Governor's office is now working on a fact sheet report on the Sub-Cabinet for dissemination.

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4.4	Develop and maintain a state climate change website for the public, including a clearinghouse of climate change information and resources and education materials that address the climate’s impacts on the environment (e.g. a State of the Environment report)				<ul style="list-style-type: none"> - CC TWG is collecting initial resources, which are posted on the AK Climate Change website - Include a "public" link to help people find what's most relevant to their day to day lives, such as energy saving ideas. Identify what is useful and pertinent to the public. - Potential link to 3.10 “One Stop”
4.5	Develop education and outreach programs to support implementation of sector-specific MAG recommendations				<ul style="list-style-type: none"> - Should be done recognizing that the means is as important as the message. - The poll (4.1) should ask how people get their information on climate change -Delivery will be key.
4.6	Establish an education and outreach committee and/or “outreach coordinator” to conduct outreach and coordination, to educate audiences regarding climate plan policies and to oversee efforts relating to education			✓	<ul style="list-style-type: none"> - Ensure that this is not redundant/ is coordinated with other efforts (e.g. Department of Education outreach efforts). - Many of the outreach options listed in this category could be conducted by this committee/coordinator - This could be a government lead by example by action if each State department has an office or program, or division devoted to climate change to better coordinate climate change information. -This could include state agencies, state public education, higher education officials and outside entities.

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4.7	Provide continuing outreach and assistance to the Governor’s office, legislature, and implementing agencies on a regular basis				-Educate policy makers on MAG policy recommendations, climate change in general, scientific and technological advances, and progress toward state goals through regular briefings to promote acceptance and implementation of mitigation and adaptation policies -This might be the job of the outreach committee/ coordinator (4.6)
4.8	Educate broadcasters, reporters, editorial boards, etc. about climate change, the risks it imposes, and solutions; Include development and funding of climate change public service announcements				-This might be the job of the outreach committee/ coordinator (4.6)

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4.9	Educate students at all levels on climate change by organizing educators to identify, assemble, and employ climate change curricula for various age groups, integrating best practices into public school operations, integrating climate change into core college curricula, promoting research on climate change and solutions, and developing university “Centers for Excellence” on climate issues			✓	<p>-Coordinate with other efforts, both public, private and non-profit (e.g. Department of Education, science centers, zoos, museums)</p> <p>- Add climate change to public education performance standards for science and social studies; identify (a) gaps in climate change education, and (b) specific curricula to fill any gaps</p> <p>-Alaska Center for Climate Assessment and Policy at the University of Alaska at Fairbanks was established in 2006 and could be an example of a “Center for Excellence”</p>
4.10	Introduce core competencies on climate change into professional licensing programs (e.g. energy efficiency in building design and construction, use of recycled materials, etc) and engage professional associations on these issues				

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4.11	Engage community associations and attend periodic meetings to reach out on climate change, impacts, sector-specific mitigation actions, and adaptation opportunities				<ul style="list-style-type: none"> - Organize and host events that focus on leading by example, sharing “how-to,” illuminating financial risks and opportunities, co-benefits, etc. - This might be the job of the outreach committee/coordinator (4.6)
4.12	Encourage business outreach efforts to customers to enhance awareness of climate change issues and opportunities				<ul style="list-style-type: none"> - This would help focus the message to specific interest groups. - This might be the job of the outreach committee/coordinator (4.6)
4.13	Encourage and assist in the development of comprehensive local government planning efforts to reduce greenhouse gas emissions, establish targets, such as educating community planning and zoning officials about climate change, impacts, and opportunities			✓	<ul style="list-style-type: none"> - Identify what is most relevant and what will have the most effect. - Identify state role - How to integrate local land use planning w/ GHG reductions? - This option could include working with municipalities to convert heat and electrical supplies to renewable sources - See also Scott Sloane’s memo, dated 8-4-2008

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4.14	Showcase and share successes of community leaders, such as Juneau, who are acting effectively on climate change			✓	<ul style="list-style-type: none"> - Sharing success stories is very important in order to show cause and effect and be tangible to the public. Climate change messages need to be very relevant to day to day lives, or they will get lost. - Can also identify individual community leaders who are not yet acting, and make a special effort to educate and encourage them to act. - Develop and provide concrete information on co-benefits to entities to use in boosting their climate efforts - Potential links to 4.3, 4.4 and 4.6
4.15	Develop and coordinate a network of community-based organizations addressing climate change to foster collaboration (e.g. ICLEI’s Cities for Climate Protection)				<ul style="list-style-type: none"> - Work with community-based organizations to identify and build upon climate issues related to their core mission - Identify, assist, and leverage community-based organizations that have expertise or interest in climate-related issues - Support and facilitate outreach and education within community-based organizations regarding climate change issues and actions
4.16	Develop a statewide voluntary program to structure and assist individuals in undertaking actions to reduce GHG emissions				
CC-5 OTHER ACTIVITIES					

Option No.	GHG Reduction Policy Option	Externalities, Feasibility Considerations	Priority for Analysis	Government Lead by Example ¹ ?	Notes
5.1	Require inclusion of GHG emissions impacts in Environmental Impacts Assessments and similar environmental studies				- Environmental studies, such as Environmental Assessments (EAs) and Environmental Impact Statements (EISs).
5.2	Consider funding for and formation of a state climate data and analysis center to develop and provide objective, state-specific information on climate and associated changes				- It is not clear if this is already occurring, or if this would be a state or federal function since there are several agencies already performing some of these functions (e.g. NOAA’s National Weather Service). - Quality information is important for informing both mitigation and adaptation activities