



Catalog of Mitigation Options

Cross-Cutting (CC) Issues Technical Working Group

Draft June 11, 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:

Potential GHG Emission Reductions ^{1/}	Potential Cost or Cost Savings ^{1/2/}
High (H): At least 1.0 million metric tons (MMt) carbon dioxide equivalent (CO ₂ e) per year by 2020 (~2% of current AK emissions)	High (H): \$50 per metric ton CO ₂ e (MtCO ₂ e) or above
Medium (M): From 0.1 to 1.0 MMtCO ₂ e per year by 2020	Medium (M): \$5-50/MtCO ₂ e
Low (L): Less than 0.1 MMtCO ₂ e per year by 2020, or 1 MMtCO ₂ e by 2050	Low (L): Less than \$5/MtCO ₂ e
Uncertain (U): Not able to estimate at this time	Negative (Neg): Net cost savings
	Uncertain (U): Not able to estimate at this time
<p>^{1/} Several options may overlap in terms of emissions reductions and/or cost impacts. Estimates assume options would be implemented independently from other options.</p> <p>^{2/} Costs are denoted by a positive number. Cost savings (i.e., “negative costs”) are denoted by a negative number.</p>	

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	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes
CC-1	GHG INVENTORY AND FORECASTING					
1.1	Establish GHG emission inventory function*					- Preliminary draft inventory has been prepared, to be refined further.
1.2	Establish GHG emission forecasting function*					- Preliminary draft forecast has been prepared, to be refined further.
CC-2	GHG REPORTING					
2.1	Establish or adopt a GHG emissions reporting program					
CC-3	GHG REGISTRY					
3.1	Establish or participate in a GHG emissions reduction registry					
3.2	Provide assistance in reporting and registering GHG emissions					
3.3	Recruit members to a GHG registry					
CC-4	STATEWIDE GHG REDUCTION GOALS OR TARGETS					

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4.1	Establish goals or targets for statewide GHG emission reductions					
4.2	Institute an accountability program to measure and report progress in reducing GHG emissions.					- 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-5	STATE, LOCAL and TRIBAL GOVERNMENT GHG REDUCTION ACTIVITIES (LEAD-BY-EXAMPLE)					
5.1	Lead by example by establishing goals or targets for reductions in GHG emissions attributable to government owned/operated sources					
5.2	Create a multi-agency body to oversee on-going state climate efforts*					- CCSC established through Administrative Order 238
5.3	Disaggregate the State's own GHG emissions to the agency level and require annual agency-specific reports on GHG reduction progress					

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5.4	Institute an accountability program to measure and report progress in reducing GHG emissions					
5.5	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).
5.6	Require projects funded with State bonding to be climate-neutral					
5.7	Encourage and assist in the development of comprehensive local government planning efforts to reduce greenhouse gas emissions, establish targets, etc.					- ID state roles - How to integrate local land use planning w/ GHG reductions?
5.8	Review sources and availability of renewable energy					
CC-6	ADAPTATION AND VULNERABILITY TO CLIMATE CHANGE					

Option No.	GHG Reduction Policy Option	Potential GHG Emissions Reduction	Cost per Ton	Externalities, Feasibility Considerations	Priority for Analysis	Notes
6.1	Assess Alaska’s vulnerability to climate change and adaptation opportunities; Develop a State climate change adaptation plan*					- Being developed through the Adaptation Advisory Group process. - Consider the local/regional implementation, and education/outreach activities
CC-7	FINANCIAL POLICIES					
7.1	Institute tax incentives and disincentives to encourage GHG reductions					
7.2	Pursue other market-based programs, including cap-and-trade*					- Alaska is an observer to the Western Climate Initiative.
7.3	Explore other regional opportunities, both public and private					
7.4	State advocacy of a national market-based system (e.g. national cap-and-trade)					
7.5	Seek and stimulate funding for implementation of MAG recommendations					
7.6	Facilitate the development of an effective carbon credit system					- The state 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.

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7.7	Create a Market Advisory Group consisting of experts to provide guidance to the state on the design of market-based compliance programs to manage GHG emissions					- California system is a potential model under its GHG cap law, AB-32.
CC-8	CLIMATE-RELATED INVESTMENT AND BUSINESS-TO-BUSINESS ENGAGEMENT					
8.1	Create a clearinghouse to facilitate investment and promote business development opportunities in climate protection					- Need a vehicle for entrepreneurs to connect with investors.
8.2	Encourage the creation of a business-oriented organization to share information and strategies, recognize success, and support GHG reduction goals					- Promote development of a business-oriented entity to help promote and recognize business efforts to reduce GHG emissions. A business council for sustainability might be considered.
8.3	Implement a state program of voluntary business actions to reduce GHGs					

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8.4	Institute a “business incubator” program to attract and support new business development relating to the new energy economy					
CC-9	DEDICATE GREATER PUBLIC INVESTMENT TO CLIMATE DATA AND ANALYSIS					
9.1	Consider formation of a state climate data and analysis center to develop and provide objective, state-specific information regarding climate data					
CC-10	GOVERNMENT EDUCATION AND OUTREACH					
10.1	Establish an education and outreach committee to educate audiences regarding climate plan policies and to oversee those relating to education; Include state public education and higher education officials					

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10.2	Create and maintain one or more “outreach coordinator” positions specifically tasked with climate outreach and coordination among state agencies and outside entities					
10.3	Educate state employees across-the-board, and assign “point persons” to do so on an on-going basis					
10.4	Institute annual Governor’s Awards to recognize climate action of several types/categories					
CC-11	POLICYMAKER EDUCATION AND OUTREACH					
11.1	Educate policy makers on MAG policy recommendations, climate change in general, scientific and technological advances, and progress toward state goals through regular briefings in order to promote acceptance and implementation of mitigation and adaptation policies					

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11.2	Provide continuing outreach and assistance to Governor’s office, legislature, and implementing agencies on a regular basis					
CC-12	FUTURE GENERATIONS EDUCATION AND OUTREACH					
12.1	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					
12.2	Organize groups of educators to identify, assemble, and employ climate change curricula appropriate to age groups					
12.3	Integrate “best practices” into public school design and construction to educate students and parents first-hand in their communities and colleges (i.e., walk the talk).					
12.4	Integrate climate change into core college curricula.					

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12.5	Promote research into climate change and solutions at state universities; develop university “Centers of Excellence” on climate issues, new approaches, and technologies*					-Alaska Center for Climate Assessment and Policy at the University of Alaska at Fairbanks was established in 2006
12.6	Work with science centers, zoos, and museums to include a climate science focus appropriate to their core mission.					
12.7	Introduce core competencies on climate change into professional licensing programs (e.g. energy efficient in building design and construction, use of recycled materials, etc)					
CC-13	COMMUNITY LEADERS & COMMUNITY-BASED ORGANIZATIONS EDUCATION AND OUTREACH					
13.1	Educate community planning and zoning officials about climate change, impacts, and opportunities					

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13.2	Identify individual community leaders who are acting effectively on climate change; showcase and share their successes					
13.3	Identify individual community leaders who are not yet acting on climate change and make a special effort to educate and encourage them to act					
13.4	Engage associations and attend their periodic meetings to reach out on climate change, impacts, sector-specific mitigation actions, and adaptation opportunities					
13.5	Identify, assist, and leverage community-based organizations that have expertise or interest in climate-related issues					
13.6	Work with community-based organizations to identify and build upon climate issues related to their core mission					

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13.7	Develop and coordinate a network of community-based organizations acting on climate change so they can link up, organize, and conduct joint events					
13.8	Support and facilitate outreach and education within community-based organizations regarding climate change issues and actions					
13.9	Develop and provide concrete information on co-benefits to entities to use in boosting their climate efforts					
13.10	Organize and host events that focus on leading by example, sharing “how-to,” illuminating financial risks and opportunities, co-benefits, etc.					

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13.11	Encourage municipal leaders to join ICLEI’s ¹ Cities for Climate Protection program and/or the Mayors’ Climate Protection Agreement ²					
CC-14	GENERAL PUBLIC EDUCATION AND OUTREACH					
14.1	Educate broadcasters, reporters, editorial boards, etc. about climate change, the risks it imposes, and solutions					
14.2	Work with state broadcasters and print media associations to develop and run climate change public service announcements					
14.3	Conduct public polling to benchmark strength and depth of climate understanding					
14.4	Keep a high profile on climate change issues and actions through regular public mention by Governor and other public leaders					

¹ ICLEI is the International Council for Local Environmental Issues. See <http://www.iclei.org>

² See <http://www.seattle.gov/mayor/climate>

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14.5	Develop and use a state-based “brand” on climate awareness and action					
14.6	Develop & maintain a state climate change website for the public, including a clearinghouse of climate change information and resources					
14.7	Work with existing company outreach efforts to customers to enhance awareness of climate change issues and opportunities					
14.8	Work to educate consumers – and home designers, builders, and contractors – to ensure that they are aware of the different choices they have for space heating and cooling (e.g., evaporative vs. refrigerative) and the impacts of those choices					
14.9	Develop a statewide voluntary program to structure and assist individuals in undertaking actions to reduce GHG emissions					

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CC-15	SECTOR-SPECIFIC EDUCATION AND OUTREACH					
15.1	Develop education and outreach to support implementation of sector-specific MAG recommendations					