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Cross-Cutting Technical Work Group

Straw Proposals

Option #	Option Proposals	Option Volunteer(s)
CC-1	Establish an Alaska Greenhouse Gas Emissions Reporting Program	Scott Sloane, Aubrey Baure
CC-2	Establish Goals for Statewide GHG Emission Reduction	Kate Troll
CC-3	Identify and Implement State Government Mitigation Actions	Doug O'Harra, Aubrey Baure
CC-4	Integrate Alaska's Climate Change Mitigation Strategy with the Alaska Energy Plan	Scott Sloane
CC-5	Explore Various Market-Based Systems to Manage GHG Emissions	Maria Gladsiszweski
CC-6	Create an Alaska Climate Change Program that Coordinates State Efforts for Addressing Climate Change	Katharine Heumann

CC-1. Establish an Alaska Greenhouse Gas Emissions Reporting Program

Policy Description

This climate change mitigation policy describes the basic elements necessary to establish and support a greenhouse gas (GHG) emission reporting program for the State of Alaska. This GHG Reporting Program will collect, verify, and analyze GHG emissions data to help establish a baseline of anthropogenic GHG emissions for Alaska and identify the types and magnitude of anthropogenic GHG emission sources in Alaska and their relative contributions. These data will be used to inform state leaders and the public on statewide GHG emission trends, identify opportunities for reducing GHG emissions, and allow Alaska to assess its climate change mitigation efforts over time.

Policy Design

Goals:

- Establish a greenhouse gas emission reporting program for the State of Alaska that ensures publically accessible, accurate, verifiable, and transparent reporting of GHG emissions data using well-documented mandatory and voluntary GHG emissions reporting and verification procedures.

- Develop and publish the Alaska GHG inventory and forecast every three years. Use this information to inform greenhouse gas emission baselines and state goals (see CC-2), communicate the results of climate change mitigation efforts, and modify Alaska's climate change mitigation strategies as needed.

Development of this program will require the State to establish new climate change statutes and regulations and develop GHG emission reporting and verification protocols, procedures, methods, forms, and reporting guidance documents. Additionally, a database will have to be developed to compile reported information about emissions. Large industries are currently permitted by ADEC's Air Permitting Program through their Title V permit and are required to report their stack emissions and fuel consumption data. ADEC's AIRTOOLS database currently tracks GHG emissions from these large industries and transmits these data electronically to EPA on a periodic basis. This database would need to be upgraded to accommodate a comprehensive GHG Reporting Program.

An additional component of data collection may be development of an "energy database" to track Alaska's energy-related GHG emissions and their abatement. This database could be developed as part of the coordination and integration of the Alaska Climate Strategy and the Alaska Energy Plan (see CC-4). The database would monitor statewide residential, commercial, industrial, and transportation fossil fuel energy consumption and production. The data from a reporting system will allow development and publication of a GHG inventory for Alaska on a regular basis (e.g., every 3 years). Managing the reporting of GHG emissions may also include overseeing compliance activities associated with reporting.

An Alaska GHG Reporting Program will help allocate and track carbon emission allowances for facilities permitted under any future cap-and-trade program (CC-5) that the State decides to engage in. California, for example, recognizes that "accurate measurement and reporting of all GHG emissions will be necessary to assure accountability, establish the integrity of allowances, and sustain confidence in the market. The regulatory agency responsible for the program must track emissions to ensure that (1) emissions match allowances at particular sources and (2) overall emissions match overall allowances."[1] Development of Alaska's GHG Reporting Program will have many benefits and serve multiple purposes.

Administration of a mandatory GHG Reporting Program by the State will require sufficient personnel and administrative resources to ensure that all GHG emissions reporting occurs on schedule, that the data are audited each year (both centrally and through targeted site audits), and that the public can access emissions data on the Internet.[2]

Implementation Mechanism

Ideally, this GHG Reporting Program will be implemented as a component of an overall State Climate Change Program (see CC-6 for recommendation regarding creation and administration of an overall Alaska Climate Change Program). If a State Climate Change Program is not developed, actions are needed to, at a minimum, put in place a GHG Reporting Program.

The Subcabinet on Climate Change will need to propose legislation to move ahead with developing Alaska specific climate change statutes and regulations, whether for an overarching climate change program or specifically for a GHG Reporting Program. Alaska's climate change bill could be modeled after California's Global Warming Solutions Act of 2006[3] and Oregon's Climate Integration Act of 2007.[4] The Global Warming Solutions Act gave the California Air Resources Board (CARB) the statutory authority to establish a mandatory GHG reporting regulation[5] and funding to establish CARB's mandatory GHG reporting program. Oregon's Climate Change Integration Act provided funding for establishing Oregon's mandatory GHG reporting rule.[6] The Oregon Department of Environmental Quality's 2008 legislative package requested a total of more than $900,000 dollars for ten positions to establish a new climate change program within the Division of Air Quality.[7] These positions will be dedicated to administering the Oregon's GHG reporting rule, developing and implementing a cap-and-trade program, data entry and verification, identifying GHG mitigation opportunities.

Alaska State departments should co-write Alaska's climate change bill in conjunction with the Subcabinet on Climate Change and the Alaska Department of Law (ADOL). They will need to prepare fiscal notes that reflect the costs of a multi-year process during which the State will hire

[1] *Recommendations for Designing a Greenhouse Gas Cap-and-Trade System for California*. Recommendations of the Market Advisory Committee to the California Air Resources Board, June 30, 2007. http://climatechange.ca.gov/market_advisory_committee/index.html

[2] Ibid.

[3] *California Global Warming Solutions Act of 2006*, Assembly Bill 32, State of California. http://cliamtechange.ca.gov/publications/legislation.html

[4] Oregon's HB 3543 "Climate Change Integration Act" of 2007, 74th Oregon Legislative Session, June 2007.

[5] California Air Resources Board *Regulation for the Mandatory Reporting of Greenhouse Gas Emissions* in Title 17 of California's Code of Regulations. http://www.arb.ca.gov/regact/2007/ghg2007/froghg.pdf

[6] Oregon Department of Environmental Quality "GHG Reporting Rule", Oregon Administrative Rule 340-215-0010. http://www.deq.state.or.us/aq/climate/docs/FinalGHGRule.pdf

[7] Scott Sloane personnel communication with Margaret Oliphant, Oregon DEQ, August 19, 2008.

staff to develop the statutory and regulatory framework for administering a mandatory program. The State should be primarily responsible for developing, writing, and submitting the fiscal note along with Alaska's climate change bill. The note and bill should include monies for hiring personnel, developing reporting and verification procedures, and developing a database for GHG emissions as well as energy use and consumption. Obtaining both senate and house approval of this legislation and fiscal note could take multiple legislative sessions (1-3 years). The State should conduct a fee study to determine the monetary fees associated with administering its mandatory GHG reporting rule. It is anticipated that new State positions could eventually be funded through fees generated via the implementation of Alaska's GHG mandatory reporting rule and any future cap-and-trade program.

Once legislation is in place, the State should develop the GHG reporting and verification protocols and regulatory guidance documents for industry with assistance from private contractors. Examples of necessary reporting and verification procedures can be obtained from other state and regional GHG reporting rules and initiatives. Both the California Climate Action Registry's General Reporting Protocol8 and The Climate Registry's (TCR) General Reporting Protocol9 are possible templates for Alaska's GHG reporting program. Both of these protocols use an on-line reporting database which provides transparent, consistent, written reporting procedures for industry as well as third-party verified data for public consumption.

It is likely that EPA's future GHG mandatory reporting protocol will be similar to TCR's protocol. TCR hosts a national climate database and it is anticipated that, under a future national cap-and-trade program, states will be responsible for reporting these data to a centralized national database such as TCR's. Most western states are also members of the Western Climate Initiative (WCI), which is currently developing its Essential Requirements of Mandatory Reporting for the Western Climate Initiative.10 Alaska could choose to join TCR and WCI now to gain familiarity with their reporting and verification procedures and to allow for a more efficient transition of data reporting once a federal GHG reporting rule is promulgated. Essential reporting requirements for Alaska's future GHG reporting program may include but are not limited to the following: greenhouse gas pollutants, emission source categories, reporting thresholds and points of regulation.

Timing and Parties Involved

The State of Alaska, in conjunction with the Subcabinet on Climate Change, will be primarily responsible for writing Alaska's climate change bill, statutes and regulations. The State will be primarily responsible for writing the fiscal note, establishing and implementing the mandatory and voluntary components of Alaska's GHG emissions reporting program, developing the database, and publishing a state-wide GHG inventory and forecast every three years. The Alaska Energy Authority (AEA) may play a role in tracking voluntary reporting of energy consumption, energy production and energy-related climate change mitigation efforts to populate the energy database. Close coordination between state agencies including ADEC, AEA, and the University of Alaska will be required to design and implement energy-related GHG mitigation efforts. The

[8] California Climate Action Registry *General Reporting Protocol*, Version 3.0, April 2008, http://www.climateregistry.org
[9] The Climate Registry *General Reporting Protocol*, Version 1.1, May 2008, http://www.theclimateregistry.org.
[10] *Essential Requirements of Mandatory Reporting for the Western Climate Initiative*, second draft dated September 30, 2008, http://www.westernclimateinitiative.org/

following provides an estimated/possible sequence for establishing Alaska's Climate Change Program, including legislation, regulations and related efforts:

- 2009: The State of Alaska joins TCR and WCI to gain familiarity with their GHG reporting and verification procedures and infrastructure.

- 2009-2011: ADOL and other appropriate State of Alaska departments, in consultation with the Subcabinet on Climate Change, develop a climate change bill and a fiscal note to obtain legislative approval and monies for establishing Alaska's Climate Change Program.

- 2010-2012: ADOL and other appropriate State of Alaska departments, in consultation with the Subcabinet on Climate Change, develop statutes and regulations to establish Alaska's mandatory GHG emissions reporting program

- 2010-2012: The State of Alaska develops a database to track energy consumption and energy related climate change mitigation efforts throughout Alaska. See CC-4.

- 2012: Covered entities begin mandatory reporting to the State on their GHG emissions for 2011. Thereafter, reporting will occur on an annual basis.

- 2013: The State of Alaska publishes Alaska's GHG emissions inventory and forecast. This report will be published every three years to guide Alaska's climate protection efforts.

Related Policies/Programs in Place

- Federal Climate Change Initiatives: It is anticipated that climate change legislation will be forthcoming under the new administration but the timeframe is unknown. A previous attempt at federal climate change legislation[11] included a mandatory GHG reporting requirement and a carbon cap-and trade program. This act sought to regulate those industries which combust, transport, produce or manufacture > 10,000 CO_2e, and will probably form the backbone of any new federal GHG legislation.

- Regional Climate Change Initiatives: TCR maintains a national climate database and it is likely that future federal GHG mandatory reporting legislation will include methods very similar to TCR's "General Reporting Protocol"[13] because many states and Canadian provinces belong to TCR and already employ its reporting and verification procedures.

- State Climate Change Initiatives: California[5], Oregon[7], and Washington have already promulgated or are in the process of developing a GHG mandatory reporting rule. Under California's and Oregon's GHG reporting rules, covered entities are those industries which produce, consume, transport or manufacture >25,000 and > 2,500 metric tons of CO_2e, respectively.

[11] *Lieberman-Warner Climate Security Act of 2008*", S.3036, 110th Congress, 2nd Session, May 21, 2008.

- Alaska Climate Change Initiatives: The Alaska Energy Authority (AEA) is currently developing the Alaska Energy Plan, due to be published in January 2009.

Key Uncertainties & Feasibility Issues

A key uncertainty regarding developing a Climate Change Program for Alaska centers on the timing and content of federal climate change legislation. Does the State wish to wait for federal climate change legislation or develop Alaska specific legislation ahead of any federal climate initiatives and requirements? Previous federal attempts at climate change legislation gave states a 2% emission allowance for those states with GHG reporting programs that exceed federal GHG emission reduction targets.12 It may make financial sense for the State of Alaska to develop GHG legislation prior to the development of the federal rule to receive extra carbon emission allowances under a future cap-and-trade program. However, there are many uncertainties around future federal climate change legislation requirements (e.g. reporting thresholds, source categories, point of regulation). Therefore, it could also be financially prudent for Alaska to wait for federal GHG legislation to avoid duplication of effort and expenditure of time and money, though any federal legislation would also require the establishment of many of the same procedures outlined in

For the reporting program, the following questions need to be answered before and during implementation:

- What emission sources/emission thresholds should be included in a reporting program?
- Should the State of Alaska join TCR and/or WCI now to gain familiarity with their reporting and verification procedures? Currently, Alaska is an observer in WCI.
- Does Alaska have the monetary resources to hire additional staff as needed to develop and manage a Climate Change Program?

Benefits

Establishing a GHG emissions reporting program in Alaska would allow the State to ascertain an accurate, verifiable, and transparent baseline of GHG emissions for Alaska, and subsequently develop a feasible GHG mitigation goal. This program could collect, verify, and analyze GHG emissions data to establish a baseline of anthropogenic GHG emissions for Alaska, identify the types and magnitude of anthropogenic GHG emission sources in Alaska and their relative contributions. These data could be used to inform state leaders and the public on statewide GHG emission trends, identify opportunities for reducing GHG emissions, and allow the State to assess its climate change mitigation efforts over time.

Costs

TBD – [as needed and approved by the TWGs]

[12] See Section 3302 in "*Lieberman-Warner Climate Security Act of 2008*", S.3036, 110th Congress, 2nd Session, May 21, 2008.

Status of Group Approval

The CC TWG is in agreement with this proposal. Additional details have been developed on this option and are available for MAG as needed.

Level of Group Support

TBD – [until CCMAG moves to final agreement]

Barriers to Consensus

TBD – [undetermined until final vote by the CCMAG]

CC-2. Establish Goals for Statewide GHG Emission Reductions

Policy Description

Countries, regions and companies worldwide committed to reversing the effects of climate change have embraced the notion of setting emission reduction goals or targets. Many of these governmental and corporate entities have done so in response to the UN's Intergovernmental Panel on Climate Change which has determined that an 80% reduction (below 1990 levels) in GHG emission by 2050 is necessary to keep CO2 levels below 450 parts per million. Members of the United States Climate Action Partnership, (USCAP) an alliance of 28 major companies including BP America, ConocoPhillips and Shell have agreed that by 2012 or sooner, they will reduce their emissions, including reductions up to 10% by 2017, and 60-80% by 2050. The states of Colorado, Connecticut, Oregon, Florida, New Mexico, Illinois and Minnesota have set similar goals. The states of Washington, California, Arizona and Utah have also established emission reduction goals using different progressive benchmarks. California is the only state to have established mandatory economy-wide emissions caps that include enforceable penalties.

More recently, President Obama has publicly announced his intent to "establish strong annual targets that set us on a course to reduce emissions to their 1990 levels by 2020 and reduce them an additional 80% by 2050." One hundred and fifty two members of Congress have signed a letter expressing strong support for these same levels of emission reductions. Draft legislation currently circulating in Congress includes the same goals articulated by President Obama.

In Alaska, the Center for Climate Strategies found that, as of 2005, there are likely over 50 million metric tons (MMt) of gross GHG emissions generated from Alaskan sources. Over 40% of these emissions result from burning carbon based fuels at industrial sites. Another major finding of the report is that nearly 40% of the state-wide greenhouse gas emissions come from the transportation sector, mostly from jet fuel consumption. Of the remaining 20%, about 7% is non-combustion related emissions from the fossil fuel industries and 7% from electricity consumption/generation (for all uses). The remainder is divided between commercial and residential (non-electrical) energy needs. On a per capita basis, Alaska activities emit about 82 metric tons of CO2 annually; significantly higher than the national average of 25 Mt per yr.

Given that almost half of Alaska's emissions are a result of fossil fuel industrial activity, it is important to note that BP America, ConocoPhillips and Shell Oil, in addition to agreeing to the goals promoted by USCAP (listed above), have all issued strong statements regarding climate change and emission goals. Here are a few excerpts:

- Robert Malone, President of BP America noted before the House Select Committee on Energy and Global Warming (April 2008) that "Congress should set climate policy goals and allow the market to decide which technologies best deliver upon the objectives it sets".

- BP America notes that in 1998 we set a target to cut emissions from our own operations to 10% below 1990 levels by 2010 – a target we reached nine years early.

- Jim Mulva, CEO of ConocoPhillips noted in his remarks to an energy conference (Feb. 2008) that "the industry must also recognize that the ways it provides energy must change. In the near term, we should reduce the carbon intensity of our own energy consumption. We can do this by continually improving efficiency and using more low-carbon and renewable fuels.

- Shell America notes on their website that they were one of the first energy companies to acknowledge the threat of climate change; to call for action by governments, our industry and energy users; and to take action ourselves. Shell America has reduced their GHG emission by nearly 25% compared to 1990.

Given these following indisputable facts:

1. Alaska is a premier energy state and the only Arctic state.

2. Alaska is experiencing the effects of climate change more than other state.

3. Alaska's major industry and source of GHG emissions supports policy goals to begin reducing GHG emissions by 2012, with reductions up to 10 percent by 2017 with an aim to reduce GHG emissions by 60-80% below 1990 levels by 2050.

4. There is a strong likelihood that national legislation will contain similar goals and that Alaska will strive to be part of the national solution.

The recommendation is: **the State of Alaska should set a similar goal to that promoted by USCAP (see 3 above).** "Goal" in this context is meant as an aspiration for the State as a whole and does not imply that these goals should become mandatory. It should be noted that these goals will 1) be reviewed after waste energy audits have been completed for Alaska's major emission sources and 2) do not account for emissions that may be added as a result of the operation of the natural gas pipeline. Once emission effects of the natural gas pipeline are known then these goals will be modified to account for this important energy project.

In addition, obtaining an accurate baseline of GHG emissions or energy consumption in Alaska will be necessary to measure Alaska's success in combating climate change and meetings its GHG emission reduction goals. Under any future carbon cap-and-trade program, carbon emission allowances may be allocated based on the GHG emissions baseline established. It will be crucial to have accurate data when establishing a cap-and-trade program to "avoid over-allocation of carbon allowances and to create the necessary market scarcity."[13]

Policy Design

Goals:

[13] *Recommendations for Designing a Greenhouse Gas Cap-and-Trade System for California*. Recommendations of the Market Advisory Committee to the California Air Resources Board, June 30, 2007.

- The State of Alaska adopts a goal of beginning to reduce GHG emissions by 2012, with reductions up to 10 percent by 2017, and with an aim to reduce GHG emissions by 60-80% below 1990 levels by 2050, similar to the USCAP goal. The CC TWG recognizes that these goals are the minimum, but offer a starting point for Alaska to enter the national stage on climate change mitigation.

- The State of Alaska will establish a GHG emissions baseline and refine it based on updates from any mandatory reporting program and GHG inventories (CC-1) to measure progress on goals.

Timing and Parties Involved:

To respect the bottom-up planning process established by the Governor's Climate Change Subcabinet, the CC TWG is advancing this recommendation to the Mitigation Advisory Group (MAG). As part of the evaluation process for all options being forwarded to the MAG, this option should be accepted knowing that the final review of this recommendation will occur at the end of the planning process. Acceptance of this option ensures that the recommendation of the Cross Cutting TWG is accepted in the process. A final review at the end of the planning process (just prior to submitting all recommendation to the Climate Change subcabinet) will allow the MAG to have a 'reality check' based on a composite analysis of the mitigation options proposed by all of the TWGs for Alaska.

Implementation Mechanisms

TBD – Oregon's *Climate Change Integration Act* established Oregon's GHG reduction goals in statute (e.g. by 2020, reduce GHG levels that are 10% below 1990 levels), and provided funding for establishing Oregon's mandatory GHG reporting rule.[14] Alaska approach needs to be discussed, based to some extent on input from other TWGs.

Related Policies/Programs in Place

See the Option Description for goals that have been set by other U.S. states, organizations and members of industry in Alaska.

Key Uncertainties

TBD – [as needed and approved by the TWGs]

Additional Benefits and Costs

By setting a GHG emissions goal, Alaska will be on par with many other U.S. states. Working to meet these goals could put Alaska in a more advantageous position if and when national rules on emissions reductions are enacted.

Feasibility Issues

TBD – [as needed and approved by the TWGs]

[14] Oregon Department of Environmental Quality "GHG Reporting Rule", Oregon Administrative Rule 340-215-0010. http://www.deq.state.or.us/aq/climate/docs/FinalGHGRule.pdf

Status of Group Approval

TBD – [until CCMAG moves to final agreement]

Level of Group Support

TBD – [until CCMAG moves to final agreement]

Barriers to Consensus

TBD – [undetermined until final vote by the CCMAG]

CC-3. Identify and Implement State Government Mitigation Actions

Policy Description

The State of Alaska can lead by example in responding to climate change and reducing GHG emissions by identifying potential GHG reduction activities and implementing specific and tangible changes in its operations.

Leadership on the part of the State to both identify and implement these early actions[15] will accomplish two primary goals:

- The State of Alaska can quickly make reductions in GHG emissions.
- The demonstrated success of State action can be an incentive for private citizens, businesses, NGOs, and local governments to take action. Identifying early actions and then doing them is the essence of "leading by example" and a necessary first step for more ambitious goals. Initial successes can also help convince the public and Legislature to move forward with actions that may require more significant changes in behavior, regulation and public funding.

Policy Design

Goals

- The State of Alaska "Leads by Example" by implementing no cost and low cost "Early Actions" that can be taken without new funding or legislative approval in the immediate future to reduce the State's GHG emissions, and actions that must be completed as a first step toward implementing more complex and expensive goals by the State.
- Publicize successes quickly through a "Report Card" to encourage others to act and to generate political momentum.

The objective of this option is for State agencies to implement actions within their purview and authority, with a priority toward immediate and meaningful reductions in GHG emissions by changes in day-to-day State activity. To facilitate this, the CC TWG has developed a preliminary matrix outlining potential lead-by-example actions, timeframes, needed resources and authorities, potential GHG reductions, and potential savings (see matrix following this write-up). Alaska can learn from the examples of other State governments that have taken steps to reduce State government GHG emissions in developing this list of actions.

The list of early-actions that the State should pursue includes:

[15] Actions that can be taken without new funding or legislative approval

- Require the establishment of audio-visual conferencing facilities and their use by state employees to reduce the economic and greenhouse gas emission costs associated with state employee airline travel

- Convert state-owned fleets to use lower carbon fuels and/or have more energy efficient vehicles;

- Develop expansive incentives for environmentally friendly commuting and comprehensive telecommuting policies for State employees;

- Develop an environmentally preferred purchasing program for state procurement;

- Conduct an energy audit and implement identified changes to improve energy efficiency for the governor's mansion and other key government buildings (e.g. require that all state computers be set at "sleep" mode or switched off when not in use for long periods of time, use LED holiday lights on state owned buildings and venues rather than conventional lights, switch to more energy efficient lighting, etc.);[16]

- Encourage creative ideas from state employees by offering incentives for energy conservation ideas in State facilities.

Alaska will establish an annual "Report Card" to describe the GHG reduction goals, and the progress that each State agency is making towards these goals[17] (relates to CC-1 and CC-2). In addition, to publicize success and encourage a culture of energy conservation, State agencies will release web updates and public service announcements when undertaking greenhouse gas emission reduction measures.

Timing and Parties Involved

State lead-by-example activity should be implemented as soon as possible after the MAG approves it as part of the Alaska Climate Change Strategy. DEC would take the lead initially to communicate and implement the immediate actions, using ideas and feedback from NGOs and other State climate offices. Once established, the new State Climate Change Program (CC-6) would take over the function of implementing and coordinating state lead-by-example actions, including identifying, tracking, and implementing more complex and expensive actions.

Implementation Mechanisms

DEC should initiate activity through the Subcabinet, identifying those actions to address immediately. The Subcabinet can agree to specific activities and recommend to the Governor's Office issuance of Executive Orders or other administrative mechanisms to implement immediate actions pertaining to specific departments. Funding may be needed in some instances to achieve early action goals.

[16] For examples, see the "Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California", October 17th, 2007. http://www.arb.ca.gov/cc/ccea/reports/reports.htm.

[17] For example, refer to "State Agency Greenhouse Gas Reduction Report Card", published by the California Environmental Protection Agency Air Resources Board, 2007. *http://www.arb.ca.gov/cc/cc.htm*

Over time, as a State Climate Change Program is established, it would take on the responsibility of communicating, educating, and providing resources for State agencies to continue to reduce their GHG emissions. .

Additional implementation approaches may be developed based on specific actions in the matrix.

Related Policies/Programs in Place

- Identifying early actions – and then implementing them – will serve as the catalyst for many other policies and goals identified by the MAG in Alaska's Climate Change Strategy.

- Local Climate Protection Efforts – Using "lessons learned", the State of Alaska could work with municipalities (borough, city, & village) in Alaska, possibly through the Alaska Municipal League, to develop their GHG mitigation plans. The State of Alaska can also look for opportunities to apply and expand the work developed at the municipal level to the state level (e.g. expanding the City of Homer's climate change plan).

Key Uncertainties

The ability of Alaska State agencies to implement GHG reduction policies that may require additional funding or time is unknown. The amount of funding and time required will vary by action, and will be estimated where possible in the matrix of early actions.

Feasibility Issues

Feasibility issues will vary by action, and be noted where appropriate.

Benefits

Changes in State procedures or employee behavior could significantly reduce GHG emissions in Alaska. Successful implementation at the State level can also set the stage for citizens and businesses to follow. Both "leading by example" and launching "first step" actions will create momentum that can launch the State's entire Climate Change Program.

Costs

TBD – [as needed and approved by the TWGs]

Status of Group Approval

TBD – [until CCMAG moves to final agreement]

Level of Group Support

TBD – [until CCMAG moves to final agreement]

Barriers to Consensus

TBD – [undetermined until final vote by the CCMAG]

INITIAL LIST OF LEAD-BY-EXAMPLE ACTIONS

#	Action	Timing	Needed Resources	Implementation Needs	GHG Savings	Cost or Cost Savings	Question/ Notes
1	**Require the use of audio-visual (AV) teleconferencing between state employees**	Immediate implementation using available resources; Increased use as more A/V centers are made available	Some AV resources are already available; Increased facilities needed; May need education/ training	Education to state employees about available resources; Establishment of new A/V centers	Elimination of air or ground travel GHG emissions	Eliminate cost of air or ground travel; Cost of increased use of AV resources	Is there any education related to Alaska's current AV resources? Are there additional barriers to use that should be considered?
2	**Convert state-owned fleets to use lower carbon fuels and/or have more energy efficient vehicles**	Phased implementation: older vehicles are replaced with more efficient vehicles or those that can use lower carbon fuels	New, more energy efficient vehicles; lower carbon fuels	Purchasing protocol to identify fleet vehicles for replacement and direct appropriate conversion	GHG savings as a result of using lower emissions fuels and/or vehicles	Initial higher cost of upgrading vehicles to more efficient models; likely decreased costs over the life of the vehicle, depending on the cost of fuel	How many state vehicles are there? Does AK have an obligation to purchase cars from American companies? Is there a central purchasing authority that this policy should be tailored towards?
3	**Develop expansive incentives for environmentally friendly commuting and comprehensive telecommuting policies for State employees**	Immediate implementation	Incentives for carpooling and transit; Increased infrastructure to support telecommuting	Development of incentives for carpooling and use of transit, such as transit passes or preferred parking; Development of telecommuting policies	State employees commuting less or more efficiently reduces GHG	Decreased driving could reduce parking lot needs and costs; Increased telecommuting can decrease office space needs	Does Alaska have a tele-commuting policy for any state employees?
3a	**State managers will immediately authorize certain employees the ability to telecommute**	Immediate implementation	Infrastructure to support telecommuting	Development of telecommuting policy; Identification of priority employees for telecommuting (i.e. those who commute more than 5 miles; those who do not have regular field or customer work)	State employees commuting less or more efficiently reduces GHG	Decreased driving could reduce parking lot needs and costs; Increased telecommuting can decrease office space needs	Does Alaska have a telecommuting policy for any state employees?
3b	**State sets up satellite work sites for those who commute long distances, but are unable to telecommute, such as in the Mat Su Borough**	Few months to years	Property and services for satellite work sites	Identification of locales that would be best served by satellite work sites (e.g. Mat Su Borough)	State employees commuting less reduces GHG		Does this action fit the definition of "early action"?
3c	**State provides or subsidizes commuter buses from park-and-ride sites in far suburbs from metropolitan areas**	Almost immediate	Buses or bus service to provide commuter service; Parking lots	Identified of locales that would be best served by commuter buses	State employees commuting more efficiently reduces GHG		Could there be enough voluntary use to make the system pay for itself? Would particular amenities encourage ridership?

#	Action	Timing	Needed Resources	Implementation Needs	GHG Savings	Cost or Cost Savings	Question/ Notes
4	**Develop an environmentally preferred purchasing program for state procurement, including energy efficient products**	Implementation following development of program and policies	Time needed for developing new policy	Development of new policy on procurement of environmentally preferable products	Reduced environmental footprint, including GHG emissions, in the purchase of environmentally preferable products	Reduced operational costs of using more energy efficient products; Some products may have higher costs than conventional counterparts	See MA: http://tinyurl.com/9qcfnr; Are there any policies in AK about environmentally responsible purchasing? What is the appropriate implementation vehicle?
5a	**Conduct an energy audit and implement identified changes to improve energy efficiency for key government buildings**	Immediate energy audit; phased implementation of identified changes	Resources for making identified changes to government buildings	Identify buildings for energy audit; Implement energy audit	Minor and major GHG savings, depending on buildings that were audited and upgraded; High profile building could encourage energy audits in public	Initial cost of making identified changes in buildings, though many of the changes (e.g. insulation, lighting upgrades, etc) will have a short payback period	Who will have primary responsibility? What resources/tools do they need?
5b	**Encourage creativity and new ideas by soliciting energy conservation ideas from state employees and providing an incentive for the best ones (e.g. paid time off)**	Immediate	No resources needed	Identification of incentive for good ideas	Employees are often aware of the best places to make energy conservation changes, so providing a goal could encourage large savings in GHG emissions	Costs would depend on incentive; Cost savings could be significant, depending on energy conservation measures suggested and implemented	

CC-4. Integrate Alaska's Climate Change Mitigation Strategy with the Alaska Energy Plan

Policy Description

This policy option is related to several others proposed by the CC TWG. The key elements of addressing Alaska climate change mitigation and energy activities are to establish a GHG baseline and goals (as described in CC-1 and CC-2) and to recognize that GHG management is a component of and must influence State energy planning. This option describes the basic strategy and reporting tools necessary to integrate Alaska's "Climate Change Mitigation Strategy" with the "Alaska Energy Plan" to accomplish the triple objective of reducing climate impacts, maintaining energy security, and ensuring economic prosperity for Alaska.

Both the Center for Climate Strategy's *Alaska GHG Inventory & Reference Case Projections, 1990-2020*[18] and the Alaska Department of Environmental Conservation's (ADEC) *Refinements to the Alaska GHG Emission Inventory*[19] concluded that the majority of Alaska's anthropogenic GHG emissions are due to the consumption of fossil fuels by power industry and transportation. The industries in Alaska combusting, producing, refining, storing and transporting fossil fuel are components of the "energy sector" and had the highest GHG emission estimates in the State. Integrating Alaska's "Climate Change Mitigation Strategy" with the "Alaska Energy Plan" makes sense as an approach to achieve the objectives stated above.

The Alaska Energy Authority (AEA) is updating the "Alaska Energy Plan", with expectations a new plan will be issued in early 2009. The Subcabinet's final "Climate Change Mitigation Strategy" is due to be published in Spring 2009. Both plans will include the development of energy efficiency, energy conservation, co-generation, fuel switching and renewable energy measures, leading to this recommendation for integration of the plans. For example, it would not make sense to develop a climate change mitigation strategy that calls for a reduction in Alaska's GHG emissions while at the same time enact an energy plan that calls for developing Alaska's coal, oil, and natural gas resources without considering the carbon footprint.

Starting in 2010, pending the approval of the Subcabinet on Climate Change, it is recommended that the "Alaska Energy Plan" and "Climate Change Mitigation Strategy" be combined to create a 10-year plan, entitled the "Climate Protection & Energy Plan." It is recommended that the integrated plan include fossil fuel (coal, oil, natural gas, coal-bed methane) resource extraction and production potential in Alaska projected through 2020, as these estimates influence the rate at which GHGs are produced. The Climate Protection and Energy Plan should also include development of an energy database (described below). This Plan should be updated periodically to guide Alaska's climate change mitigation objectives and energy consumption goals through

[18] *Alaska Greenhouse Gas Inventory and Reference Case Projections, 1990-2020*, Center for Climate Strategies, July 2007. www.climatechange.alaska.gov/doc-links.htm

[19] *Summary Report of Improvements to the Alaska Greenhouse Gas Emission Inventory*, ADEC, January 2008. http://www.climatechange.alaska.gov/doc-links.htm

time and across various State administrations. This option does not provide the detailed, industry-by-industry energy policies necessary for achieving Alaska climate change mitigation objectives as they are being addressed in other TWGs.

Policy Design

Goals

- Starting in 2010, the State of Alaska will begin to develop Alaska's 10-year "Climate Protection & Energy Plan" to achieve Alaska's climate change mitigation strategy objectives and energy consumption goals through the year 2020. This will be done by integrating the Climate Action Strategy with the Alaska Energy Plan.

- Starting in 2010, the State of Alaska will begin to develop an "Energy Database" which will track commercial, residential, industrial, and transportation energy consumption and production, GHG emissions and climate change mitigation actions throughout Alaska.

Timing and Parties Involved

Agreement on how to coordinate and integrate the two planning efforts is needed. The Alaska Energy Authority has responsibility for Alaska's Energy Plan and the Governor's Subcabinet on Climate Change is responsible for development of the Climate Change Mitigation Strategy.

Implementation Mechanisms

Integrating the Plans: There are many newly developed alternative energy blueprints that Alaska can incorporate to achieve its GHG mitigation goals. California's *Climate Change Proposed Scoping Plan*[20] provides numerous examples of state-led alternative energy initiatives. The US Department of Energy (DOE) and US Environmental Protection Agency (EPA) recently released their cooperative *National Action Plan for Energy Efficiency, Vision for 2025: A Framework for Change.*[21] The U.S. House of Representatives' Select Committee on Energy Independence and Global Warming *Final Staff Report for the 110th Congress*[22] also provides many energy-related measures to combat climate change. The Alaska Cold Climate Housing Research Center's (CCHRC) report[4] includes several examples of voluntary, residential and commercial energy measures that can be used to achieve a portion of Alaska's desired GHG mitigation goals. These newly developed energy policies can be combined with the Alaska specific climate change and energy options being developed by the TWGs and AEA to achieve Alaska's desired GHG mitigation goals through the eventual integration of the Alaska Climate Change Mitigation Strategy and the Alaska Energy Plan.

Establish Energy Goal Posts: As referenced previously, the majority of Alaska's anthropogenic GHG emissions are due to the consumption of energy as fossil fuels to power industry and transportation. Obtaining an accurate baseline of GHG emissions or energy

[20] *Climate Change Proposed Scoping Plan*, October 2008, prepared by the California Air Resources Board for the State of California. http://www.arb.ca.gov/cc/cc.htm

[21] *National Action Plan for Energy Efficiency, Vision for 2025: A Framework for Change*, prepared by the US Department of Energy, and US Environmental Protection Agency, November 2008. http://www.epa.gov/eeactionplan

[22] *Final Staff Report for the 110th Congress*, US House of Representatives Select Committee on Energy Independence & Global Warming, October 31, 2008. http://globalwarming.house.gov

consumption in Alaska will be necessary to measure Alaska's success in combating climate change. The Alaska Cold Climate Housing Research Center's (CCHRC) report states that "most significantly, energy conservation and policy effectiveness cannot be measured without establishing a current baseline. Collecting baseline data is the first step in launching a meaningful energy-related efficiency program."[23] Alaska's GHG emissions or energy consumption baseline is the starting point for accounting how well a climate change mitigation strategy is working. The other "goal post" would be the goals outlined in CC-2.

Establish Energy Database: It is recommended that the State of Alaska develop a statewide energy database to collect data on and monitor the following:

- Residential, commercial, industrial and transportation fossil fuel energy consumption and production;
- Alternative energy consumption and production;
- GHG emission reductions due to energy-related climate change mitigation actions

Currently, there is no energy database in Alaska that tracks commercial, residential, light industrial, and transportation energy consumption and production Statewide. Both the State of California and The Climate Registry use an online reporting tool for mandatory and voluntary reporting of GHG emissions, which are third-party verified and accessible to the public. The State of Alaska may need to develop a similar, new or modified, database and on-line reporting tool that would enable the State to track energy consumption and production (as well as carbon emissions as described in CC-1), and potentially the flow of money. This new or modified database will play an integral part in tracking Alaska's GHG emissions and energy-related climate change mitigation efforts. AEA may be the agency to house a portion of Alaska's new or modified database since it is responsible for implementing the Alaska Energy Plan. Energy units may have a monetary value under a future, federal carbon cap-and-trade or tax program (CC-5), meaning that whichever Agency has responsibility for issuing and tracking carbon allowances will need access to and familiarity with a well secured, State insured banking database.

Related Programs/Policies in Place

- Alaska's 10-year "Climate Protection and Energy Plan" should also integrate the energy and climate protection plans currently being developed by the members of the Alaska Municipal League and any other state efforts that would establish plans and efforts for energy production and mitigating GHG emissions.
- The Cold Climate Housing Research Center's (CCHRC) *Alaska Energy Efficiency Program and Policy Recommendations* report provides many voluntary residential and commercial energy-related measures that can be used to achieve a portion of Alaska's desired GHG mitigation goals.

[23] *Alaska Energy Efficiency Program and Policy Recommendations*, Final Report to the Cold Climate Housing Research Center, dated June 5, 2008. http://www.akenergyauthority.org/

- ADEC has the statutory responsibility for thermal and lighting efficiency standards and for training public building maintenance officials.

- The federal Energy Independence and Security Act of 2007 (EISA) sets stringent automobile fuel economy standards; industrial building, lighting and appliance efficiency standards; accelerates research in and deployment of alternative energy; and encourages smart-grid development.

Feasibility Issues

TBD – [as needed and approved by the TWGs]

Key Uncertainties

- Who has the authority to take the lead on integrating climate change mitigation strategies with energy planning?

- Who will be responsible for establishing and administering Alaska's Energy Database?

- How much will the Energy Database cost?

- Where will the Energy Database be located?

Benefits

Integrating Alaska's climate protection and energy policies will allow Alaska to achieve its GHG mitigation goals, and result in a profitable, less-volatile, fixed-price, carbon-based economy. Alaska is rich in carbon based fuels and should benefit from a future GHG cap-and-trade program.[24] [25]

Costs

TBD – [as needed and approved by the TWGs]

Status of Group Approval

TBD – [until MAG moves to final agreement]

Level of Group Support

TBD – [until MAG moves to final agreement]

Barriers to Consensus

TBD – [undetermined until final vote by the MAG]

[24] Comments on the documents titles "Analysis of The Lieberman-Warner Climate Security Act (S. 2191) Using The National Energy Modeling System (NEMS/ACCF/NAM)" & "Alaska Economic Impact on the State from the Lieberman-Warner Proposed Legislation to Reduce Greenhouse Gas Emissions", ISER Working Paper 2008.1 prepared by Steve Colt, Ph.D. Associate Professor of Economics, Institute of Social and Economic Research University of Alaska Anchorage, 11 April 2008.

[25] *Energy Market and Economic Impacts of S.2191, the Lieberman-Warner Climate Security Act of 2007*, by Energy Information Administration, April 2008.

CC-5. Explore Various Market-Based Systems to Manage GHG Emissions

Policy Description

Many organizations and governmental entities are exploring and implementing market-based programs for managing GHG emissions. For example, the European Union Emissions Trading Scheme and the Northeast Regional Greenhouse Gas Initiative have been developed and are being implemented. The Western Climate Initiative (WCI) is developing a regional cap and trade system among Western states (Alaska is an observer to WCI). The U.S. Congress is also developing and considering market-based systems that would be enacted nationwide if adopted, with varying scopes on industry. Details of these proposals vary, as does their impact on Alaska.

Alaska has many issues to be addressed as the State considers development of climate policy for the state. Alaska is a major producer of oil and natural gas, which makes up a large portion of its economy and of its greenhouse gas (GHG) footprint. Any market-based system that is adopted by Alaska or the United States could have significant effects on the nationwide demand for oil and gas. In general, any efforts to put a price on carbon will increase the wellhead value of both gas and crude oil from the North Slope. According to the Institute for Social and Economic Research (ISER), "natural gas contains 55% as much CO2 per unit energy as coal. Switching from coal to natural gas is one sure way for electric utilizes to reduce GHG emissions. Economic theory predicts that the more stringent is the cap on emissions, the more the demand for natural gas will be stimulated."26 Indeed, the projections contained in this ISER analysis of the Lieberman-Warner bill show an additional $4 billion to $9 billion per year of wellhead value, translating into an additional $1 billion to $2 billion per year of gas revenue to the State treasury under Lieberman-Warner.

This option recommends that a study be commissioned to explore the implications to Alaska of participating in the various market-based approaches for managing greenhouse gas emissions, including cap and trade programs and carbon taxes. The study would include investigation into the experiences of those who have implemented market-based systems, such as the European Union and the U.S. Northeast. The study could further make a recommendation on the type of market-based system that would be most beneficial to Alaska or the type of system that the State should prepare for.

The analysis of this commission report would look at the major market-based systems under consideration and their impacts on Alaska and would make a recommendation for on policy Alaska should develop. An appropriately designed market-based program can help ensure that GHG emissions are achieved in the most cost-effective manner possible. Revenues generated

[26] Steve Colt, Institute for Social and Economic Research, "Comments on the Lieberman-Warner Climate Security Act and Lieberman-Warner proposed legislation," April 2008, (www.iser.uaa.alaska.edu/Publications/Colt_ACCF-NAM_Ak2.pdf) and Steve Colt, Scott Goldsmith, and Peter Larson, ISER, "Analysis of National Greenhouse Gas (GHG) Control Legislation on Alaska Energy Prices and Consumer Costs," July 2007, (www.iser.uaa.alaska.edu/presentations/Bingaman_update_V2.pdf).

from the market-based program can be used to cover program costs, generate jobs, and establish loan or grant programs, or offset impacts.

Policy Design

Market based initiatives to manage carbon are under development.[27] Exploring the impact on Alaska of the various market-based systems in detail requires rigorous economic inquiry. This option recommends that a special commission be formed to research and explore different market-based initiatives and their impact on Alaska.

Goals:

- Examine how a market-based program interacts with existing and proposed emission reduction measures including regulations, performance-based standards, price subsidies, tax credits, and other technology promoting initiatives.

- Examine how to oversee and manage revenues generated by any future market-based program and determine whether changes to existing laws will be needed.

- In parallel and coordination with this study, participate in federal and regional discussions on and implementation of a market-based program for Alaska

The two major types of market-based systems under debate are carbon taxes and a carbon cap-and-trade program. The applicability of these approaches to Alaska needs further investigation. A brief description of these two market-based systems follows:

- A carbon tax is a pollution tax on carbon dioxide and other GHG emissions, levied on the production, distribution or use of a fossil fuel. The government would set a price for GHG emissions and translate that price into a tax on covered entities, such as the electric power industry, based on the amount of GHG emitted from fossil fuels. Because this tax would make energy more expensive to produce, it would encourage more energy conservation from both producers and consumers.

- A carbon cap-and-trade program would set a cap on the amount of allowable GHG emissions, potentially lowering the cap over time. The program would grant a certain number of allowances to entities (by geographic area or by industry). Entities that emit fewer GHG emissions than their allowance could sell their allowances on the market to entities that emit over their allowance, thereby putting a price on carbon that would encourage covered entities to reduce their GHG emissions. Some cap and trade programs propose a "safety valve" – if the price of a GHG allowances becomes too high, entities would be able to purchase additional allowances at some fixed price.

Timing and Parties Involved:

[27] See www.pewclimate.org/federal/analysis/congress/110/cap-trade-bills for a table summarizing the Economy-Wide Cap & Trade Proposals in the 110th Congress prepared by the Pew Center on Global Climate Change. See www.westernclimateinitiative.org/ewebeditpro/items/O104F19865.PDF for the design recommendations of the Western Climate Initiative.

2009: The Subcabinet on Climate Change would commission a research study to engage Alaska professionals in an Alaska-specific analysis of the impact of participating in various market-based proposals and determine a recommendation of the path forward for Alaska.

Implementation Mechanisms

The Subcabinet on Climate Change would commission a study on market-based options, potentially by leveraging existing funding.

Related Programs/Policies in Place

The Institute of Social and Economic Research (ISER) has done some economic analyses of how carbon market legislation could affect Alaska:
http://www.iser.uaa.alaska.edu/Home/ResearchAreas/climatechange.htm

Key Uncertainties

The timeframe for developing a federal market-based program to manage GHG emissions is unknown. Recent discussions in Congress, and announcements from President Obama, suggest that a GHG cap and trade program may be on the horizon. The pace of development of this federal legislation could impact the need for a study. Mandatory requirements could be developed before Alaska evaluates options and engages in discussions.

Feasibility Issues

It is unclear who would conduct this analysis, though the Alaska Institute for Social and Economic Research seems likely, given their past work on climate change legislation and its impacts on the Alaskan economy.

Benefits

The results of this analysis could help inform Alaska's participation in some market-based system, such as the WCI.

Costs

TBD – [as needed and approved by the TWGs]

Status of Group Approval

TBD – [until MAG moves to final agreement]

Level of Group Support

TBD – [until MAG moves to final agreement]

Barriers to Consensus

TBD – [undetermined until final vote by the MAG]

CC-6. Create an Alaska Climate Change Program that Coordinates State Efforts for Addressing Climate Change

Policy Description

Responding to climate change and reducing GHG emissions will require a dedicated and coordinated State of Alaska effort with sufficient funding and staff. Better coordination can promote efficiencies and effectiveness in the following areas:

- Coordination and tracking climate change efforts across State agencies in Alaska;
- Coordination between State of Alaska and other efforts;
- Coordination of the Alaska GHG emissions reporting program and related reporting tools (see CC-1 and CC-4);
- Access to information and education resources (web portal);
- Support of education for students and the public about climate change strategies and impacts; and
- Potential development and drafting of a GHG baseline, goals, priorities, inventories, schedules and performance measures related to mitigating climate change in Alaska.

To achieve the above, it is necessary to establish a centralized coordinating entity—an Alaska Climate Change Program. It is recommended that the Subcabinet prioritize available staff time and resources to create this entity, including an online presence (e.g., web portal) that represents the State of Alaska climate change activities, including the work of the Subcabinet and Climate Change Strategy that results from its efforts. With a strong coordinating office, resources and funding can be identified and secured to further develop this effort as the voice and face of Alaska's climate change policies and goals.

Policy Design

Goals:

The goals of the Alaska Climate Change Program staff are the following:

- Coordinate policy and legislation
- Provide information on climate change mitigation technology and regulatory guidance to industry and the public;
- Coordinate the GHG emission reporting program and associated inventories (see CC-1);

- Coordinate the Subcabinet's climate change mitigation policy efforts with the Alaska Energy Plan, the Alaska Municipal League, industry, the Western Climate Initiative and advisory groups and coordinate and track climate change efforts in Alaska;

- Develop partnerships with private citizens, businesses, and local governments;

- Conduct direct outreach on climate change and GHG reduction strategies;

- Develop a web portal and a repository of relevant resources and information; and

- Support educators to teach students of all levels regarding climate change.

Activities of the Program:

- Develop and draft statutes, regulations, fiscal notes, fee studies, position papers, guidance documents, policies, procedures, and standards as necessary to establish and implement federal and state climate change legislation;

- Coordinate and track climate change efforts in Alaska by working with the Governor's office, Subcabinet, Commissioners and state agencies as they develop policy, launch legislative initiatives, and implement practical and meaningful GHG emission reductions in day-to-day state operations;

- Implement GHG Reporting Program (CC-1); coordinate with any carbon market system;

- Develop partnerships with private citizens, businesses, and local governments to gather and share practical strategies to reduce emissions and mitigate climate change;

- Identify and implement climate change "early actions" for State government (see CC-3);

- Provide access to information by creating and populating a Web Portal dedicated to the Alaska Climate Change Strategy. The Web Portal effort could be supported by a team that includes agency Public Information Officers and Special Assistants for relevant State agencies, along with existing departmental staff who work on climate change issues. The Web Portal will be a repository of relevant resources and information for diverse audiences (e.g., elected officials, media, researchers, the public) and serve as a clearinghouse of climate change information, resources, and education materials. The goal of the web portal is not to replace or replicate existing efforts, but expand information access and assist current efforts with state resources. Examples of information that can be included on the website are:

    - Information on renewable energy/energy efficiency incentive programs in Alaska;

    - Practical and doable strategies – "what you can do" – for private citizens, businesses and industry sectors, and local governments

  - Identification and reporting of the actions that the state government is taking ("lead by example" – see CC-3); and

  - Links to the Alaska/Arctic climate change research and monitoring underway by universities, agencies and other groups.

- Coordinate technical advisory groups and then process, organize and share their recommendations with state leaders and the public;

- Implement and/or advocate the state's long-term climate change policy and plan;

- Conduct direct outreach on climate change, GHG reduction strategies, including personal and business strategies, and potential risks from and needed responses to climate change;

- Reach across state and municipal governments, NGOs, the private sector, and citizens to ensure the longevity of the Climate Change Strategy efforts (e.g., Advisory Groups and Technical Working Groups), bring agencies together to coordinate efforts, coordinate outreach and education, and support the ongoing work of the Subcabinet.

- Identify necessary regulations and work with agencies and the Legislature to enact them;

- Support education of students at all levels and the general public about climate change strategies and impacts and develop education resources and curriculum on climate change for schools and work with the local school districts and state Board of Education to incorporate climate change into science education standards.

Timing and Parties Involved:

This coordination effort should be initiated as soon as possible after approval by the Subcabinet on Climate Change. Key to success of the effort will be identifying and maximizing partnerships within State Agencies, and with federal, private and public programs. The Governor and the Governor's Office, OMB, the Climate Change Sub-Cabinet, and representatives of key State Departments, including ADEC, ADFG, ADNR, AEA, and DCCED should be involved. In 2009, the Subcabinet should assess current resources and identify lead staff. Resources and staff should be committed by the end of 2009 to address the goals and activities above.

Implementation Mechanisms

To establish an Alaska Climate Change Program, the State must promulgate statutes and regulations and allocate funds for the personnel and infrastructure to administer this program. The Subcabinet should submit legislative or budget documentation necessary to procure the resources and authority to charter this coordination and outreach effort. The design of this option assumes that at least a portion of Alaska's future Climate Change Program will be hosted by ADEC because most of the necessary permitting, database, and reporting tools for administering a GHG Reporting Program (see CC-1) are already in place.

Related Programs/Policies in Place

Creating an entity with the mission of tracking climate change and coordinating the State's response will ensure the success of all of the other policies in the Alaska Climate Change Strategy. Staff tasked with this effort can also serve as key liaisons and resources for the private sector if or when the State enacts regulations governing GHG emissions or reporting. The web portal would serve as an information hub to provide outreach for preparing for and responding to climate change, and for efforts to monitor, measure and research climate change.

Key Uncertainties

Creating a program using existing resources/securing additional needed funding; identifying a program lead; presenting information to the public in a way that will be comprehensive and accessible; and identifying processes by which the website is maintained and updated.

Feasibility Issues

Key feasibility issues include identifying a funding source, appropriately coordinating across existing programs, and significant and sufficient political will.

Benefits

Creating a coordination function to track and coordinate the state's response and resources to climate change can help ensure the continuing and success of the other mitigation policies, and offer an opportunity to leverage and pool resources.

Costs

TBD – [as needed and approved by the TWGs]

Status of Group Approval

TBD – [until MAG moves to final agreement]

Level of Group Support

TBD – [until MAG moves to final agreement]

Barriers to Consensus

TBD – [undetermined until final vote by the MAG]