

Appendix H

Cross-Cutting Issues

Policy Options

Summary List of ACCMAG Options

Option #	Option Proposals
CC-1	Establish an Alaska Greenhouse Gas Emission Reporting Program
CC-2	Establish Goals for Statewide GHG Emission Reduction
CC-3	Identify and Implement State Government Mitigation Actions
CC-4	Integrate Alaska's Climate Change Mitigation Strategy with the Alaska Energy Plan
CC-5	Explore Various Market-Based Systems to Manage GHG Emissions
CC-6	Coordinate Implementation of Alaska's Efforts to Address Climate Change

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

On March 10, 2009, U.S. EPA released a draft greenhouse gas (GHG) reporting rule that would require the mandatory reporting of GHG emissions from large sources (those emitting at least 25,000 MTCO_{2e}). If adopted in its current form, components of the following CC TWG option may no longer be applicable for the Sub-cabinet to consider, though some of the reporting structures will be necessary to comply with the Federal rule.

Policy Description

This climate change mitigation policy describes the basic legislative, fiscal, administrative, reporting and database elements necessary to establish and support a Greenhouse Gas (GHG) Reporting Program for the State of Alaska. Alaska's GHG Reporting Program will be responsible for establishing and administering Alaska's mandatory and voluntary GHG emissions reporting program. This program will 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 will be used to inform state leaders and the public on statewide GHG emission trends, identify opportunities for reducing GHG emissions, and will allow us to assess Alaska's climate change mitigation efforts over time. Pending the approval of the Subcabinet on Climate Change, implementation of this climate change mitigation policy would also require legislative and executive branch, including departmental, approval. The development of this program would be in conjunction with but not duplicative of any Federally mandated climate change or GHG reporting legislation or regulations.

Policy Design

Goals:

- Establish a Greenhouse Gas Reporting Program for the State of Alaska which 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 an "Energy Database" for the State of Alaska which will track commercial, residential, industrial, and transportation energy consumption, GHG emissions and climate change mitigation actions throughout Alaska.
- Develop and publish the Alaska GHG inventory and forecast every three (3) years. Use this information to communicate the results of climate change mitigation efforts, and to modify Alaska's climate change mitigation strategy as needed.

In order to establish a GHG Reporting Program for Alaska, the State will have to establish new climate change statutes and regulations as well as allocate funds for the personnel and infrastructure required to administer this program. The following section describes some of the legislative, fiscal, administrative, reporting, and database elements that are essential for establishing and administering Alaska's GHG Reporting Program.

Legislative & Fiscal Requirements: The State of Alaska and the Subcabinet on Climate Change will have to decide on a legislative pathway and the level of funding necessary for establishing and administering Alaska's GHG Reporting Program. Does the State wish to wait for Federal climate change legislation or develop Alaska specific climate change legislation ahead of any Federal initiative? It is anticipated that a national, economy-wide, carbon cap-and-trade or tax program will be promulgated by Federal law in the near future. Congress may decide to draft new Federal climate change legislation outside of the Clean Air Act (CAA) to allow the U.S. Environmental Protection Agency (EPA) to promulgate GHG mandatory reporting regulations and a carbon cap-and-trade program (e.g. Climate Security Act of 2008¹)². In the event of new Federal climate change legislation, the State of Alaska may need to prepare a climate change bill with a fiscal note, new statutes and regulations, and a fee study. This will be a multi-year (2-5 year) legislative process.

If Alaska decides to proceed with climate change legislation it 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 regulation⁵ and funding to establish CARB's mandatory GHG reporting program. This legislation also gave CARB the authority to establish California's 1990 GHG emissions baseline and a publically approved 2020 GHG emissions cap⁶. Oregon's Climate Change Integration Act⁴, an act relating to an emergency, 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 rule⁷. The Oregon Department of Environmental Quality's 2008 legislative package requested a total of more than \$900,000 dollars for ten (10) positions to establish a new GHG Reporting Program within their Division of Air Quality⁸. 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.

¹ "*Lieberman-Warner Climate Security Act of 2008*", S.3036, 110th Congress, 2nd Session, May 21, 2008.

² On March 10, U.S. EPA released a draft GHG emission reporting rule.
<http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>

³ "*California Global Warming Solutions Act of 2006*", Assembly Bill 32, State of California.
<http://climatechange.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 "*California 1990 Greenhouse Gas Emission Level and 2020 Emission Limit*", California Environmental Protection Agency Air Resources Board, Staff Report, Public Release Date November 16, 2007.
<http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm>

⁷ 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>

⁸ Scott Sloane, Alaska Department of Environmental Conservation, personal communication with Margaret Oliphant, Oregon Department of Environmental Quality, August 19, 2008.

Administrative Requirements: The Alaska Department of Environmental Conservation (ADEC) Division of Air Quality’s Air Permitting Program currently administers CAA Title V and Title I air discharge permits, conducts air pollution emission inventories using its AIRTOOLS database, and reports these data electronically to EPA. One option for Alaska’s future GHG Reporting Program would have that program work closely with ADEC’s Air Permitting Program because of the need to track GHG emissions as well as cap-and-trade allowances for large permitted industries. Therefore, the design of this option assumes that at least a portion of Alaska’s future GHG Reporting Program be hosted by ADEC because most of the necessary permitting, database, and reporting tools for administering Alaska’s GHG Reporting Program are already in place. Other state agencies will also play a role in Alaska’s GHG Reporting Program. The Alaska Energy Authority (AEA) is currently developing Alaska’s “Energy Plan.” As this plan is enacted, close coordination between AEA and ADEC will be necessary to track energy consumption and climate change mitigation efforts throughout Alaska. The University of Alaska will also play a large role in climate change mitigation and adaptation research and implementation. Alaska’s GHG Reporting Program could eventually be composed of several state agencies with different functions.

In order for the State to administer a mandatory GHG reporting and carbon cap-and-trade program, it will be necessary for it to have sufficient administrative resources to ensure that all GHG emissions reporting occurs on schedule, that these data are audited each year (both centrally and through targeted site audits), and that the public can access emissions data on the Internet.⁹ Under a future cap-and-trade program “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.”¹⁰ The State will also be responsible for providing certainty through well-recognized civil and criminal penalties.¹¹

Alaska’s future GHG Reporting Program staff would be tasked to accomplish the following:

- 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;
- Develop and draft GHG emission reporting and verification protocols, procedures, methods, forms, and reporting guidance documents for regulated industries in Alaska;
- Develop and draft GHG mitigation and reduction goals, priorities, inventories, schedules and performance measures related to mitigating climate change in Alaska;
- Establish Alaska’s GHG emissions baseline and compare this baseline to Alaska’s GHG mitigation goals;

⁹ “*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

¹⁰ Ibid.

¹¹ Ibid.

- Conduct and publish Alaska’s GHG emission inventory every three years;
- Allocate and track carbon emission allowances for facilities permitted under a future Federal cap-and-trade program;
- Provide information on climate change mitigation technology and regulatory guidance to industry and the public;
- Coordinate the Subcabinet’s climate change mitigation policy efforts with Alaska’s Energy Plan, the Alaska Municipal League, industry, the Western Climate Initiative and others; and
- Conduct compliance and enforcement activities.

GHG Reporting & Verification Requirements: Once Alaska’s GHG Reporting Program is in place, the State of Alaska may then establish a standard protocol for mandatory and voluntary GHG emissions reporting and verification. The State would be primarily responsible for developing these written protocols with assistance from private contractors.

All of the 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 Protocol*”¹² and The Climate Registry’s (TCR) “*General Reporting Protocol*”¹³ are good 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 “*General Reporting 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*.”¹⁴ 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*—The following greenhouse gases would be included: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). Other newly described greenhouse gases, like nitrogen trifluoride (NF₃), may also be included under Alaska’s mandatory GHG reporting rule.
- *Emission Source Categories*—Electricity Generation; Industrial Processes such as oil & gas process emissions (including vented, flared, fugitive, and accidental emissions); commercial,

¹² California Climate Action Registry “*General Reporting Protocol*”, Version 3.0, April 2008, <http://www.climateregistry.org>

¹³ The Climate Registry “*General Reporting Protocol*”, Version 1.1, May 2008, <http://www.theclimateregistry.org>.

¹⁴ “*Essential Requirements of Mandatory Reporting for the Western Climate Initiative*”, second draft dated September 30, 2008, <http://www.westernclimateinitiative.org/>

industrial, residential, and transportation fuel combustion above the reporting threshold. An Alaska GHG reporting program would include those industries in Alaska with a Title V permit, but could also include mobile sources such as marine and aviation fleets and other transportation sources above the reporting threshold.

- *Reporting Thresholds*—Alaska’s GHG reporting threshold will have to be as stringent as any future Federal reporting requirement. The Climate Security Act of 2008¹⁵ captured GHG sources emitting >10,000 CO₂ equivalents (10,000 metric tons of CO₂). California’s mandatory GHG reporting rule captures emission sources which emit $\geq 25,000$ CO₂ equivalents.¹⁶ Oregon’s proposed mandatory GHG reporting program captures emission sources which emit $\geq 2,500$ metric tons or more of carbon dioxide equivalent per year of greenhouse gases.¹⁷
- *Point of Regulation*—For industrial facilities the point of regulation is the point of emission. For electricity sources in Alaska, the point of regulation would also be the point of emission, since electricity is not currently distributed or sold out-of-state. For transportation sources, the point of regulation could be the point at which fuels enter commerce at the terminal rack, final blender, or distributor.

Database Requirements: It is recommended that the State of Alaska develop a statewide energy database which will enable it to record and monitor the following:

- Residential, commercial, industrial and transportation fossil fuel energy consumption and production;
- Alternative energy consumption and production;
- Mandatory and voluntary reporting of energy-related GHG emissions;
- GHG emission reductions due to energy-related climate change mitigation actions; and
- Carbon emission allowances and their monetary value under a future cap-and-trade program.

To track Alaska’s energy-related GHG emissions and their abatement it will be necessary to establish an “Energy Database” which will monitor statewide residential, commercial, industrial and transportation fossil fuel energy consumption and production in energy units. The common energy unit used in international reports of GHG emissions is the joule or terajoule (TJ = 10^{12} joules), while the customary U.S. energy unit is the British Thermal Unit (BTU). Electric utilities often report their emissions per kilowatt hour (kWh) or megawatt hour which are interchangeable with TJ and BTUs. Knowing both the higher heating values of various fuels (e.g. million BTUs per cubic foot of natural gas) and their carbon content (e.g. teragrams of carbon per BTU) allows us to convert a facility’s or fleet’s energy consumption (BTUs, TJ, kWh) to GHG emissions in teragrams (Tg = 10^{12} g) of carbon, or million metric tons of CO₂

¹⁵ See Section 4 in “*Lieberman-Warner Climate Security Act of 2008*”, S.3036, 110th Congress, 2nd Session, May 21, 2008.

¹⁶ 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>

¹⁷ 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>

equivalents (MMTCO₂e).¹⁸ Alaska's "Energy Database" should be able to record and monitor facility and fleet specific energy consumption and production in the form of TJ, BTUs, kWh, calories or other energy unit and easily convert these to GHG emissions in Tg of carbon or MMTCO₂e.

In addition to tracking energy (BTU, kWh, TJ), this new or modified database may also have to issue and track carbon emission allowances and have banking capabilities. Carbon emissions or energy units will have a monetary value under a future Federal carbon cap-and-trade or tax program. It is anticipated that large industries in Alaska will be regulated as "capped sources" in the near future.¹⁹ These large industries are already 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 emissions from these large industries and transmits these data electronically to EPA on a periodic basis. AIRTOOLS could be enhanced and used for tracking and reporting GHG emissions under a future mandatory GHG reporting rule and cap-and-trade program. However, this database is currently insufficient to monitor statewide energy consumption and production, carbon emission allowances and potentially the flow of money. The state agency eventually responsible for issuing and tracking carbon allowances may need access to and familiarity with a well secured, state insured banking database. Preferably this database would serve multiple functions and have the statewide capability to accurately and securely monitor the following:

Energy ◊ GHG Emissions ◊ US Currency
[BTU, kWh, TJ] ◊ [Tg of carbon or MMT CO₂e] ◊ [\$\$\$]

It will also be important for Alaska to track and mitigate GHG emissions from residential, commercial, light industrial and transportation sources that are not included under a future cap-and-trade program (uncapped sources). The Center for Climate Strategy's "*Alaska GHG Inventory & Reference Case Projections, 1990-2020*"²⁰ estimated that transportation sources in Alaska accounted for approximately 35% of the gross GHG emissions in 2000. Residential and commercial sources accounted for another 9% of the gross GHG emissions in that same year. Combined, these sources accounted for almost 45% of the total GHG emissions in Alaska for 2000. These GHG emissions sources may not be captured under a future mandatory GHG reporting rule or cap-and-trade program. Alaska's climate change mitigation strategy will need to account for both mandatory (capped) and voluntary (uncapped) GHG emission sources so that all GHG emissions can be tracked as climate change mitigation activities are enacted across the state.

Currently, there is no energy database in Alaska which tracks commercial, residential, light industrial, and transportation energy consumption and production throughout the State.²¹ Both the State of California and The Climate Registry use an online reporting tool for mandatory and

¹⁸ EPA's "Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2006", Annexes 1-8.

¹⁹ *Lieberman-Warner Climate Security Act of 2008*, S.3036, 110th Congress, 2nd Session, May 21, 2008.

²⁰ *Alaska Greenhouse Gas Inventory and Reference Case Projections, 1990-2020*, Center for Climate Strategies, July 2007. www.climatechange.alaska.gov/doc-links.htm

²¹ Scott Sloane, ADEC, personal communication with Peter Crimp, Alaska Energy Authority, December 5, 2008.

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 which would enable the State to track energy, carbon emissions 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's responsible for implementing Alaska's Energy Plan.

Timing: The following timeline provides an estimated timeframe for establishing Alaska's GHG Reporting Program, including legislation, regulations and related efforts:

- **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 GHG Reporting 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, and carbon cap-and-trade program.
- **2010–2012:** The State of Alaska develops a database to track energy consumption and energy related climate change mitigation efforts throughout Alaska.
- **2009:** The State of Alaska joins TCR and WCI to gain familiarity with their GHG reporting and verification procedures and infrastructure.
- **2012:** Covered entities will be required to begin reporting to the State of Alaska on their GHG emissions for 2011. Thereafter, reporting will occur on an annual basis.
- **2012:** 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.

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. The State will also be responsible for establishing and implementing the mandatory and voluntary components of Alaska's GHG emissions reporting program, and publishing a state-wide GHG inventory and forecast every three years. AEA may play a role in tracking voluntary reporting of energy consumption, energy production and energy-related climate change mitigation efforts. 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.

Other: None.

Implementation Mechanisms

The Subcabinet on Climate Change would need legislative approval from both houses in the form of a bill prior to moving ahead with developing Alaska specific climate change statutes and regulations. Alaska's climate change bill could be modeled after California's "Global Warming Solutions Act of 2006"²² and Oregon's "Climate Integration Act of 2007."²³ State departments

²² *California Global Warming Solutions Act of 2006*, Assembly Bill 32, State of California.

would co-write Alaska's climate change bill in conjunction with the Subcabinet on Climate Change and the Alaska Department of Law (ADOL). As part of this legislative approval process, affected State of Alaska agencies would have to prepare fiscal notes which reflect the costs of a multi-year process during which the State would hire staff to develop the statutory and regulatory framework for administering a mandatory GHG reporting program and carbon cap-and-trade program. The State would be primarily responsible for developing, writing, and submitting the fiscal note along with Alaska's climate change bill. The fiscal note would include monies for hiring GHG Reporting Program personnel, developing reporting and verification procedures, and developing a database as presented in this mitigation option. Obtaining both senate and house approval of Alaska's climate change legislation and fiscal note could take multiple legislative sessions (1-3 years).

Once Alaska's climate change legislation is approved, the fiscal note will provide the monies necessary for the State to hire staff to develop a GHG Reporting Program, develop climate change statutes and regulations, GHG reporting and verification procedures and a database. ADOL would be primarily responsible for developing Alaska specific climate change statutes and regulations in conjunction with the Subcabinet. The State would be primarily responsible for developing a "GHG Mandatory Reporting Rule" by amending and adopting GHG reporting regulations developed in other states. The State would develop the GHG reporting and verification protocols and regulatory guidance documents for industry with the assistance from private contractors. The State would be solely responsible for conducting a fee study to determine the monetary fees associated with administering its mandatory GHG reporting rule. It is anticipated that any new positions will eventually be funded through fees generated via the implementation of Alaska's GHG mandatory reporting rule and carbon cap-and-trade program.

One of the primary implementation tasks will be developing a database, new or modified, which tracks energy and carbon allowances. Carbon emissions will have a monetary value under a future carbon cap-and-trade program. The state agency eventually responsible for issuing and tracking these carbon allowances will need access to and familiarity with a well secured, state insured banking database. AEA may be the agency to house a portion of Alaska's new or modified database since it's responsible for implementing Alaska's Energy Plan.

Related Policies/Programs in Place

- **Federal Climate Change Initiatives:** EPA has released a draft GHG emissions reporting rule, and it will soon be open for public comment. This draft rule, as written, would regulate large sources of GHG emissions, including those not currently regulated by EPA. The rule will be finalized 60 days after it is published in the *Federal Register*, and may undergo substantial changes, depending on the comments received. Currently, the draft reporting rule would regulate any source that emits $\geq 25,00$ MTCO_{2e}.
- **Regional Climate Change Initiatives:** The Climate Registry (TCR) maintains a national climate database. It is likely that future Federal GHG mandatory reporting legislation will include methods very similar to TCR's "General Reporting Protocol" because most states

<http://cliamtechange.ca.gov/publications/legislation.html>

²³ Oregon's HB 3543 "Climate Change Integration Act" of 2007, 74th Oregon Legislative Session, June 2007.

and Canadian provinces belong to TCR and already employ its reporting and verification procedures. The State of Alaska could join TCR now to gain familiarity with their reporting and verification procedures. Alternatively, the State of Alaska could develop state-specific reporting and verification procedures or wait for Federal GHG legislation and adopt the Federal GHG reporting and verification procedures.

- **State Climate Change Initiatives:** The western states of California, Oregon, 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 $\geq 25,000$ and $\geq 2,500$ metric tons of CO₂ equivalents, respectively. EPA will likely employ GHG reporting and verification procedures similar to those developed by California, TCR, and WCI.
- **Alaska Climate Change Initiatives:** The Alaska Energy Authority (AEA) is currently developing an Energy Plan for Alaska due to be published in January 2009. The Subcabinet on Climate Change could work with AEA and the Alaska Municipal League to integrate their alternative energy plans into Alaska's Climate Change Mitigation Strategy. To integrate Alaska's Energy Plan and Climate Change Mitigation Strategy a new or modified database will need to be developed for the State which can track energy and carbon.

Type(s) of GHG Reductions

Not applicable.

Estimated GHG Reductions and Net Costs or Cost Savings

Not applicable.

Key Uncertainties

A key uncertainty regarding development of a GHG Reporting Program for Alaska is coordination and interaction with EPA regulations. Recently, EPA released a draft GHG emissions reporting rule. Does the State wish to wait for Federal climate change legislation to be finalized or does it want to develop Alaska-specific legislation ahead of a finalized Federal climate change initiative? 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 (see section 3302 Climate Security Act²⁴), though the current draft of EPA's rule does not do this. It may make financial sense for the State of Alaska to develop GHG legislation prior to the finalization of the Federal rule in order to receive extra carbon emission allowances under any future cap-and-trade program. However, there are many uncertainties with regards to what future Federal climate change legislation may require (e.g. reporting thresholds, source categories, point of regulation): since the rule is in draft form, there may be many changes to it before it is finalized. Therefore, it may be financially prudent for Alaska to wait for Federal GHG legislation to avoid duplication of effort, avoid wasting legislative staff time and executive branch money.

²⁴ See Section 3302 in *Lieberman-Warner Climate Security Act of 2008*, S.3036, 110th Congress, 2nd Session, May 21, 2008.

Another key uncertainty centers on developing an “energy database” for Alaska. Where will this database be housed and who will develop it? What data elements are required? Close coordination between affected state agencies, AEA and the University of Alaska will be required to develop this database. This coordination process should begin immediately following the climate change bill and fiscal note approval. A list of policy questions follows:

- Should the State of Alaska develop a “GHG Mandatory Reporting Rule” now or wait for finalization of Federal legislation?
- Should Alaska’s GHG Reporting Program include both mandatory and voluntary reporting of GHG emissions, and what emission sources and emission thresholds should be included?
- Should the State of Alaska develop an energy-database to track GHG emissions, carbon allowances, and energy related climate change mitigation efforts throughout Alaska?
- Should the State of Alaska join TCR and WCI now to gain familiarity with their reporting and verification procedures; or wait for future Federal mandatory reporting requirements?
- Does Alaska have existing statutory authority to implement a GHG cap-and-trade program or do new statutes and regulations have to be developed prior to implementing this program?
- Does Alaska have the monetary resources to hire additional staff as needed to develop and manage a GHG Reporting Program?

Additional Benefits and Costs

Benefits

Establishing a GHG 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 technically 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 could allow us to assess Alaska’s climate change mitigation efforts over time.

Costs

The estimated five-year (FY 2010-2014) operating expenditures for establishing and administering Alaska’s GHG Reporting Program are presented in Table 1. Personnel salary and benefit funds are presented for five full time equivalents (FTEs) including one Environmental Program Specialist (EPS) IV, three EPS III, and one Analyst Programmer.

Table 1.1. GHG Reporting Program 5-year estimated operating expenditures

Operating Expenditures	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Personnel Salary & Benefits for 5 full-time positions	\$425,000	\$425,000	\$425,000	\$425,000	\$425,000
Travel	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
Equipment	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000

Operating Expenditures	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
Contractual					
ADOL	\$100,000	\$100,000	\$100,000	0	0
Reporting/Guidance Documents	\$100,000	\$100,000	\$100,000	0	0
Energy Database Development	\$100,000	\$100,000	\$100,000	0	0
Database Maintenance				\$50,000	\$50,000
Totals	\$775,000	\$775,000	\$775,000	\$525,000	\$525,000

During the first three years of this transition period (FY 2010-2012) a total of \$300,000 dollars are allocated to the following: \$100,000 for ADOL to develop a climate change bill, statutes and regulations; \$100,000 for private contractors for developing mandatory GHG reporting & verification procedures and other regulatory guidance documents; \$100,000 for developing an energy-database. Over the five-year transition period, annual program receipts from routine fees associated with administering the GHG Reporting Program are expected to increase. The State will have to conduct a fee study to ascertain the fee structure necessary to pay for the increased level of effort associated with administering a mandatory GHG reporting program, administering the carbon cap-and-trade program, as well as compliance and enforcement activities. It is anticipated that eventually most of the personnel salary and benefit costs will be paid for by permit fees and the trading of carbon under a future cap-and-trade program. Final costs estimates may differ from those presented above depending on the final options for and design of a state GHG Reporting Program.

Feasibility Issues

In developing an Alaska-specific reporting program, the feasibility issues to note are how it would interface with any Federal or regional program, and where and how funding would be available for the staff positions and infrastructure required.

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-2. Establish Goals for Statewide GHG Emission Reductions

Policy Description

The State of Alaska should set a goal that both recognizes Alaska's unique emissions profile and the emerging dynamics of a Federal GHG emission regulatory program. In addition, the State of Alaska should set a baseline of emissions that will help measure progress toward these goals. This option recommends that the State of Alaska adopt a goal starting now to reduce emissions, with reductions of 20% below 1990 levels by 2020, and 80% below 1990 levels by 2050.

Countries, regions, states, cities, counties, and companies worldwide committed to reversing the effects of climate change have set goals or targets as a mechanism to ensure that emission reductions are achieved. Many of these governmental and corporate entities have done so in response to the UN's Intergovernmental Panel on Climate Change (IPCC) 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 major companies and climate and environmental groups that includes BP America, ConocoPhillips and Shell, have agreed to their own emission reductions targets, and have also reached consensus on the need for a regulated, economy-wide market-driven approach to climate protection that includes emission reductions for total U.S. emissions and for capped sectors. USCAP recommends the following emission reduction targets and timetable, which it believes are achievable at manageable costs to the economy when enacted along with offset and other cost containment measures:

- 97%-102% of 2005 levels by 2012
- 80%-86% of 2005 levels by 2020
- 58% of 2005 levels by 2030
- 20% of 2005 levels by 2050

Almost half of all U.S. states have established state-specific goals and targets to reduce their emissions, with many setting aspirational goals of reducing emissions up to 80% below 1990 levels by 2050.²⁵ In the Federal budget released in February 2009 for fiscal year 2010, the Obama Administration proposed a 14% reduction in emissions below 2005 levels by 2020.²⁶ One hundred and fifty two members of Congress have signed a letter expressing strong support for these same levels of emission reductions. In addition, the *American Clean Energy and Security Act of 2009*, commonly referred to as the Waxman-Markey bill, proposes a number of

²⁵ States with state-specific goals and targets include Arizona, California, Colorado, Connecticut, Oregon, Florida, New Mexico, Illinois, Minnesota, Utah and Washington. At this time, California is the only state with a mandatory economy-wide emissions cap that includes enforceable penalties. The Pew Center Web site contains detailed information on emissions targets and other activities at the state level:
www.pewclimate.org/what_s_being_done/in_the_states/state_action_maps.cfm

²⁶ *A New Era of Responsibility: Renewing America's Promise – Budget for Fiscal Year 2010*. The U.S. Office of Management and Budget. Accessed:
http://www.whitehouse.gov/omb/assets/fy2010_new_era/a_new_era_of_responsibility2.pdf

measures related to U.S. climate policy, including the establishment of nationwide goals associated with a cap-and-trade system. The current language proposed in the bill calls for a 20% reduction in GHG emission below 2005 levels by 2020, a 42% reduction by 2030 and an 80% reduction by 2050.²⁷

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 MTCO₂ annually, significantly higher than the national average of 25 MTCO₂ per year.

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, have all issued strong statements regarding climate change and emission goals. For example:

- 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.”²⁸
- BP America notes that in 1998, BP America set a target to cut emissions from operations to 10% below 1990 levels by 2010—a target reached nine years early.²⁹
- Jim Mulva, CEO of ConocoPhillips noted in his remarks to an energy conference (February 2008) that “the industry must also recognize that the ways it provides energy must change. For example: 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.”³⁰

²⁷ *American Clean Energy and Security Act of 2009*. Accessed:
http://energycommerce.house.gov/Press_111/20090331/acesa_discussiondraft.pdf

²⁸ Robert Malone, BP America, written testimony to U.S. Congress, April 1, 2009.
<http://globalwarming.house.gov/tools/assets/files/0456.pdf>

²⁹ BP Sustainability Report 2001.
http://www.bp.com/liveassets/bp_internet/globalbp/STAGING/global_assets/downloads/E/Environmental_and_social_report_2001.pdf

³⁰ Jim Mulva, Chairman & CEO, ConocoPhillips. CERAWeek Energy Security and Climate Change Speech. “Energy Security and Climate Change: The Case for Engagement”, February 12, 2008.
http://www.conocophillips.com/newsroom/other_resources/CERA_speech.htm

- Shell notes on their Web site that they were one of the first energy companies to acknowledge the threat of climate change; to call for action by governments, its industry and energy users; and to take action itself.³¹ Shell America has reduced their GHG emission by nearly 25% compared to 1990.

Given these following indisputable facts:

- Alaska is a premier energy state and the only Arctic state;
- Alaska is experiencing the effects of climate change more than other state;
- 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 and incremental goals thereafter that reduce GHG emissions by 60-80% below 1990 levels by 2050;
- 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 State of Alaska should set a goal that both recognizes Alaska's unique emissions profile and the emerging dynamics of a Federal GHG emission regulatory program. "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 1) will 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 meeting 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."³²

Policy Design

Goals:

- The State of Alaska adopts a goal starting now to reduce emissions, with reductions of 20% below 1990 levels by 2020, and 80% below 1990 levels by 2050.
- The State of Alaska establishes a GHG emissions baseline and refines it based on updates from any mandatory reporting program and GHG inventories to measure progress on goals.

³¹ "Responding to Climate Change: Responsible Energy." Royal Dutch Shell.
http://www.shell.com/home/content/responsible_energy/environment/climate_change/

³² *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.

Timing: 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 CC 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.

Parties Involved: The Mitigation Advisory Group; The Subcabinet on Climate Change; other stakeholders as deemed necessary

Other: None.

Implementation Mechanisms

This option could be implemented through either legislation or as an executive order. . In Oregon, the *Climate Change Integration Act* established Oregon’s GHG reduction goals in statute (e.g. by 2020, reduce GHG levels to 10% below 1990 levels), as well as provided funding for establishing Oregon’s mandatory GHG reporting rule.³³ In Washington, the state’s GHG reduction goal was established in 2007 when Governor Gregoire issued Executive Order 02-07.

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.

Type(s) of GHG Reductions

Not applicable.

Estimated GHG Reductions and Net Costs or Cost Savings

Not applicable.

Key Uncertainties

The key uncertainty associated with this option is how it could interface with any Federal legislation that may occur in the near future. It is possible that the U.S. Congress would pass legislation that would require a GHG emission cap across all states. If this were to happen, Alaska would decide whether they wanted to meet that cap or set a goal to go even further in reductions.

³³ 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>

Additional Benefits and Costs

Benefits

By setting a GHG emissions goal, Alaska would 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.

Costs

Costs for adopting this option could be zero if the MAG and Subcabinet agree to these proposed goals. If additional work is needed to help stakeholders agree to goals for GHG emission reductions, there would be some moderate costs (\$10,000 - \$50,000) to facilitate a workgroup of these stakeholders and develop a decision.

Feasibility Issues

These goals should be evaluated against other Mitigation TWGs recommended options for reducing greenhouse gas emissions to ensure this reduction goal is feasible for the state to undertake.

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-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 actions³⁴ 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:

- 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;

³⁴ Actions that can be taken without new funding or legislative approval

- 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.);³⁵
- 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 goals³⁶ (related 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: 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.

Parties Involved: DEC would take the lead initially to communicate and implement the immediate actions, using ideas and feedback from other State climate offices and relevant non-governmental organizations. If any State climate change program or coordinating body is established, it would take over the function of implementing and coordinating state lead-by-example actions, including identifying, tracking, and implementing more complex and expensive actions.

Other: None.

Implementation Mechanisms

ADEC 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, though it is assumed that these options would have a short energy payback period.

If any state climate change program or coordinating body is established, it would take on the responsibility of communicating, educating, and providing resources for State agencies to continue to reduce their GHG emissions.

³⁵ 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/ceca/reports/reports.htm>.

³⁶ 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>

Additional implementation approaches may be developed based on specific actions

Related Policies/Programs in Place

- Identifying early actions—and then implementing them—will serve as the catalyst for many other policies and goals identified in Alaska’s Climate Change Strategy.
- Using “lessons learned”, the State of Alaska could work with municipalities (boroughs, cities, and villages), 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).

Type(s) of GHG Reductions

Not applicable.

Estimated GHG Reductions and Net Costs or Cost Savings

Not applicable.

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.

Additional Benefits and Costs

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

The costs of developing and implementing these actions will vary, depending on the specific actions. The intent of these actions is that they be relatively low cost to implement and/or create cost-savings over some period of time. Additional work is needed to determine specific costs of the initial actions outlined in this option, and not-yet-developed options will require some amount of staff time to scope and cost for inclusion in this effort.

Feasibility Issues

For each action, feasibility issues will vary. For developing further ideas for early action, there may be some need for staff time, though most actions that would fit in this option should be relatively simple to implement, thus not requiring a great deal of staff time.

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]

Table 3.1. 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 (A/V) teleconferencing between state employees	Immediate implementation using available resources; Increased use as more A/V centers are made available	Some A/V 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 A/V resources	Is there any education related to Alaska's current A/V 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 telecommuting 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?

#	Action	Timing	Needed Resources	Implementation Needs	GHG Savings	Cost or Cost Savings	Question/ Notes
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?
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?

#	Action	Timing	Needed Resources	Implementation Needs	GHG Savings	Cost or Cost Savings	Question/ Notes
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 climate change mitigation policy 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 maintaining climate integrity, energy security and economic prosperity for Alaska.

Both the Center for Climate Strategy's *Alaska GHG Inventory & Reference Case Projections, 1990-2020*³⁷, and the Alaska Department of Environmental Conservation's (ADEC) *Refinements to the Alaska GHG Emission Inventory*³⁸ reports concluded that the majority of Alaska's anthropogenic greenhouse gas (GHG) emissions are due to the consumption of energy as fossil fuels to power industry and transportation. Those industries in Alaska combusting, producing, refining, storing and transporting the most fossil fuel had the highest GHG emission estimates and can be grouped into Alaska's energy sector. "The energy sector is mainly comprised of exploration and exploitation of primary energy sources; conversion of primary energy sources into more useable energy forms in refineries and power plants; transmission and distribution of fuels; use of fuels in stationary and mobile applications."³⁹ These data lead us to the conclusion that integrating Alaska's "Climate Change Mitigation Strategy" with Alaska's "Energy Plan" is good policy for achieving the stated objectives.

It seems sensible to assume that Alaska's "Energy Plan" eventually be integrated with Alaska's "Climate Change Mitigation Strategy," since both plans will include the development of energy efficiency, energy conservation, co-generation, fuel switching and renewable energy measures. 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 Alaska's "Energy Plan" and "Climate Change Mitigation Strategy" be combined into one plan to achieve Alaska's stated climate change mitigation goals guided by a 10-year energy plan. It is also recommended that Alaska's 10-year integrated "Climate Protection & Energy Plan" include all fossil fuel (coal, oil, natural gas, coal-bed methane) resource extraction and production potential in Alaska projected through the year 2020 because these estimates influence

³⁷ Alaska Greenhouse Gas Inventory and Reference Case Projections, 1990-2020, Center for Climate Strategies, July 2007, www.climatechange.alaska.gov/doc-links.htm

³⁸ Summary Report of Improvements to the Alaska Greenhouse Gas Emission Inventory, ADEC, January 2008. <http://www.climatechange.alaska.gov/doc-links.htm>

³⁹ 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2 Energy, Prepared by the IPCC National Greenhouse Gas Inventories Programme. Published: IGES, Japan, <http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.htm>.

the rate at which GHGs are produced in Alaska. A major component of this integrated “Climate Protection & Energy Plan” will be the development of an “Energy Database” for Alaska as briefly described below. Finally, it is recommended that Alaska’s integrated “Climate Protection & Energy Plan” be updated periodically to guide Alaska’s climate change mitigation objectives and energy consumption goals through time and across various State administrations. This mitigation policy does not provide the detailed, industry-by-industry energy policies necessary for achieving Alaska climate change mitigation objectives because these are being developed by the individual Technical Workgroups (TWGs) and AEA. This climate change mitigation policy addresses greenhouse gases (GHG) from fossil fuels (carbon dioxide, methane, nitrous oxide) but does not address high global warming potential greenhouse gases containing bromine, chlorine or fluorine.

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.
- 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.

Establish Energy (GHG Emissions) Baseline: 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 transportation⁴⁰. Obtaining an accurate baseline of GHG emissions or energy (fossil fuel) 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.”⁴¹ Alaska’s GHG emissions or energy consumption baseline is the starting point from which we account for how well our climate change mitigation strategy is working. Also, under a future carbon cap-and-trade program, carbon emission allowances may be allocated based on the GHG emissions baseline established in Alaska’s GHG inventory. 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.”⁴² Therefore, through the Climate Change Mitigation Strategy, the Mitigation Advisory Group should strive to establish a “publically approved” energy or GHG emissions baseline for Alaska.

⁴⁰ “Alaska Greenhouse Gas Inventory and Reference Case Projections, 1990-2020”, Center for Climate Strategies, July 2007. www.climatechange.alaska.gov/doc-links.htm

⁴¹ *Alaska Energy Efficiency Program and Policy Recommendations*, Final Report to the Cold Climate Housing Research Center, dated June 5, 2008, <http://www.akenergyauthority.org/>

⁴² *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.

Establish Energy (GHG Emissions) Reduction Goals: In addition to establishing a GHG emissions or energy baseline for Alaska, the final Climate Change Mitigation Strategy should also include a statewide GHG emissions reduction goal (e.g. reduce Alaska’s GHG emissions 30% below 2000 levels by 2020 and 80% by 2050).

Alaska’s “GHG emissions baseline” and “GHG reduction goal” can be used as “goal posts” for achieving Alaska’s desired climate change mitigation objectives. For example let’s assume, as presented on page 3 of the “Alaska Greenhouse Gas Inventory”, that Alaska’s GHG emissions baseline is approximately 50 million metric tons of CO₂ equivalents (MMTCO₂e). Let’s also assume that Alaska’s stated GHG reduction goal is reducing Alaska’s baseline of GHG emissions 30% by 2020. This would imply that Alaska would have to reduce its GHG emissions by 15 MMTCO₂e over the next 10 years, equivalent to an annual reduction of 1.5 MMTCO₂e per year. The alternative energy-related measures that are currently being developed by the various TWGs (e.g. Energy, Oil & Gas, etc.) will include a combination of fuel switching, cogeneration, flare-reduction, energy-efficiency and energy conservation measures. All of these energy-related measures can be used to achieve Alaska’s annual GHG reduction goal (e.g. 1.5 MMTCO₂e per year), and overall GHG reduction goal (e.g. reduce Alaska’s GHG emissions 30% below 2000 levels by 2020 and 80% by 2050).

Use Energy Plans to Achieve Alaska’s GHG Reduction Goals: Alaska’s “Climate Change Mitigation Strategy” objectives and desired GHG mitigation goals can be achieved by integrating these objectives with Alaska’s “Energy Plan”. In addition to the alternative energy policies currently being developed by AEA and the TWGs, 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*⁴³ provides numerous examples of state-led alternative energy initiatives. The U.S. Department of Energy (DOE) and U.S. Environmental Protection Agency (EPA) recently release their cooperative *National Action Plan for Energy Efficiency, Vision for 2025: A Framework for Change*.⁴⁴ The U.S. House of Representatives’ Select Committee on Energy Independence and Global Warming *Final Staff Report for the 110th Congress*⁴⁵ also provides many energy-related measures to combat climate change. The Alaska Cold Climate Housing Research Center’s (CCHRC) report 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. All of the energy-related measures can be used to accomplish the triple objective of maintaining climate integrity, energy security, and economic prosperity for Alaska through the integration of its Climate Change Mitigation Strategy and its Energy Plan.

⁴³ *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>

⁴⁴ *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>

⁴⁵ *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>

Establish Energy or Carbon Database: “Because there will be monetary value to carbon credits, there is an even greater incentive to establish carbon data management systems that works.”⁴⁶ In the near future, carbon emissions will have a monetary value under a national carbon cap-and-trade or carbon tax program. Therefore, it would be financially beneficial to the State of Alaska if it could track fossil fuel energy consumption and production throughout the state. Currently in Alaska, there is no single statewide database that tracks residential, commercial, industrial and transportation fossil fuel energy consumption and production. There are separate state and Federal agencies which track energy consumption and production for their individual agency missions. For example, ADEC tracks fuel consumption for its Title V permits. The Alaska Housing & Finance Corporation tracks residential energy consumption. The U.S. DOE Energy Information Administration tracks energy production and consumption in Alaska. However, there is *no single state agency* in Alaska that is responsible for tracking energy consumption and production *for the State of Alaska*.

To track Alaska’s energy-related GHG emissions and their abatement, it will be necessary to establish an “Energy Database” which will monitor statewide residential, commercial, industrial and transportation fossil fuel energy consumption and production in energy units. The common energy unit used in international reports of GHG emissions is the joule or terajoule (TJ = 10^{12} joules), while the customary U.S. energy unit is the British Thermal Unit (BTU). Electric utilities often report their emissions per kilowatt hour (kWh) or megawatt hour which are interchangeable with TJ and BTUs. Knowing both the higher heating values of various fuels (e.g. million BTUs per cubic foot of natural gas) and their carbon content (e.g. teragrams of carbon per BTU) allows us to convert a facility’s or fleet’s energy consumption (BTUs, TJ, kWh) to GHG emissions in teragrams (Tg = 10^{12} g) of carbon, or million metric tons of CO₂ equivalents (MMTCO₂e).⁴⁷ Alaska’s “Energy Database” should be able to record and monitor facility and fleet specific energy consumption and production in the form of TJ, BTUs, kWh, calories or other energy unit and easily convert these to GHG emissions in Tg of carbon or MMTCO₂e.

In addition to tracking energy (BTU, kWh, TJ), this new or modified database may also have to track carbon emission allowances and have banking capabilities. Carbon emissions will have a monetary value under a future Federal carbon cap-and-trade, cap-and-dividend or tax program. It is anticipated that large industries in Alaska will be regulated as “capped sources” in the near future.⁴⁸ The state agency eventually responsible for issuing and tracking carbon allowances will need access to and familiarity with a well secured, state insured banking database. Preferably, this database will serve multiple functions and have the statewide capability to accurately and securely monitor the following:

Energy ◊ GHG Emissions ◊ US Currency
[BTU, kWh, TJ] ◊ [Tg of carbon or MMT CO₂e] ◊ [\$\$\$]

⁴⁶ National Association of Clean Air Agencies’ *Defining the Role of States and Localities in Federal Global Warming Legislation*, Conference Proceedings, June 2008. <http://www.4cleanair.org/TopicDetails.asp?parent=16>

⁴⁷ EPA’s “*Inventories of U.S. Greenhouse Gas Emissions and Sinks, 1990-2006*”, Annexes 1-8.

⁴⁸ “*Lieberman-Warner Climate Security Act of 2008*”, S.3036, 110th Congress, 2nd Session, May 21, 2008.

It will also be important for Alaska to track and mitigate GHG emissions from residential, commercial, light industrial and transportation sources that are not included under a future cap-and-trade program (uncapped sources). The Center for Climate Strategy's "*Alaska GHG Inventory & Reference Case Projections, 1990-2020*" estimated that transportation sources in Alaska accounted for approximately 35% of the gross GHG emissions in 2000.⁴⁹ Residential and commercial sources accounted for another 9% of the gross GHG emissions in that same year. Combined, these sources accounted for almost 45% of the total GHG emissions in Alaska for 2000. These GHG emissions sources may not be captured under a future mandatory GHG reporting rule or cap-and-trade program. Alaska's climate change mitigation strategy will need to account for both mandatory (capped) and voluntary (uncapped) GHG emission sources so that all GHG emissions can be tracked as climate change mitigation activities are enacted across the state. It will also be important to track Alaska's alternative energy consumption and production (e.g. hydroelectric, solar, wind, tidal, geothermal) because the rate at which these technologies are implemented corresponds directly with the decrease of GHG production in Alaska.

Timing:

- Beginning in 2010, pending approval from the Subcabinet on Climate Change, the State of Alaska will work to develop Alaska's 10-year "Climate Protection & Energy Plan." This plan will include the Subcabinet's final climate change mitigation objectives, and include future fossil fuel (coal, oil, natural gas, coal-bed methane) resource extraction and production potential in Alaska projected through the year 2020. This plan will include the alternative energy measures being developed by the TWGs and AEA. This plan will be updated every two years to guide Alaska's energy consumption and climate change mitigation efforts. Alaska's natural gas will be developed where possible to replace high density carbon fuels (e.g. coal and oil).
- Beginning in 2010, pending approval from the Subcabinet on Climate Change, the State of Alaska will work to develop an "Energy Database" for Alaska, which will enable it to record and monitor the following:
 - Residential, commercial, industrial and transportation fossil fuel energy consumption and production;
 - Mandatory and voluntary reporting of energy-related GHG emissions;
 - GHG emission reductions due to alternative energy-related climate change mitigation actions;
 - Carbon emission allowances and their monetary value under a future cap-and-trade or tax program.

Parties Involved: Subcabinet on Climate Change; Alaska Energy Authority; Relevant State agencies

⁴⁹ "Alaska Greenhouse Gas Inventory and Reference Case Projections, 1990-2020", Center for Climate Strategies, July 2007. www.climatechange.alaska.gov/doc-links.htm

Other: None.

Implementation Mechanisms

See Policy Design section.

Related Programs/Policies in Place

Other related efforts include the following:

- The New York Stock Exchange and Energy Futures Report provides financial data for energy related fuels. Alaska's energy database may eventually have to be connected with these financial transactions because carbon emissions will have a monetary value.
- ADEC collects fuel consumption and emissions data for large (Title V) industries and submits emissions inventory data to EPA through their Consolidate Emissions Reporting program.
- The Alaska Housing and Finance Corporation collect data on residential energy consumption.
- The U.S. DOE Energy Information Administration collects data on energy consumption and production in Alaska.
- Alaska's 10-year "Climate Protection and Energy Plan" should integrate the energy and climate protection plans currently being developed by the members of the Alaska Municipal League.
- 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 or on-line reporting tool which would enable the State to track energy consumption and production, carbon emissions 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.

Type(s) of GHG Reductions

Not applicable.

Estimated GHG Reductions and Net Costs or Cost Savings

Not applicable.

Key Uncertainties

- How will Alaska track energy-related GHG emissions and their abatement?
- What kind of carbon trading system will be developed by the Federal government (e.g. carbon cap-and-trade vs. carbon tax and dividend) and what kind of database will be required to track carbon emissions and their monetary value?

- Who will be responsible for establishing and administering Alaska’s “Energy Database”, how much will it cost, and where will this database be located?

This mitigation strategy recommends, starting in 2010, that the State of Alaska begin to develop its 10-year integrated “Climate Protection & Energy Plan” and its energy database. By 2011, it is anticipated that a Federal carbon cap-and-trade or carbon tax program will be in place. The agency responsible for administering Alaska’s energy database, its exact location, structure (e.g. reporting requirements) and costs will be determined based on the Federal program about to be promulgated. It appears that the Federal government is leaning towards developing a national carbon cap-and-trade program. Less talked about is the possibility of developing a carbon tax-and-dividend program. In either case, carbon emissions will likely have a monetary value in the near future. Therefore, it would be beneficial to the State of Alaska to start developing its own carbon or energy database now in anticipation of the Federal program.

Additional Benefits and Costs

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.^{50,51}

Costs

The State of Alaska will accrue costs for developing and managing an “Energy Database” for Alaska. Estimated costs for developing this database range from \$300,000 to \$500,000, depending on whether or not the State can modify an existing database or must develop a completely new one. Funds could come from AEA’s existing Alternative Energy Fund to develop and administer this database.

Feasibility Issues

The feasibility issues associated with this option are how to ensure that the thus working on the Alaska Energy Plan and those working on the Climate Change Strategy will work in coordination to develop an integrated plan. Further, for the development of the energy database, what mechanism the funding will come from is not yet known.

⁵⁰ 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.

⁵¹ “*Energy Market and Economic Impacts of S.2191, the Lieberman-Warner Climate Security Act of 2007*”, by Energy Information Administration, April 2008.

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-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 utilities 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.”⁵² 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, carbon taxes and cap and dividend programs. 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. An appropriately designed market-based program can help ensure that GHG emissions are achieved in the most cost-effective manner possible. Revenues generated from the market-based program can be used to cover program costs, generate jobs, and establish loan or grant programs, or offset impacts.

⁵² 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).

Policy Design

Market-based initiatives to manage carbon are under development.⁵³ Exploring the impact on Alaska of the various market-based systems in detail requires rigorous economic inquiry. This option recommends that research be done to 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 three major types of market-based systems under debate are carbon taxes, carbon cap-and-trade program, and a carbon cap-and-dividend program. The advisability and costs and benefits of these approaches for Alaska need further investigation. A brief description of these 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.⁵⁴
- A carbon cap-and-trade program would set a cap on the amount of allowable GHG emissions. 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. The cap would lower over time, affecting costs of carbon and decreasing emissions.⁵⁵

⁵³ 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.

⁵⁴ Pew Center on Global Climate Change. “Tax Policies to Reduce Greenhouse Gas Emissions.” <http://www.pewclimate.org/DDCF-Briefs/Taxes>

⁵⁵ Ibid.

- A carbon cap and dividend program establishes permits for emitting CO₂ that are auctioned to potential emitters, with the revenues being returned to citizens in the form of dividends, based on specific criteria for distribution (e.g., equal distribution or need). This could be modeled after the Alaska Permanent Fund. Similar to a cap and trade program, the cap would lower over time and the price of carbon would rise. Dividends will rise as the price of carbon rises.⁵⁶

Timing: In 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.

Parties Involved: Subcabinet on Climate Change; Commissioned researcher

Other: None.

Implementation Mechanisms

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

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>

Type(s) of GHG Reductions

Not applicable.

Estimated GHG Reductions and Net Costs or Cost Savings

Not applicable.

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.

⁵⁶ *Cap and Dividend: Raise the price of carbon and give the money back.* “How Cap and Dividend Works.” See: <http://www.capanddividend.org/?q=readfirst>

Additional Benefits and Costs

Benefits

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

Costs

The costs of this option will be the costs of commissioning a study, which will vary depending on the final scope of the study. Initial estimates for this option range between \$25,000- \$50,000.

Feasibility Issues

It is unclear who would conduct this analysis, although the Alaska Institute for Social and Economic Research (ISER) is well-positioned given their past work on climate change legislation and its impacts on the Alaskan economy. Further, the mechanism for funding and overseeing this study is not yet known.

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. Coordinate Implementation of Alaska's Efforts to Address Climate Change

Policy Description

Responding to climate change and reducing GHG emissions will require a dedicated and coordinated effort. Better coordination can promote efficiencies and effectiveness in the following areas:

- Tracking climate change efforts across State agencies in Alaska;
- Communicating between State of Alaska and other efforts (e.g. Federal activities);
- Responding to expected Federal initiatives on climate change;
- Providing access to information and education resources; and
- Improving outreach to citizens and businesses on climate change.

To achieve the above, a coordinating entity is needed. This could be an Alaska Climate Change Coordinating Committee under the Subcabinet or a designated person or office that brings together representatives of State agencies. It is recommended that the Subcabinet ensure coordination of the work already started through the Advisory Committee process. If a committee or lead office is not identified, the Subcabinet should authorize a Task Force to continue to identify ways to ensure coordination among state agencies, especially on policy and strategy coordination and responses to Federal inquiries and reporting requirements. With a strong coordination effort, resources and funding can be identified, secured, and leveraged to further Alaska's climate change policies and goals.

Policy Design

Goals:

- The goals of coordinating climate change activities in Alaska include the following:
- Provide focus to State agency efforts as recommendations of the Subcabinet are implemented;
- Ensure that the State agency development of position papers, guidance documents, policies, procedures, and standards to establish and implement Federal and state climate change programs are coordinated;
- Provide outreach and consistent information on climate change mitigation technology and regulatory guidance to industry and the public;
- Ensure the Subcabinet's Climate Change Strategy efforts are coordinated with the Alaska Energy Plan (see CC-4), the Alaska Municipal League, industry, the Western Climate Initiative and advisory groups working on climate change efforts in Alaska; and
- Provide a primary point of contact for Federal agencies addressing climate change in Alaska.

Activities

- Support a GHG emission reporting program and associated inventories (see CC-1) as mandated by Federal or state policies;
- Develop state government partnerships with private citizens, businesses, and local governments;
- Promote “actions” for state agencies to take to address climate change (see CC-3); and
- Provide outreach and access to information by continuing to support the Alaska Climate Change Strategy Web site (Consider evolution to a portal to provide additional information and functionality as a clearinghouse of climate change information, resources, and education materials among state agencies).

Timing: This coordination effort should be initiated as soon as possible after approval by the Subcabinet of the Alaska Climate Change Strategy.

Parties Involved: 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, the Office of Management and Budget, the Climate Change Sub-Cabinet, and representatives of key State Departments, including Alaska Department of Environmental Conservation (ADEC), Alaska Department of Fish and Game (ADFG), Alaska Department of Natural Resources (ADNR), and Alaska Department of Commerce, Community, and Economic Development (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 coordination goals and activities listed above. Many groups will be partners and beneficiaries of this coordinating body, including:

- Alaska State Legislature
- Alaska Climate Change Strategy Subcabinet
- State Agencies
- Alaska Municipal League
- Tribes
- Alaska Energy Authority
- Federal Agencies
- University of Alaska
- Public
- Alaska Elementary and Secondary Schools
- Industry

Other: None.

Implementation Mechanisms

To establish an Alaska Climate Change Coordinating Program, authorization to lead the effort must be provided by the Subcabinet. Additionally, funding for activities may be required. The Subcabinet should submit legislative or budget documentation necessary to procure the resources and authority to charter this coordination effort. The ADEC will continue to have responsibilities for permitting, database, and reporting tools for administering a GHG Reporting Program (see CC-1). Appropriate tools and skills must be put in place to support coordination and outreach efforts – including technology and training as necessary.

Related Programs/Policies in Place

Creating a coordinating function with the mission of tracking climate change and coordinating the State's response will help to ensure the success 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. A 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.

Many state agencies already have existing staff that deal with climate change issues and outreach. This option will not fund these positions or create new ones within these agencies, but would serve to coordinate and complement these activities.

Type(s) of GHG Reductions

Not applicable.

Estimated GHG Reductions and Net Costs or Cost Savings

Not applicable.

Key Uncertainties

Challenges include engaging all agencies with responsibilities for addressing climate change, establishing clear responsibilities for coordinating roles, identifying needed funding to carry out the coordination, organizing information to present to the public, and identifying processes to maintain and update a Web site.

Additional Benefits and Costs

Benefits

Creating a coordination function is essential to track and provide some cohesion to the state's response to the Subcabinet recommendations. It will also help to educate the State agencies to educate businesses, agencies, and individuals seeking knowledge about climate change programs and policies, improving overall understanding of climate change issues. Finally, it will provide a means for State agencies to share information and coordinate interactions with on climate change with the Federal government.

Costs

Costs primarily entail resources for personnel to provide the point of coordination, including salaries and benefits, potentially contracting costs to develop materials and support a Web portal, and training costs to ensure staff have skills needed to provide outreach and education.

Feasibility Issues

Key feasibility issues include identifying a funding source and appropriately coordinating across existing programs. In addition, the effort needs to be flexible and generate sufficient political will to be effective and sustained.

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]