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**Cross-Cutting Issues Technical Work Group
Summary List of Pending Policy Options**

	Policy Option	GHG Reductions (MMtCO ₂ e)			Net Present Value	Cost-Effectiveness (\$/tCO ₂ e)	Status of Option
		2010	2020	Total 2007-2020	2007-2020 (Million \$)		
CC-1	GHG Inventories, Forecasting, Reporting, and Registry	<i>Not Quantified</i>					Pending
CC-2	Statewide GHG Reduction Goals and Targets	<i>Not Quantified</i>					Pending
CC-3	State and Local Government GHG Emissions (Lead-by-Example)	<i>Not Quantified</i>					Pending
CC-4	Public Education and Outreach	<i>Not Quantified</i>					Pending
CC-5	Tax and Cap Policies	<i>Not Quantified</i>					Pending
CC-7	Participate in Regional and Multi-State GHG Reduction Efforts	<i>Not Quantified</i>					Pending
CC-8	Encourage the Creation of a Business-Oriented Organization to Share Information and Strategies, Recognize successes, and Support Aggressive GHG Reduction Goals	<i>Not Quantified</i>					Pending
CC-9	Dedicate Greater Public Investment to Climate Data and Analysis	<i>Not Quantified</i>					Pending
CC-10	Facilitate the Development of an Effective Carbon Credit System for MN	<i>Not Quantified</i>					Pending
CC-11	Create a Market Advisory Group	<i>Not Quantified</i>					Pending

Note: There is no policy option CC-6, as this catalog option was determined not to be a priority for analysis by the MCCAG.

CC-1. GHG Inventories, Forecasting, Reporting, and Registry

Note: Underlined and deleted text identifies revisions by the Small Group to the August 24 version of this policy option that CCS sent to the full TWG.

Policy Description

Greenhouse gas (GHG) emissions inventories and forecasts are essential for understanding the magnitude of all emission sources and sinks (both anthropogenic and natural), the relative contribution of various types of emission sources and sinks to total emissions, and the factors that affect trends over time. Inventories and forecasts help to inform state leaders and the public on statewide trends, opportunities for mitigating emissions or enhancing sinks, and verifying GHG reductions associated with implementation of action plan initiatives.

GHG reporting reflects the measurement and reporting of GHG emissions to support tracking and management of emissions. GHG reporting can help sources identify emission reduction opportunities and reduce risks associated with possible future GHG mandates by moving “up the learning curve.” Tracking and reporting of GHG emissions can also help in the construction of periodic state GHG inventories. GHG reporting is a precursor for sources to participate in GHG reduction programs, opportunities for recognition, and a GHG emission reduction registry, as well as to secure “baseline protection” (i.e., credit for early reductions).

A GHG registry enables recording of GHG emissions reductions in a central repository with “transaction ledger” capacity to support tracking, management, and “ownership” of emission reductions; establish baseline protection; enable recognition opportunities; and/or provide a mechanism for regional, multi-state, and cross-border cooperation. Properly designed registry structures also provide a foundation for possible future trading programs.

Policy Design

TBD – [as approved by the TWG]

The CC TWG recommends that the state institute formal GHG inventory and forecast and GHG reporting functions within the Minnesota Pollution Control Agency (MPCA), to be assisted by other state agencies as needed.

Goals:

- Develop a periodic, consistent, and complete inventory of emission sources and sinks and an accompanying forecast of future GHG emissions in at least (every 3 years) 5 and 10 year increments extending at least 20 years into the future. The GHG forecast should reflect projected growth as well as the implementation of scheduled mitigation options, and should, through differences year-to-year, provide a basis for documenting and illuminating trends in state GHG emissions.
- Develop a consistent protocol for evaluating progress toward meeting the goals of SF-145 and provide this information in a biannual report to the legislature.
- Develop a consistent protocol for preparing the inventory and forecast. In forecasting future GHG emissions, treatment of uncertainties should be transparent, as consistent as possible across sectors and time, and to the extent possible, reflect multiple scenarios.

- Inventory all natural and man-made emissions generated within the boundaries of the state (i.e., a production-based inventory approach) as well as emissions associated with energy imported and consumed in the state (i.e., a consumption-based inventory approach).

Timing: This function should be implemented as soon as possible as allowed by current funding and enhanced over time.

Parties Involved: All GHG emission sources and sinks (both anthropogenic and natural) should be included in the inventory and forecast.

Other: Not applicable.

The CC TWG recommends that the state develop GHG reporting opportunities for all sources. Mandatory reporting should be required for significant sources as determined by the MPCA. Elements that the MPCA may wish to include are:

- Subject to consistently rigorous quantification, opportunity to voluntarily report GHG emissions should be open to all sources (e.g., combustion, processes, vehicles, etc.) using common sense regarding de minimis emissions. In order to encourage GHG mitigation activities from all quarters, reporting should not be constrained to particular sectors, sources, or approaches.
- GHG reporting requirements should be phased in by sectors as rigorous, standardized quantification protocols, base data, and tools become available, and as responsible parties become clear. Entities should be allowed to report GHG emissions voluntarily before mandatory reporting applies to them; and the state, municipalities, and other jurisdictions should be allowed to report emissions associated with their own activities and any programs they may implement.
- The goal should be reporting of “organization-wide emissions within the state” but with greatest possible “granularity” in order to facilitate baseline protection.
- Reporting should occur annually on a calendar-year basis for all six traditional GHGs and, to the extent possible, for black carbon.
- Reporting of direct emissions¹ should be required; reporting of emissions associated with purchased power and heat² should be phased in, and voluntary reporting of other indirect emissions³ should be allowed.
- Every effort should be made to maximize consistency with federal, regional, and other states’ GHG reporting programs.
- GHG emissions reports should be verified through self-certification and MPCA spot-checks; to qualify for future registry purposes, reports should undergo third-party verification.
- Mandate reporting of expected increases or decreases of emissions.
- Project-based emissions reporting should be allowed, when properly identified as such and quantified with equally rigorous consistency.

¹ Defined as “Scope 1” emissions in the *GHG Protocol*.

² Defined as “Scope 2” emissions in the *GHG Protocol*.

³ Defined as “Scope 3” emissions in the *GHG Protocol*.

- The reporting program should provide for appropriate public transparency of reported emissions.

The CC TWG notes that the State has joined the effort to develop a national GHG registry through *The Climate Registry*. Being a charter state in this effort should help ensure that Minnesota's needs and priorities are addressed in the course of *The Climate Registry's* development. To the extent that Minnesota's needs may not be fully met by *The Climate Registry*, the State should consider developing supplemental or ancillary registry capacity or opportunity.

Elements to consider include:

- Geographic applicability at least at the statewide level and as broadly (i.e., regionally or nationally) as possible.
- **Consider allowing** sources to start as far back chronologically as good data exists, as affirmed by **an independent** third-party verification, and **consider** allowing registration of project-based reductions **or "offsets"** that are equally rigorously quantified.
- Incorporating adequate safeguards to ensure that reductions aren't double-counted by multiple registry participants; providing appropriate transparency; and allowing the state to be a valid participant for reductions associated with its programs, direct activities, or efforts.
- Striving for maximum consistency with other state, regional, and/or national efforts; greatest flexibility as GHG mitigation approaches evolve; and providing guidance to assist participants.

Goals: Implementation of a GHG registry for Minnesota sources as soon as possible.

Timing: As soon as possible

Parties Involved: Probably overseen by MPCA; costs shared by participants benefiting from the registry.

[Insert text as appropriate]

Goals: [Insert text as appropriate]

Timing: [Insert text as appropriate]

Parties Involved: [Insert text as appropriate]

Other: [Insert text as appropriate]

Implementation Mechanisms

TBD – [as approved by the TWG]

Related Policies/Programs in Place

TBD – [as needed and approved by the TWG]

The MPCA has a long-standing program in place for preparing and updating GHG emissions inventories for all sectors and GHG pollutants.

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

The option is an enabling policy to encourage management, tracking, and ultimately reduction, of GHG emissions. It does not reduce GHG emissions itself per se.

Estimated GHG Savings and Costs per MTCO_{2e}

TBD – [as needed and approved by the TWG]

This option could be considered an administrative and enabling function of the Climate Action Plan (including enabling any future cap and trade options) and will incur overhead costs but not directly reduce emissions per se except where these data motivate reductions for public relations by individual companies or sources.

The reporting and registry components of this policy option would help position Minnesota entities for participation in an emissions trading program should one develop in the future, leading to cost savings. Although establishment of a credible reporting and registry program is essential for participating in a trading program, these elements do not reduce GHG emissions themselves.

Data Sources: Many.

Quantification Methods: Several – will be designed to follow standard, comparative and accepted approaches that allow exchange/sale of emission credits should this become a need in Minnesota.

Key Assumptions: Reporting will establish a baseline for GHG emissions and provide a monitoring tool for assessing the efficacy of the Climate Action Plan. Adjustments will be made in the Plan as certain techniques prove more or less beneficial than projected. Downward trends will allow for further incentives to be developed for sectors that show continuous improvement. Effective emission sinks can be identified and augmented. Public participation will inform and involve citizens in the overall goal of GHG emission reductions. Forecasting will allow state officials to plan for, implement and monitor necessary additions emission sources or sinks to the emission cycle.

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until MCCAG moves to final agreement at meeting #5 or #6]

Level of Group Support

TBD – [blank until MCCAG meeting #5]

Barriers to Consensus

TBD – [blank until final vote by the MCCAG]

CC-2. Statewide GHG Reduction Goals and Targets

Policy Description

NOTE: All red text is meant to reflect only an illustrative example.

Article 5 of the New Generation Energy Act of 2007 (S.F. 145) establishes goals for Minnesota to reduce statewide greenhouse gas (GHG) emissions across all sectors producing those emissions to a level at least 15% below 2005 levels by 2015, to a level at least 30% below 2005 levels by 2025, and to a level at least 80% below 2005 levels by 2050. The levels shall be reviewed based on the climate change action plan study. In addition, Article 1 of the Act establishes that it is the energy policy of the state of Minnesota that: (1) the per capita use of fossil fuel as an energy input be reduced by 15% by the year 2015, through increased reliance on energy efficiency and renewable energy alternatives; and (2) 25% of the total energy used in the state be derived from renewable energy resources by the year 2025.

Policy Design

TBD – [as approved by the TWG]

Goals: As noted above.

Timing: As soon as possible.

Parties Involved: State Government, municipalities, citizen’s groups, NGOs, commercial, industrial, and economic sectors.

Other:

Implementation Mechanisms

TBD – [as approved by the TWG]

The policy option descriptions from the individual TWGs suggest specific implementation mechanisms. Many are regulatory, requiring executive action or further legislation. However, the very scale associated with comprehensively addressing climate change suggests that there are essential non-regulatory aspects to implementation as well, such as education and engagement of the general public, municipalities, and the commercial, industrial, economic and educational sectors in the state at many levels (as discussed further in CC-4).

In all sectors, improvements in energy efficiency directly reduce fuel costs, giving rapid payback on investment to the user. However, funding the upfront costs of efficiency measures is likely to require a diverse range of innovative funding mechanisms and incentives to ensure sufficiently rapid penetration of the market to achieve the [year] goals of a xx% reduction in GHG emissions from the state.

Related Policies/Programs in Place

TBD – [as needed and approved by the TWG]

GHG emission reduction goals have been established by Governor Pawlenty and the Minnesota General Assembly.

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

All.

Estimated GHG Savings and Costs per MTCO_{2e}

TBD – [as needed and approved by the TWG]

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until MCCAG moves to final agreement at meeting #5 or #6]

Level of Group Support

TBD – [blank until MCCAG meeting #5]

Barriers to Consensus

TBD – [blank until final vote by the MCCAG]

CC-3. State and Local Government GHG Emissions (Lead-by-Example)

Note: Underlined and deleted text identifies revisions by the Small Group to the August 24 version of this policy option that CCS sent to the full TWG.

Policy Description

In many areas, Minnesota state government is already leading by example to obtain GHG emission reductions. State and local government is responsible for providing a multitude of services for the public that are delivered through very diverse operations and result in wide-ranging GHG emission activities. State and local government can take the lead in demonstrating that reductions in GHG emissions can be achieved through analysis of current operations, identification of significant GHG sources, and implementation of changes in technology, procedures, behavior, operations, and services provided. State and local governments can also encourage and/or provide incentives to reduce GHG emissions by others in a variety of ways.

The support of broad-ranging goals for GHG reductions for state government through the CNWG Interagency Pollution Prevention Advisory Team (IPPAT) Climate Neutral Working Group (CNWG) will be helpful for setting an example and building expectations, with actual reductions realized at the agency level. Disaggregating the State's own GHG emissions to the agency level and showing the results in the annual IPPAT biennial report ~~from the CNWG~~ on GHG reduction progress is an effective way to measure and manage the State's emissions. A multi-agency group oversees the on-going climate efforts of state agencies, providing direction, guidance, resources, shared approaches, and recognition to agencies and employees working to reduce the State's GHG emissions.

[Met Council](#)

[Minneapolis](#)

[St. Paul](#)

[DOC](#)

[-EE](#)

[-CIP](#)

[MPCA Sustainability Conference information](#)

[Explore Minnesota](#)

Policy Design

The CC TWG recommends that state and local governments establish GHG reduction targets for their own GHG emissions. The establishment of broad-ranging goals for reducing governments' own GHG emissions will be helpful in both setting an example and building expectations. Actual reductions will typically be realized at the individual agency level, so disaggregating individual government's own GHG emissions to the agency or department level and requiring annual agency- or department-specific reports on GHG reduction progress can be an effective way to measure and manage each government's progress in reducing its GHG emissions. Government agencies or departments ~~would~~ first ~~need to develop~~ ed agency- or department-specific GHG emissions inventory data. This ~~would become~~ became the baseline data for

ongoing emission reduction activities and measurement, which ~~would be~~ is summarized in annual IPPAT reports by each agency or department. ~~Agency and/or department reports would be aggregated into a summary report reflecting state GHG emissions. A multi-agency group should~~ IPPAT oversees the on-going climate efforts of the government's agencies ~~or~~ and departments, reviews their performance, and provides direction, guidance, resources, shared approaches, and recognition to agencies or departments and their employees that are working to reduce the government's GHG emissions.

Goals:

The existing directives of IPPAT and the executive orders listed below will be continued and enhanced as deemed appropriate by the MCCAG.

Executive Orders:

04-02, Providing Direction to State Agencies Regarding State Contracting Procedures

04-08, Providing for State Departments to Take Actions to Reduce Air Pollution in Daily Operations (Clean Air Minnesota provisions)

04-10, Providing for State Departments to Improve Fleet and Travel Management

05-16, Providing for Energy Conservation Measures for State-owned Buildings

06-03, Requiring Increasing the Use of Renewable Fuels by State Agencies

• Goals:

Timing: The state's efforts to lead-by-example in reducing its own GHG emissions ~~should start immediately. The first annual report by agencies will necessarily reflect initial agency-level inventories. The second annual report should reflect initial progress in reducing GHG emissions as agencies begin to plan and implement operational changes have already begun through~~ IPPAT's actions and the above-listed executive orders. The baseline information and emission-reductions from the years are already recorded. Future annual reports should show further progress in reducing agency GHG reductions.

Parties Involved: Coverage should include all operations of all state agencies and all departments of local governments.

Implementation Mechanisms

TBD – [as approved by the TWG]

- Public education and outreach to state and local government agencies and employees.
- Performance reviews and recognition of agency progress.
- Procurement of low-GHG products.

Related Policies/Programs in Place

TBD – [as needed and approved by the TWG]

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Steps to reduce energy demand would reduce all GHGs related with energy production. Support for renewable energy and cleaner energy will also help lower all GHGs associated with energy production. Improving existing recycling efforts would result in an associated reduction in GHG emissions from processing new materials. Transportation and fleet management could lower vehicle emissions, as would converting vehicle fleets to run on alternative fuels (e.g., biofuels).

Estimated GHG Savings and Costs per MTCO_{2e}

TBD – [as needed and approved by the TWG]

Not applicable.

Key Uncertainties

TBD – [as needed and approved by the TWG]

Substantial uncertainty surrounds future growth rates in GHG emissions, particularly beyond 2020, as well as the timing and scope of implementation of MCCAG recommendations for specific policy options, including those associated with the state’s own GHG emissions.

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until MCCAG moves to final agreement at meeting #5 or #6]

Level of Group Support

TBD – [blank until MCCAG meeting #5]

Barriers to Consensus

TBD – [blank until final vote by the MCCAG]

CC-4. Public Education and Outreach

Note: Underlined and deleted text identifies revisions by the Small Group to the August 24 version of this policy option that CCS sent to the full TWG.

Policy Description

Explicitly articulated public education and outreach can support GHG emissions reduction efforts at all levels in the context of emissions reduction programs, policies, or goals. Public education and outreach is vital to fostering a broad awareness of climate change issues and effects (including co-benefits, such as clean air and public health) among the state's citizens. Such awareness is necessary to engage citizens, businesses and institutions in actions to reduce GHG emissions. Public education and outreach efforts should integrate with and build upon existing outreach efforts involving climate change and related issues in the state. Ultimately, public education and outreach will be the foundation for the long-term success of ~~all~~ the policy actions proposed by the MCCAG as well as those which may evolve in the future.

Policy Design

The TWG recommends that the state build upon current educational efforts and action campaigns of state agencies, utilities and non-profit organizations. State agencies, utilities and non-profits understand each others offerings and use these enhanced resources to better educate Minnesota residents and businesses to encourage them to take action.

1. STATE EDUCATION INITIATIVES

Minnesota has a long history of environmental education. The TWG recommends that the state work through existing organizations by encouraging them to incorporate education about climate change and the role of GHG emissions into their existing educational efforts.

The states initiatives should focus on being the primary mechanism for providing mitigation, awareness and understanding of climate change and the role humans play in causing it.

Current Efforts

Environmental Education Advisory Board

The Environmental Education Advisory Board (EEAB) is the state board that guides the direction of environmental education in Minnesota. It was created by the 1990 Environmental Education Act (M.S. 1998, Chap. 115A.072) to promote environmental literacy for all Minnesota citizens. The Board accomplishes this by advising the Governor through the Minnesota Pollution Control Agency, state agencies, organizations and citizens. A major vehicle is the implementation of A GreenPrint for Minnesota: State Plan for Environmental Education (aka GreenPrint). The third edition of the Plan is being revised and it will list 4 or 5 main objectives for the state.

The Board consists of 20 members - eleven citizen representatives and nine government agencies representatives. One citizen member from each of the 8 congressional districts and 3 citizen at-large members comprise the citizen members (2 of the citizen members must be classroom teachers). They serve two-year terms. The Board also has a representative from each of the following: Pollution Control Agency, Department of Education, Department of Agriculture,

Department of Health, Department of Natural Resources, Board of Water and Soil Resources, Environmental Quality Board, Board of Teaching, and the University of Minnesota Extension Service.

Environmental Learning in Minnesota Fund

The Environmental Learning in Minnesota Fund (ELM) is a current initiative of the Environmental Education Advisory Board. The board is working very hard to develop a fund to provide fiscal resources for environmental education needs in Minnesota. While still at the exploratory stages, the board is currently dialoging with the Minnesota Association for Environmental Education (MAEE) for a potential public/private partnership to manage and administer the fund. Details are still fluid, however it is felt that revolving funding priorities and joint administration would be a part of the final program.

The ELM fund, could provide fiscal resources to enable schools, environmental learning centers, residential environmental learning centers, science museums, colleges and universities, and various local government entities to educate Minnesota citizens and businesses about critical issues in the global warming discussion.

Minnesota Scope and Sequence

The Environmental Literacy Scope and Sequence publication (March 2002, also due for revision in 2008) is designed to help create opportunities for mainstreaming environmental education in a way that has not been possible before. It provides a systems approach to environmental education that can focus the efforts of teachers and other deliverers of education to unify their many independent efforts to achieve the goal of environmental literacy. Because the Scope and Sequence is based on both state and national standards, it enables environmental education deliverers to build, adapt or integrate curriculum and assessments that are most appropriate for their particular grade level or audience.

Sharing Environmental Education Knowledge Partnership

The Sharing Environmental Education Knowledge Partnership (SEEK) is a partnership of over 130 organizations who provide environmental education to Minnesota citizens. The main communication tool for the partnership is a Web site (www.seek.state.mn.us). Included in the Web site are a Resource directory with over 1500 resources, a News area, a Jobs and Internship Area, training opportunities, calendar of statewide activities (for both the public and educators,) Regional pages, and other information areas. SEEK members are non-profit businesses, for profit businesses, municipal, state, and Federal government entities. It is the first stop in information about Minnesota's environmental education community.

2. UTILITY PROGRAMS

Utility conservation improvement programs (CIP) should be strengthened to provide education about specific actions all consumers can take to reduce their energy use and emissions while state programs provide general awareness of the issue, utility programs should lead to direct action.

3. NON-PROFITS

Minnesota non-profits such as the Will Steger Foundation, Fresh Energy, Sierra Club, Center for Energy and Environment have been promoting education and action on climate change for many years. The TWG recommends that the state support these actions and not duplicate them. Will

Steger has a unique ability to deliver the climate change message in a way that people really understand. His presentations in partnership with Fresh Energy helped transform activities with the state. CEE has developed the Minnesota Energy Challenge as a way for people to team up and take action about climate change. The Sierra Club has promoted action on climate change. The Minnesota Environmental Initiative (MEI) has supported a number of conferences on energy and the environment. MEI also provides environmental education and in conjunction with the Hamline University Center for Global Environmental Education (CGEE) created a program for green fleets.

~~The TWG recommends that the state lead by example in its own education and outreach activities by establishing a pro-active public education and outreach capability, and using it to target education and outreach activities to five specific audiences:~~

- ~~—State and Tribal Government Education and Outreach Actions—because state and tribal governments should lead by example (i.e., walk the talk) regarding education and outreach, including award programs, establishment of “outreach coordinator” position to coordinate with all audiences, government employees, educators, etc.~~
- ~~—Policymakers (legislators, regulators, executive branch, agencies)—because implementation of climate actions hinges on policymakers’ approval.~~
- ~~—Future Generations—by integrating climate change into educational curricula, post-secondary degree programs, and professional licensing programs.~~
- ~~—Community Leaders and Community-Based Organizations (e.g., institutions, municipalities, service clubs, social and affinity groups, non-governmental organizations, etc.)—in order to recognize leadership, share success stories, publicize role models, and expand climate involvement and participation within civic society.~~
- ~~—General Public—to increase awareness and engage citizens in climate stabilizing actions in their personal and professional lives.~~
- ~~—Industrial and Economic Sectors—in order to recognize leadership, share success stories, publicize role models, and expand climate involvement and participation within the business community.~~
- ~~—Faith-Based Organizations and Communities—to increase awareness and engagement in climate actions in personal and religious lives.~~
- The CC TWG recommends that one or more organizations in Minnesota (e.g., state agency and/or non-governmental organization) implement a statewide program to encourage and structure voluntary individual actions to reduce GHG emissions. Such a program might be called “Minnesota Climate Keepers” and echo models in other states and local communities. This program should also include an accountability process to measure the effectiveness of the program.

Goals: The overarching goal is to raise awareness about global warming and promote individual action to reduce the Minnesota’s overall CO2 emissions. The overarching goal is a wholesale shift in public consciousness away from uninformed consumerism to commitment to choices that enhance personal, community, and statewide health, and contribute to productive, thriving natural systems.

Timing: Public education and outreach efforts should commence now.

Parties Involved: Rather than create a new agency the legislature should include the Department of Commerce (DOC) as a board member of the EEAB and also include GHG education as part of the EEAB mission. The board’s membership is prescribed by statute language and this would require legislation. The addition of Commerce to the board would ensure that any energy-related education assisted and/or initiated by the Department of Commerce is represented in a cohesive, coordinated manner, supported by the state plan for environmental education, the GreenPrint. The TWG should also direct the DOC to insure that utility CIP programs include effective energy education and are designed to complement the activities of non-profits. In collaboration with the Minnesota state agencies, a State Climate Change Advisory Group including business, government, nongovernmental organizations, and citizen advocacy representatives should be formed to help guide a coordinated effort moving forward.

Other: [Insert text as appropriate]

Implementation Mechanisms

TBD – [as approved by the TWG]

Related Policies/Programs in Place

TBD – [as needed and approved by the TWG]

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Not applicable.

Estimated GHG Savings and Costs per MTCO_{2e}

TBD – [as needed and approved by the TWG]

Not applicable.

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until MCCAG moves to final agreement at meeting #5 or #6]

Level of Group Support

TBD – [blank until MCCAG meeting #5]

Barriers to Consensus

TBD – [blank until final vote by the MCCAG]

CC-5. Tax and Cap Policies

Policy Description

TBD – [as approved by the TWG]

The MCCAG approved as priority policy options for analysis Energy Supply-X (ES-X) (GHG Cap-and-Trade) and ES-11 (Carbon (GHG) Tax). The ES TWG will quantify the emission reductions and costs or cost savings associated with these options. The CC TWG has requested that the ES TWG strongly consider a multi-sector, regional approach in the development of the design elements and quantification of these options.

CC-7. Participate in Regional and Multi-State GHG Reduction Efforts

Note: Underlined and deleted text identifies revisions by the Small Group to the August 24 version of this policy option that CCS sent to the full TWG.

Policy Description

Regional approaches ~~undertaken can offer broader and more streamlined market opportunities to reduce GHG emissions~~ in collaboration with partner states or other organizations can offer broader and more economically efficient opportunities to reduce GHG emissions across Minnesota's economy. There are several options ~~that can for regional, market-based GHG reduction strategies which should~~ be considered in Minnesota such as: ~~Joining~~ joining the Western Climate Initiative (WCI), joining the Northeast States Regional Greenhouse Gas Initiative (RGGI), or instituting a new Midwestern states GHG initiative.

Policy Design

[Insert text as appropriate]

Goals: Ensure the cost effective reduction of GHG emissions to at least the reduction levels set forth in Minnesota statute, in a manner that maximizes public benefits and induces innovation in energy efficiency and sustainable energy technologies and avoids inequitable impacts.

Timing: By February 1, 2008, the Administration must report to the legislature on its investigation into regional GHG reduction opportunities. By August 1, 2009, Minnesota should either join an existing GHG reduction initiative or, institute and join a new Midwestern states GHG initiative that will ensure that Minnesota achieves the goal, as stated above.

Parties Involved: The Governor and administration staff should implement the legislative directive (see below) and inform the chairs and ranking minority members of the legislative committees with jurisdiction over energy and environmental finance and policy.

Other: [Insert text as appropriate]

Implementation Mechanisms

TBD – [as approved by the TWG]

S.F. No. 145, Article 5, Sec. 2, Subd. 6 (Regional activities), ~~authorizes the~~ The state must, to the extent possible, with other states in the Midwest region, pursue efforts to develop and implement a regional approach to reducing GHG emissions from activities in the region, including consulting on a regional cap and trade system.

Related Policies/Programs in Place

See CC-5 – Cap and Tax Policies and outcomes from the Energy Supply Working Group

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Not applicable.

Estimated GHG Savings and Costs per MTCO_{2e}

TBD – [as needed and approved by the TWG]

Not applicable.

Key Uncertainties

Will the design of a new or existing multi-state system ensure the cost effective reduction of GHG to at least the reduction levels set forth in Minnesota statute, in manner that maximizes public benefits and induces innovation in energy efficiency and sustainable energy technologies and avoids inequitable impacts? Will joining another pre-designed initiative compromise the achievement of Minnesota's goal?

Additional Benefits and Costs

There will be additional environmental and economic co-benefits associated with the state's participation in a regional GHG emission reduction initiative that meets Minnesota's goals, including: the opportunity to reduce GHG emissions in economically efficient manner, the identification of additional areas for cooperation within specific sectors (e.g. transportation), and the reduction of other non-GHG pollutants associated with the production and use of energy.

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until MCCAG moves to final agreement at meeting #5 or #6]

Level of Group Support

TBD – [blank until MCCAG meeting #5]

Barriers to Consensus

TBD – [blank until final vote by the MCCAG]

CC-8. Encourage the Creation of a Business-Oriented Organization to Share Information and Strategies, Recognize successes, and Support Aggressive GHG Reduction Goals

Note: Underlined and deleted text identifies revisions by the Small Group to the August 24 version of this policy option that CCS sent to the full TWG.

Policy Description

Successful state GHG reduction efforts are highly dependent on active participation of the business community, particularly in the energy, agriculture, transportation, development and manufacturing sectors. In Minnesota, there are many progressive corporations that are anxious to participate in broad-scale efforts to reduce GHG emissions. In order to facilitate a strategic approach that has ~~an optimal~~ a significant impact, a statewide pro-active business organization ~~should~~ could be formed to promote energy efficiency and GHG reduction~~address climate~~ opportunities ~~and risks~~.

Policy Design

[Insert text as appropriate]

Goals: The Next Generation Energy Act of 2007 established general goals for GHG emissions reduction and an aggressive specific annual goal of reducing energy consumption by 1.5%. A new business strategy that aggressively promotes options to improve energy efficiency by Minnesota's businesses will help achieve these goals.

Timing: As soon as possible.

Parties Involved: The Minnesota Chamber of Commerce (Chamber), energy utilities, the Minnesota Department of Commerce (DOC), energy conservation experts and individual businesses around the state.

Other: [Insert text as appropriate]

Implementation Mechanisms

In 1993, the Preliminary discussions have been held at the MN Chamber of Commerce created a business waste reduction program called Minnesota Waste Wise. Since then, hundreds of businesses have participated to reduce waste generation and improve recycling and reuse rates. The Chamber is now using the Waste Wise model for a new program to promote energy conservation and efficiency. The program will promote the use of Conservation Improvement Programs (CIP) sponsored by energy utilities through education and outreach, technical assistance and recognition programs. The Chamber is consulting with energy utilities, business consumers and the DOC on program development. Funding will be sought from DOC CIP grant funds.

Related Policies/Programs in Place

Energy utilities' Conservation Improvement Programs.

Minnesota Waste Wise

Energy Star

Type(s) of GHG Reductions

Carbon Dioxide, other GHGs.

Estimated GHG Savings and Costs per MTCO_{2e}

Not applicable.

Key Uncertainties

Must secure funding.

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until MCCAG moves to final agreement at meeting #5 or #6]

Level of Group Support

TBD – [blank until MCCAG meeting #5]

Barriers to Consensus

TBD – [blank until final vote by the MCCAG]

CC-9. Dedicate Greater Public Investment to Climate Data and Analysis

Policy Description

NOTE: All red text is meant to reflect only an illustrative example.

In order assure cost-effective investment of resources it is essential to have accurate and current data and information about GHG emissions and impacts and also state of the art computer modeling capabilities. High quality data and accurate predictive capabilities are key elements in being able to plan strategically and track progress over time in reducing GHG emissions. It is also important to integrate efforts of multiple entities gathering GHG data so that additional monitoring and data collection resources are effectively utilized. In Minnesota a state climate data and analysis center is proposed in order to develop and provide objective, state-specific information regarding climate data, analysis, assessment of options and directions, identification of trends, development or improvement of computer modeling, and other information to government, business, and the public.

Policy Design

TBD – [as approved by the TWG]

Goals: [Insert text as appropriate]

Timing: [Insert text as appropriate]

Parties Involved: [Insert text as appropriate]

Other: [Insert text as appropriate]

Implementation Mechanisms

TBD – [as approved by the TWG]

Related Policies/Programs in Place

TBD – [as needed and approved by the TWG]

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Not applicable.

Estimated GHG Savings and Costs per MTCO_{2e}

TBD – [as needed and approved by the TWG]

Not applicable.

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until MCCAG moves to final agreement at meeting #5 or #6]

Level of Group Support

TBD – [blank until MCCAG meeting #5]

Barriers to Consensus

TBD – [blank until final vote by the MCCAG]

CC-10. Facilitate the Development of an Effective Carbon Credit System for MN

Policy Description

NOTE: All red text is meant to reflect only an illustrative example.

Carbon credit systems can encourage development of carbon markets (and offset techniques). The state could purchase carbon credits associated with its own activities, function as a purveyor of credits to others, or act as a certification entity of others carbon exchanges.

[Note: This option may overlap with elements of ES-X (GHG Cap-and-Trade) and ES-11 (Carbon (GHG) Tax). The CC TWG will coordinate with the ES TWG to ensure consistency and to avoid duplication of effort during development of CC-10.]

Policy Design

TBD – [as approved by the TWG]

Goals: [Insert text as appropriate]

Timing: [Insert text as appropriate]

Parties Involved: [Insert text as appropriate]

Other: [Insert text as appropriate]

Implementation Mechanisms

TBD – [as approved by the TWG]

Related Policies/Programs in Place

TBD – [as needed and approved by the TWG]

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Estimated GHG Savings and Costs per MTCO_{2e}

TBD – [as needed and approved by the TWG]

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until MCCAG moves to final agreement at meeting #5 or #6]

Level of Group Support

TBD – [blank until MCCAG meeting #5]

Barriers to Consensus

TBD – [blank until final vote by the MCCAG]

CC-11. Create a Market Advisory Group

Policy Description

NOTE: All red text is meant to reflect only an illustrative example.

The CC TWG recommends that the MCCAG establish a “Market Advisory Group” consisting of experts to provide guidance to the state on the design of market-based compliance programs to manage GHG emissions. Note that the State of California has formed a Market Advisory Committee (MAC) to help formulate a GHG Cap and Trade system in California. The California MAC has formulated a set of guiding principles and has developed an initial set of recommendations for a California Cap-and-Trade program. It is recommended that Minnesota evaluate the MAC to determine if it can be used as an example for developing a “Market Advisory Group” for Minnesota to provide expert guidance to the state on design of market-based compliance programs to manage GHG emissions.

[Note: This option may overlap with elements of ES-X (GHG Cap-and-Trade) and ES-11 (Carbon (GHG) Tax). The CC TWG will coordinate with the ES TWG to ensure consistency and to avoid duplication of effort during development of CC-11.]

Policy Design

TBD – [as approved by the TWG]

Goals: [Insert text as appropriate]

Timing: [Insert text as appropriate]

Parties Involved: [Insert text as appropriate]

Other: [Insert text as appropriate]

Implementation Mechanisms

TBD – [as approved by the TWG]

Related Policies/Programs in Place

TBD – [as needed and approved by the TWG]

Type(s) of GHG Reductions

TBD – [as needed and approved by the TWG]

Not applicable.

Estimated GHG Savings and Costs per MTCO_{2e}

TBD – [as needed and approved by the TWG]

Not applicable.

Key Uncertainties

TBD – [as needed and approved by the TWG]

Additional Benefits and Costs

TBD – [as needed and approved by the TWG]

Feasibility Issues

TBD – [as needed and approved by the TWG]

Status of Group Approval

Pending – [until MCCAG moves to final agreement at meeting #5 or #6]

Level of Group Support

TBD – [blank until MCCAG meeting #5]

Barriers to Consensus

TBD – [blank until final vote by the MCCAG]