

Chapter 7

Cross-Cutting Issues

Overview of Cross-Cutting Issues

Some issues relating to climate policy cut across multiple or all sectors. The Minnesota Climate Change Advisory Group (MCCAG) addressed such issues explicitly in a separate Technical Work Group (TWG) as “cross-cutting” issues rather than assigning them to any individual sector. Cross-cutting recommendations typically encourage, enable, or otherwise support emissions mitigation activities and/or other climate actions. The types of policies considered for this sector are not readily quantifiable in terms of greenhouse gas (GHG) reductions and cost-effectiveness calculations. Nonetheless, if successfully implemented, they would likely contribute to GHG emission reductions and enhance the economic benefits described for each of the other policy recommendations that were quantified. Those recommendations are described in Chapters 3–6.

The Cross-Cutting Issues (CC) TWG developed recommendations for each of seven policies (see Table 7-1) that were then reviewed, revised, and ultimately adopted by the MCCAG. All of the recommendations are focused on supporting GHG emissions reduction efforts.

The statewide goals and targets recommendation (CC-2) is the overarching MCCAG recommendation, and it is based on the goals established in the Minnesota Next Generation Act of 2007 (S.F. 145). The GHG reduction goals contained in the Act and endorsed by the MCCAG are to reduce statewide GHG emissions across all sectors producing those emissions to levels at least 15% below 2005 levels by 2015, at least 30% below 2005 levels by 2025, and at least 80% below 2005 levels by 2050. MCCAG projects that implementation of the policies contained in this Plan will achieve these levels of reductions.

All of the seven policy recommendations were adopted unanimously by the MCCAG members present and voting.

Table 7-1 Summary List of Cross-Cutting Policy Recommendations

Policy No.	Policy Recommendation	GHG Reductions (MMtCO ₂ e)			Net Present Value 2008–2025 (Million \$)	Cost-Effectiveness (\$/MtCO ₂ e)	Level of Support
		2015	2025	Total 2008–2025			
CC-1	GHG Inventories, Forecasting, Reporting, and Registry	<i>Not quantified</i>					Unanimous Consent
CC-2	Statewide GHG Reduction Goals and Targets	<i>Not quantified</i>					Unanimous Consent
CC-3	State and Local Government GHG Emissions (Lead by Example)	<i>Not quantified</i>					Unanimous Consent
CC-4	Public Education and Outreach	<i>Not quantified</i>					Unanimous Consent
CC-7	Participate in Regional and Multistate GHG Reduction Efforts	<i>Not quantified</i>					Unanimous Consent
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>					Unanimous Consent
CC-9	Dedicate Greater Public Investment to Climate Data and Analysis	<i>Not quantified</i>					Unanimous Consent
	Sector Total After Adjusting for Overlaps	<i>Not quantified</i>					
	Reductions From Recent Actions	<i>Not quantified</i>					
	Sector Total Plus Recent Actions	<i>Not quantified</i>					

GHG = greenhouse gas; MMtCO₂e = million metric tons of carbon dioxide equivalent; \$/MtCO₂e = dollars per metric ton of carbon dioxide equivalent.

Key Challenges and Opportunities

One of the key challenges facing Minnesota and other states is the lack of clear federal climate change goals, policies and programs. Recent enactment of the federal energy act will provide some direction on auto mileage and energy efficiency requirements but there are many other facets of the climate change problem that may need to wait over a year for federal policy to become more apparent.

In the meantime the state is one of the partners in the Midwestern Governors GHG Reduction Accord and the Energy Security Platform. Participation in these important regional ventures offers the state the clear opportunity to help develop regional goals and collaborative initiatives that will have broader applicability than just within Minnesota borders.

The state has begun to implement a number of activities recognized in the lead by example section of this chapter. The state will need to build on these efforts and take such initiatives to the next level. Additionally, the state will need to organize efforts across state agency boundaries in order to realize some of the reductions anticipated from state government.

Implementation of many elements of the MN Climate Action Plan may entail additional costs to state government that the state will need to determine how to finance. For instance the Plan calls

on the state to make greater investments in Climate Data and Analysis upon which the ongoing climate program will depend. Determining how to finance implementation of the Plan will remain an ongoing challenge.

Another opportunity for the state is in the arena of building more business and economic opportunities associated with reducing GHG emissions. The Plan calls for the creation of a business oriented entity to promote such efforts.

The state also needs to make efficient use of many existing programs, particularly in the monitoring arena. The state should be striving to integrate GHG emissions monitoring and tracking into the existing monitoring infrastructure to the extent feasible.

Cross-Cutting Issues Policy Descriptions

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

GHG emission inventories are essential for understanding the magnitude of all emission sources and sinks (both natural and those resulting from human activities), for estimating the relative contribution of various types of emission sources and sinks to total emissions, for informing state leaders and the public on statewide trends, and for assisting with verifying GHG reductions associated with implementation of action plan initiatives.

GHG forecasts, built on solid inventories, help to predict likely impact scenarios, identify the factors that affect trends over time, and highlight opportunities for mitigating emissions or enhancing sinks.

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 emission 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 provide a mechanism for regional, multistate, and cross-border cooperation. Properly designed registry structures also provide a foundation for possible future trading programs.

The state should 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 at least once every 2 years. To the degree that data and methods allow, the inventory should include 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). Through performance metrics and differences in year-to-year emissions, the inventory should provide a way of documenting and illuminating trends in state GHG emissions.
- Develop a protocol for use in preparing the statewide emission and sink inventory. This should include a consistent protocol for evaluating the state's progress in meeting the goals of the Next Generation Energy Act of 2007, which should logically form the basis for inventory reporting of electricity sector emissions under a consumption-based approach.
- Biennially provide a summary of statewide emission and sink trends and progress toward the goals of the 2007 Next Generation Energy Act to the legislature.
- Develop a periodic, consistent, and complete forecast of future GHG emissions in at least 5- and 10-year increments extending at least 20 years into the future. MPCA should periodically assemble the GHG forecasts, which should reflect projected growth as well as the implementation of scheduled mitigation projects. In the forecasting of future GHG emissions, the treatment of uncertainties should be transparent, should be as consistent as possible across sectors and time and, to the extent possible, should reflect multiple scenarios. The estimation methods should be consistent with those used to develop the emission inventory and should reflect best practice.
- Develop a standardized protocol for the periodic forecasting of statewide GHG emissions.

CC-2 Statewide GHG Reduction Goals and Targets

Article 5 of the Next Generation Energy Act of 2007 (S.F. No. 145) establishes goals for Minnesota to reduce statewide GHG emissions across all sectors producing those emissions, to levels at least 15% below 2005 levels by 2015, at least 30% below 2005 levels by 2025, and at least 80% below 2005 levels by 2050. The levels will be reviewed based on the Minnesota Climate Action Plan. In addition, Article 1 of the act establishes that Minnesota's energy policy requires (1) that the per capita use of fossil fuel as an energy input be reduced by 15% by 2015 through increased reliance on energy efficiency and renewable energy alternatives, and (2) that 25% of the total energy used in the state be derived from renewable energy resources by 2025.

The MCCAG endorses these goals as part of this Plan.

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

In many areas, the Minnesota state government is already leading by example to obtain GHG emission reductions. State and local governments are 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 governments 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 provide incentives for reducing GHG emissions by others in a variety of ways.

The support of broad-ranging goals for GHG reductions for state government through the goals established below and those that already exist through the Interagency Pollution Prevention Advisory Team (IPPAT) will be helpful for setting an example and building expectations, with actual reductions realized at the state agency level. Disaggregating the state's own GHG emissions to the agency level and showing the results in the annual IPPAT report on GHG reduction progress is an effective way to measure and manage the state's emissions.

State and local governments should establish reduction targets for their own GHG emissions. The establishment of broad-ranging goals for reducing governments' GHG emissions will be helpful both in setting an example and in building expectations. Because actual reductions will typically be realized at the individual agency level, disaggregating individual governments' GHG emissions to the agency or department level and requiring annual agency- or department-specific reports on GHG reduction progress can be effective ways to measure and manage each agency's progress toward reducing its emissions. Government agencies or departments first developed agency- or department-specific GHG emissions inventory data. These data became the baseline data for ongoing emission reduction activities and measurements, which are summarized in annual IPPAT reports by each agency or department. IPPAT oversees the ongoing climate efforts of the state government's agencies and departments; reviews their performance; and provides direction, guidance, resources, shared approaches, and recognition to agencies or departments and their employees who are working to reduce the state government's GHG emissions.

Goals:

- Each state agency will, in consideration of its current and projected building stock,
 - Determine and quantify its current and projected energy consumption and associated GHG emissions from such consumption,
 - Develop and propose a plan to reduce the statewide GHG emissions associated with its building stock commensurate with its pro rata share of the statewide GHG reduction goals established in the 2007 Next Generation Energy Act,
 - Provide the plan to IPPAT, and
 - Report annually to IPPAT on its progress toward its GHG reduction goals in buildings.
- Each state agency will, in consideration of its current and projected transportation stock,
 - Quantify and establish the same goals for its transportation stock described above for its building stock,
 - Provide the plan to IPPAT, and
 - Report annually to IPPAT on its progress toward its GHG reduction goals in transportation.

The state should develop appropriate guidelines and tools for utilizing the environmental impact assessment processes to assess and promote reductions of GHG emissions. Environmental

Assessment Worksheets (EAWs) and Environmental Impact Statements (EISs) are written analyses of the potential environmental impacts of a proposed action or project in Minnesota. Including consideration of GHG emissions as part of EAW and EIS processes and documents would enable comparison of reference case GHG emission levels to future GHG emission levels as a result of proposed projects. Such information could be helpful in targeting development decisions that minimize GHG emissions or in pointing out the need for authority to regulate GHG emissions. Agencies should utilize state-developed guidelines and tools in EAW and EIS documents comparing reference case and estimated future GHG emissions. This information will guide officials and developers in choosing technologies and activities that result in development that protects the environment and reduces additional contributions of GHGs.

Additionally, the existing directives of IPPAT, along with the following Executive Orders, should be continued and enhanced:

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 State Agencies To Increase the Use of Renewable Fuels

CC-4 Public Education and Outreach

Explicitly articulated public education and outreach can support GHG emission reduction efforts at all levels in the context of emission reduction programs, policies, or goals by fostering a broad awareness of climate change issues and effects (including co-benefits, such as clean air and public health) and engaging 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 and should make the public aware of GHG emissions associated with products produced outside of Minnesota and the United States. Ultimately, public education and outreach will be the foundation for the long-term success of the policy actions proposed by the MCCAG as well as those that may evolve in the future.

The state should build upon current educational efforts and action campaigns of state agencies, utilities, and nonprofit organizations that understand each other's offerings and should use these enhanced resources to educate and encourage all sectors within Minnesota—such as residential, commercial, and educational—to take action.

Minnesota has a long history of environmental education. The state should 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.

Some of the highlights of these current actions include The Environmental Education Advisory Board, the Environmental Learning in Minnesota Fund, the Minnesota Environmental Literacy Scope and Sequence, and the Sharing Environmental Education Knowledge Partnership. Additional educational initiatives by the utilities and nonprofit sectors are also recommended.

Goals: The overarching goal is to raise awareness about global warming and promote individual action to reduce the Minnesota's overall GHG emissions.

CC-7 Participate in Regional and Multistate GHG Reduction Efforts

Regional approaches undertaken in collaboration with partner states or other organizations can offer broader and more economically efficient opportunities to reduce GHG emissions across Minnesota's economy. Several options for regional, market-based GHG reduction strategies should be considered in Minnesota, such as joining the Western Climate Initiative (WCI) or the Northeast States Regional Greenhouse Gas Initiative (RGGI), instituting a new midwestern states GHG initiative, considering the California vehicle standards, and encouraging cost-sharing on multistate initiatives.

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

Near the end of the MCCAG process, Governor Pawlenty signed the state on to the Midwestern Regional Greenhouse Gas Reduction Accord and the Midwestern Energy Security and Climate Stewardship Platform adopted by nine midwestern states and one Canadian province.

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

Successful state GHG reduction efforts are highly dependent on the 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 eager to participate in broad-scale efforts to reduce GHG emissions. To facilitate a strategic approach that has a significant impact, a statewide proactive business organization should be formed to promote energy efficiency and GHG reduction opportunities.

Goals: The Next Generation Energy Act of 2007 established general goals for GHG emission reductions 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.

To calibrate GHG mitigation policies, it is critical that decision makers and Minnesota citizens understand how climate change is currently affecting and will in the future affect the state's natural resources and economy. Much of the data and information needed to make such an assessment is being collected by various departments and entities in the state. MPCA and the Minnesota Departments of Natural Resources, Agriculture, and Employment and Economic Development should assess and identify the gaps in ongoing data collection that would need to be filled to monitor, track, and assess climate change impacts in Minnesota. The departments should develop recommendations for filling these data gaps and suggest the best approach (possibly by coordinating with the University of Minnesota) for periodically assessing how intensely Minnesota is being and is likely to be affected by climate change.

Goals: Develop a plan for periodically assessing the recent and projected impacts of climate change on Minnesota natural resources and economic activity. The assessment would focus on (but not be limited to) impacts on water resources and quality, air quality, landscape change, forest resources and health, ecosystem health, species diversity, fish and wildlife and their habitats, agricultural productivity, recreation and other amenities, human disease, and settlement. The assessment should treat impacts arising from climate change in the present and recent past and impacts that are likely or possible 30–50 years into the future and should rely on the best available regional climate data and assessments.