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Catalog of State Actions Cross Cutting (CC) Issues Working Group

A catalog of state-level, GHG-reducing actions and policy options prepared by the Center for Climate Strategies (CCS), Minnesota Department of Commerce (DOC), and Minnesota Pollution Control Agency (PCA) based on actions undertaken or considered by Minnesota and other states, including regional, state, local and private actions.

Important Note: The GHG Reduction Policy Options below are numbered solely for convenience in referencing them. Their numbers do NOT reflect a ranking or prioritization of the policy options.

Notation regarding options:

Definition of “Priorities for Analysis”:

- **High:** High priority options will be analyzed first.
- **Medium:** Medium priority options will be analyzed next, time and resources permitting.
- **Low:** Low priority options will be analyzed last, time and resources permitting.

Options marked with an asterisk (*) indicate options that are at least partially “base case” policies, i.e., that have been considered or undertaken at some level in Minnesota.

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
1	INVENTORIES AND FORECASTING (H)			Consolidate CC-1, CC-2, and CC-3 into one option
1.1.	Establish and fund mandatory GHG emission inventory function at state agency*	H		<ul style="list-style-type: none"> • State has already established on-going inventory capacity within the MN Pollution Control Agency. • S.F. No. 145, Article 5, Section (Sec.) 2, Subdivision (Subd.) 4(1): Requires state to estimate GHG emissions for 1990 – 2005.
1.2.	Establish and maintain GHG emission forecasting function*	H		<ul style="list-style-type: none"> • S.F. No. 145, Article 5, Sec. 2, Subd. 4(1): Requires state to make projections of GHG emissions for 2015, 2025, and 2050.

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2	GHG REPORTING (H)			Consolidate CC-1, CC-2, and CC-3 into one option
2.1.	Establish or adopt a GHG emissions reporting program*	H		<ul style="list-style-type: none"> • State recently joined <i>The Climate Registry</i> which, at least for voluntary participants, will include compliance with reporting protocols for registering GHG emissions and emission reductions. • S.F. No. 145, Article 5, Sec. 2, Subd. 4(6): Requires state to recommend a system to require the reporting of statewide GHG emissions, identifying which facilities must report, and how emission estimates should be made. • S.F. No. 145, Article 5, Sec. 2, Subd. 5(c): The “plan” must include recommendations for improvements in the emissions inventory and recommend whether the state should require GHG emissions reporting for specific sources and, if so, which sources should be required to report.

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3	GHG REGISTRY (H)			Consolidate CC-1, CC-2, and CC-3 into one option
3.1.	Participate in the development of a multi-state GHG emissions reduction registry*	H		<ul style="list-style-type: none"> State recently joined <i>The Climate Registry</i> for registering GHG emissions and emission reductions. S.F. No. 145, Article 5, Sec. 2, Subd. 5(c): The “plan” must also evaluate options for an emissions registry after reviewing registries in other states and recommend a registry that will insure the greatest opportunity for MN entities to obtain marketable credits.
4	STATEWIDE GHG REDUCTION GOALS AND TARGETS (H)			
4.1.	Establish goals or targets for statewide GHG emission reductions	H		<ul style="list-style-type: none"> S.F. No. 145, Article 5, Sec. 2, Subd. 1: Establishes statewide GHG emission reduction goal across all sectors producing GHG 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. S.F. No. 145, Article 5, Sec. 2, Subd. 5(a): The “plan” must evaluate and recommend interim goals as steps to achieve these goals.
4.2.	Institute an accountability program to measure and report progress in reducing GHG emissions.	H		<ul style="list-style-type: none"> Purpose is to ensure that overall implementation of the MCCAG’s plan proceeds toward its targets. Implementation accountability for individual policy options should be included in policy option straw proposals developed by the TWGs.

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5	STATE AND LOCAL GOVERNMENT GHG EMISSIONS (LEAD-BY-EXAMPLE) (H)			Consolidate CC-5 and CC-6
5.1.	Lead by example by establishing targets for reductions in State GHG emissions	H		
5.2.	Create a multi-agency body to oversee on-going state climate efforts.	H		
5.3.	Disaggregate the State's own GHG emissions to the agency level and require annual agency-specific reports on GHG reduction progress.	H		
5.4.	Institute an accountability program to measure and report progress in reducing GHG emissions.	H		
5.5.	Climate-neutral bonding	H		
5.6.	Require evaluation of GHG emissions in Environmental Impact Statements and similar environmental studies.	H		<ul style="list-style-type: none"> • Environmental studies, such as environmental Assessments (EAs) and Environmental Impact Statements (EISs).

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6	COMPREHENSIVE LOCAL GOVERNMENT CLIMATE ACTION PLANS (COUNTIES, CITIES, ETC.) (H)			Consolidate CC-5 and CC-6
6.1.	Encourage and assist in the development of local government planning efforts to reduce greenhouse gas emissions, establish targets, etc.	H		
7	PUBLIC EDUCATION AND OUTREACH^a (H)			^a See Appendix A for all detail of Option 7
7.1.	State and Tribal Government Education and Outreach Actions (H) The State and Tribal Authorities 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.			
7.2.	Target Audience: Policymakers (legislators, regulators, executive branch, agencies) (H) Implementation of climate actions hinges on policymakers’ approval, requiring education of policy makers in Governor’s office and legislature.			
7.3.	Target Audience: Future Generations (H) Integrate climate change into accredited educational curricula, core competencies, post-secondary degree programs, and professional licensing.			
7.4.	Target Audience: Community Leaders and Community-Based Organizations (H) (e.g., Institutions, Municipalities, Service Clubs, Social and Affinity Groups, Non-Governmental Organizations (NGOs), etc.) Recognize leadership; share success stories and role models; expand involvement and participation within civic society and local officials. Recognize local leaders and associations as role models; target local leaders and associations not yet acting on climate change.			

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7.5.	Target Audience: General Public (H) Increase awareness and engage in climate actions in personal and professional lives, public polling, inclusion in statewide speeches and statements, etc.			
7.6.	Target Audience: Industrial and Economic Sectors (H) Sector-specific climate change education and outreach, residential, car dealers, ClimateWise programs, etc.			
7.7.	Target Audience: Faith-Based Organizations and Communities (H) Increase awareness and engagement in climate actions in personal and religious lives.			
8	TAX AND CAP POLICIES (H)			To be quantified by ES and/or RCI TWGs if MCCAG approves option as a priority for analysis. CC TWG's interest is that the design of this option consider a multi-sector approach and regional geographic coverage.
8.1.	Institute tax incentives and disincentives to encourage GHG reductions.	H		
8.2.	Other market-based programs including cap and trade	H		To be quantified by ES and/or RCI TWGs
8.3.	Join the Western Regional Climate Action Initiative (the "Five-State Initiative) as an observer, and consider joining as a full state partner.	L		
9	SEEK FUNDING FOR IMPLEMENTATION OF CLIMATE ACTION PANEL RECOMMENDATIONS (L)			
9.1.	Seek and stimulate funding and investment in climate solutions in Minnesota.	L		•

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10	ADAPTATION and VULNERABILITY (H)			
10.1.	Undertake a comprehensive planning effort to assess and address Minnesota's vulnerability to climate change and adaptation opportunities.	H		•
10.2.	Develop a comprehensive, multi-media monitoring plan to help track changes and identify vulnerabilities	H		<ul style="list-style-type: none"> • Some work in this direction is underway. • Examples might include precipitation intensity, wildlife populations, etc.
10.3.	Upgrade and update planning tools and data bases to assist in state and regional planning, infrastructure development, etc.	H		•
11	PARTICIPATE IN REGIONAL AND MULTI-STATE GHG REDUCTION EFFORTS (H)			
11.1.	Join the Western Climate Initiative (WCI), the multi-state/province market initiative	L		•
11.2.	Join the Northeast states' Regional Greenhouse Gas Initiative (RGGI)	H		•
11.3.	Initiate a regional GHG reduction initiative of the Midwest states	H		<ul style="list-style-type: none"> • S.F. No. 145, Article 5, Sec. 2, Subd. 6 (Regional activities): Authorizes state to pursue efforts to develop and implement a regional approach to reducing GHG emissions.

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12	ENCOURAGE THE CREATION OF A BUSINESS-ORIENTED ORGANIZATION TO SHARE INFORMATION AND STRATEGIES, RECOGNIZE SUCCESSES, AND SUPPORT AGGRESSIVE GHG REDUCTION GOALS (H)			
12.1.	Create a statewide pro-active business organization to address climate opportunities and risks.	H		• Preliminary discussions have been held at the MN Chamber of Commerce.
13	DEDICATE GREATER PUBLIC INVESTMENT TO CLIMATE DATA AND ANALYSIS (H)			Consolidate with CC-14
13.1.	Create a state climate data and analysis center 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.	H		•
14	DEDICATE GREATER PUBLIC INVESTMENT TO CLIMATE-RELATED RESEARCH, DEVELOPMENT, AND DISTRIBUTION (RD&D) (H)			Consolidate with CC-13
14.1.	Create a state climate RD&D center.	H		•
14.2.	Create tax incentives to encourage private RD&D investment.	H		•

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
15	FACILITATE THE DEVELOPMENT OF AN EFFECTIVE CARBON CREDIT SYSTEM FOR MINNESOTA (H)			The CC TWG agreed that terrestrial sequestration offset markets should be addressed by the AFW TWG.
15.1.	The State of Minnesota could purchase carbon credits to offset emissions associated with some or all of its activities.	H		<ul style="list-style-type: none"> • This might be a way to encourage the development of carbon markets (and offset techniques). A vigorous debate is ongoing regarding carbon offsets, both nationally and internationally, and has been since the initiation of the Clean Development Mechanism (CDM) under the Kyoto Protocol.
15.2.	The State of Minnesota could act as a purveyor or provider of carbon credits to Minnesotans interested in purchasing offsets.	H		<ul style="list-style-type: none"> • From whom would the state purchase? How would it decide? How would it provide this service to Minnesotans?
15.3.	The State of Minnesota could certify that carbon credits sold in Minnesota represent real reductions in rough amount equal to what is being marketed, essentially as a form of consumer protection.	H		<ul style="list-style-type: none"> • What should the standards for carbon credits in Minnesota be? Real? Verifiable to what level? Additional? Limited geographically to some part of the world? Permanent and, if so, to what degree?

16	INVESTIGATE GREATER COORDINATION OF ENVIRONMENTAL ATTRIBUTES TRADING ASSOCIATED WITH ELECTRIC POWER GENERATION (H)			Consolidate with CC-8, with quantification to be addressed by ES and/or RCI TWGs if MCCAG approves option as a priority for analysis.
16.1.	It may make sense from a market development and liquidity perspective to investigate whether the potential exists to develop greater coordination between these different environmental attributes requirements and trading systems.	H		<ul style="list-style-type: none"> • In the Midwest (MN, WI, IL, ND, SD, IA, Manitoba), the Midwest Renewable Energy Trading System (M-RETS)¹ will soon be going into effect. Many of the same states are also participating in <i>The Climate Registry</i>. Some are CCX partners. Some have criteria pollutant trading or existing registry systems. All incorporate federal Title 4 Acid Rain SO₂ trading provisions. Some states will be included in the NO_x trading program of the federal Clean Air Interstate Rule. • The sale of attributes under one trading or accounting system could go unnoticed under another –or even conflict with it. This could lead to uncertainty about ownership the attributes and, potentially, double counting. Ultimately, renewable energy portfolio requirements [and associated tradable Renewable Energy Credits (RECs)] are for the purpose of encouraging renewable energy development not for its own sake but to limit emissions of GHGs, fossil-based criteria pollutants, and mercury.

¹ For more information about M-RETS, see its web site at <http://www.gpisd.net/mrets/topbar.htm> .

17	DEVELOP AND MAINTAIN A CONCERTED PRESENCE IN WASHINGTON, DC TO HELP ENSURE THAT FEDERAL CLIMATE POLICY DEVELOPMENTS RESPECT MINNESOTA'S INTERESTS (L)			
17.1.	Field a presence in Washington D.C. for purposes of trying to steer the discussion around the coming GHG legislation or rule-writing	L		<ul style="list-style-type: none"> Should a DC presence be semi-permanent and, if so, how/when should it be sun-set? Its representation should be what? Its charge should be what? How will its charge be determined? How might it be funded? How should it operate? Which particular venues are appropriate for it to operate in? On what issues should MN play? Where do MN's interests lie?
18	CREATE A MARKET ADVISORY GROUP (H)			Added by CC TWG during Call #3.
18.1.	Create a Market Advisory Group	H		<ul style="list-style-type: none"> To provide expert guidance to the state on design of a market-based compliance programs to manage GHG emissions. Consider California's Market Advisory Committee as an example.
18.2.	Support market based GHG emissions programs	H		<ul style="list-style-type: none">
				<ul style="list-style-type: none">

Appendix A. PUBLIC EDUCATION AND OUTREACH
Third-Level Sub-Options by Audience for Option 7 of Catalog

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
7.	PUBLIC EDUCATION AND OUTREACH			
7.1	State and Tribal Government Education and Outreach Actions The State and Tribal Authorities should lead by example (i.e., walk the talk) regarding education and outreach.			
7.1.1.	Establish an education and outreach committee to educate audiences regarding climate plan policies and to oversee those relating to education.			• Ongoing through Minnesota's Environmental Education Advisory Board
7.1.2.	Include state and tribal public education and higher education officials in the committee established above			• Ongoing through Minnesota's Environmental Education Advisory Board
7.1.3.	Create and maintain one or more “outreach coordinator” positions specifically tasked with climate outreach and coordination among state agencies, and tribal authorities, and outside entities.			
7.1.4.	Educate state and tribal employees across-the-board, and assign “point persons” to do so on an on-going basis.			
7.1.5.	Institute annual Governor’s Awards to recognize climate action of several types/categories.			

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7.2.	Target Audience: Policymakers (Legislators, Regulators, Executive Branch, Agencies) Implementation of climate actions hinges on policymakers' approval.			
7.2.1.	Educate policy makers on CAP policy recommendations, climate change in general, scientific and technological advances, and progress toward state goals through regular briefings in order to promote acceptance and implementation of mitigation and adaptation policies.			
7.2.2.	Provide continuing outreach and assistance to Governor's office, legislature, and implementing agencies on a regular basis.			
7.3.	Target Audience: Future Generations Integrate climate change into educational curricula, post-secondary degree programs, and professional licensing.			
7.3.1.	Add climate change to public education performance standards for science and social studies; identify (a) gaps in climate change education, and (b) specific curricula to fill any gaps.			<ul style="list-style-type: none"> • Ongoing through Minnesota's Environmental Education Advisory Board
7.3.2.	Organize groups of educators to identify, assemble, and employ climate change curricula appropriate to age groups			<ul style="list-style-type: none"> • Ongoing through Minnesota's Environmental Education Advisory Board

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7.3.3.	Integrate “best practices” into public school design and construction to educate students (and parents) first-hand in their communities and colleges (i.e., walk the talk).			
7.3.4.	Integrate climate change into core college curricula.			
7.3.5.	Promote research into climate change and solutions at state universities; develop university “Centers of Excellence” on climate issues, new approaches, and technologies.			
7.3.6.	Integrate climate change into existing and/or new educational competition programs.			
7.3.7.	Work with science centers, zoos, and museums to include a climate science focus appropriate to their core mission			
7.3.8.	Introduce core competencies on climate change into professional licensing programs (e.g., energy efficiency in building design and construction, use of recycled materials, etc.)			

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7.4.	<p align="center">Target Audience: Community Leaders and Community-Based Organizations (e.g., Institutions, Municipalities, Service Clubs, Social and Affinity Groups, Non-Governmental Organizations (NGOs), etc.)</p> <p align="center">Recognize leadership; share success stories and role models; expand involvement and participation within civic society.</p>			
7.4.1.	Educate community planning and zoning officials about climate change, impacts, and opportunities.			
7.4.2.	Identify individual community leaders who are acting effectively on climate change; showcase and share their successes.			
7.4.3.	Identify individual community leaders who are not yet acting on climate change and make a special effort to educate and encourage them to act.			
7.4.4.	Engage associations and attend their periodic meetings to reach out on climate change, impacts, sector-specific mitigation actions, and adaptation opportunities.			
7.4.5.	Identify, assist, and leverage community-based organizations that have expertise or interest in climate-related issues			

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
7.4.6.	Work with community-based organizations to identify and build upon climate issues related to their core mission			
7.4.7.	Develop and coordinate a network of community-based organizations acting on climate change so they can link up, organize joint events, etc.			
7.4.8.	Support and facilitate outreach and education within community-based organization regarding climate change issues and actions			
7.4.9.	Develop and provide concrete information on co-benefits to entities to use in boosting their climate efforts			
7.4.10.	Organize and host events that focus on leading by example, sharing “how-to,” illuminating financial risks and opportunities, co-benefits, etc.			
7.4.11.	Encourage municipal leaders to join ICLEI’s ² Cities for Climate Protection program and/or the Mayors Climate Protection Agreement ³			

² ICLEI is the International Council for Local Environmental Initiatives. See www.iclei.org.

³ See <http://www.ci.seattle.wa.us/mayor/climate/>.

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7.4.12.	Help communities statewide implement programs like Ft. Collins' ClimateWise program.			
7.5.	Target Audience: General Public Increase awareness and engage in climate actions in personal and professional lives.			
7.5.1.	Educate broadcasters, reporters, editorial boards, etc. about climate change, the risks it imposes, and solutions.			
7.5.2.	Work with state broadcasters and print media associations to develop and run climate change public service announcements.			
7.5.3.	Conduct public polling to benchmark strength and depth of climate understanding.			
7.5.4.	Keep a high profile on climate change issues and actions through regular public mention by Governor and other public leaders			
7.5.5.	Develop and use a state-based "brand" on climate awareness and action			
7.5.6.	Develop and maintain a state climate change website for the public including a clearinghouse of climate change information and resources.			

Option No.	GHG Reduction Policy Option	Priority for Consideration	Feasibility Considerations	Notes
7.5.7.	Work with existing company outreach efforts to customers to enhance awareness of climate change issues and opportunities			
7.5.8.	Undertake a concerted planning effort to identify and address climate adaptation issues and needs in the state			
7.5.9.	Work to educate consumers – and home designers, builders, and contractors to ensure that they are aware of the different choices for space heating and cooling (e.g., evaporative vs. refrigerative) and the impacts of those choices.			
7.5.10.	Develop a statewide voluntary program to structure and assist individuals in undertaking actions to reduce GHG emissions.			
7.6.	Target Audience: Industrial and Economic Sectors Sector-specific climate change education and outreach.			
7.6.1.	Residential, Commercial, and Industrial			
7.6.2.	Transportation and Land Use			<ul style="list-style-type: none"> • Have a State award for the car dealer that sells the most hybrids?

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7.6.3.	Energy Supply and Use			<ul style="list-style-type: none"> • Do public service announcements to education the public about DSM. • Include environmental disclosure in monthly electricity bills. • Help municipal utilities move to greater demand-side emphasis rather than supply-side.
7.6.4.	Agriculture and Forestry			
7.6.5.	Implement a state program of voluntary business actions to reduce GHGs (like Ft. Collins' ClimateWise Program).			
7.6.6.	Institute a "business incubator" program to attract and support new business development relating to the new energy economy.			
7.6.7.	Audiences outside Minnesota too			
7.7.	Target Audience: Faith-Based Organizations and Communities Increase awareness and engage in climate actions in personal and professional lives.			
7.7.1.				