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Minnesota Pollution Control Agency

January 15, 2009

The Honorable Ellen R. Anderson
Minnesota Senate
75 Rev. Dr. Martin Luther King Jr. Blvd.
Room 120
St. Paul, Minnesota 55155-1606

The Honorable Bill Hilty
Minnesota House of Representatives
100 Rev. Dr. Martin Luther King Jr. Blvd
Room 559
St. Paul, Minnesota 55155-1606

The Honorable Yvonne Prettner Solon
Minnesota Senate
75 Rev. Dr. Martin Luther King Jr. Blvd.
Room G-9
St. Paul, Minnesota 55155-1606

RE: Green Solutions Act Reports:

1. Midwestern Greenhouse Gas Accord
2. Economic, Environmental and Public Health Impact and Potential Revenues Study
3. Governance Study

Dear Senator Anderson, Senator Solon and Representative Hilty:

Pursuant to Minnesota Session Laws 2008 Chapter 340 – Green Solutions Act of 2008 - this letter provides an update of activities of the Midwestern Governors Association *Midwestern Greenhouse Gas Reduction Accord*¹ and two related studies requested by the legislature.

BACKGROUND

On November 15 and 16, 2007, the Midwest Energy Security and Climate Stewardship Summit (Summit) was held by the Midwestern Governors Association² (MGA). The Summit was co-hosted by Governor Pawlenty, Chair of the National Governors Association, and Wisconsin Governor Jim Doyle, Chair of the MGA. At the end of the two day Summit, six Midwest Governors³ and the Premier of Manitoba signed the *Midwestern Greenhouse Gas Reduction Accord*⁴ (Midwestern Accord). Under the Midwestern Accord, members agree to:

¹ A full copy of the Midwest Greenhouse Gas Reduction Accord can be viewed at: <http://www.wisgov.state.us/docview.asp?docid=12497>.

² Information regarding the Midwest Governors Association can be view at: <http://www.midwesterngovernors.org/govenergynov.htm>

³ The Governors of Minnesota, Wisconsin, Indiana, Iowa, Michigan, Kansas, as well as the Premier of the Canadian Province of Manitoba, signed the Accord as full participants; the Governors of Indiana, Ohio, and South Dakota joined the agreement as observers to participate in the development of the cap and trade system.

⁴ A full copy of the Midwest Greenhouse Gas Reduction Accord can be viewed at: <http://www.wisgov.state.us/docview.asp?docid=12497>.

- establish greenhouse gas reduction targets and timeframes consistent with MGA member states' targets;
- develop a market-based and multi-sector cap-and-trade mechanism to help achieve those reduction targets;
- establish a system to enable tracking, management and crediting for entities that reduce greenhouse gas emissions;⁵ and
- develop and implement additional steps as needed to achieve the reduction targets, such as a low-carbon fuel standards and regional incentives and funding mechanisms.

The Midwestern Accord builds on existing greenhouse gas reduction efforts in each state as well as existing regional efforts. The Midwestern Accord represents the third regional agreement⁶ among U.S. states to collectively reduce greenhouse gas emissions. Between these three regional agreements, twenty U.S. states and two Canadian Provinces have adopted plans for reducing their greenhouse gas emissions, with another seven states and two provinces as observers to the agreements.⁷

In addition to the Midwestern Accord, eight members of the MGA signed the *Energy Security and Climate Stewardship Platform for the Midwest*⁸ (Stewardship Platform). To transition to a lower carbon energy economy, the Stewardship Platform lists the following goals:

1. Energy Efficiency Improvements – the Midwest Regional commitment is to meet at least 2 percent of regional annual retail sales of natural gas and electricity through energy efficiency improvements by 2015, and continues to achieve an additional 2 percent in efficiency improvements every year.
2. Bio-based Products and Transportation – the Midwest Regional commitment with regards to biofuels in general is to have 50 percent of the region's transportation fuels come from renewable resources by 2025, including:

⁵ Prior to the Summit, an in-depth study and data analysis of greenhouse gas (GHG) emissions was performed by World Resources Institute (WRI) for eight Midwest U.S. States: Minnesota, Illinois, Indiana, Iowa, Michigan, Missouri, Ohio and Wisconsin. The study is entitled *Charting the Midwest: An Inventory and Analysis of Greenhouse Gas Emissions in America's Heartland* published in October 2007. A copy of the WRI report can be viewed at: <http://dnr.wi.gov/environmentprotect/gtfgw/document/chatring-the-midwest.pdf>.

⁶ The two other regional agreements are the Regional Greenhouse Gas Initiative in the Northeast (found at: <http://www.rggi.org/index.htm>) and the Western Climate Initiative in the Southwest (found at: <http://www.westernclimateinitiative.org>.)

⁷ More information regarding regional efforts can be found at: http://www.pewclimate.org/what_s_being_done/in_the_states/regional_initiatives.cfm?preview=1.

⁸ A full copy of the Energy Security and Climate Steward Platform for the Midwest can be viewed at: <http://www.wisgov.state.us/docview.asp?docid=124975>.

- accelerating strategies for improving the efficiency of biofuels production and use;
- reducing fossil fuel inputs;
- minimizing greenhouse gas (GHG) emissions;
- decreasing water use; strengthening the existing biofuels industry; and
- developing, demonstrating and commercializing a variety of biomass-utilizing technologies and other low-carbon advanced fuels.

There is also a regional commitment on E85, which is a goal that least 15 percent of retail stations in the region offer E85 by 2015, 20 percent by 2020, and 33 percent by 2025.

3. Renewable Electricity – the Midwest Regional commitment on renewable electricity production is to obtain at least 30 percent of the region's electricity from renewable resources by 2030.
4. Advance Coal and Carbon Capture and Storage – the Midwest Regional commitment on coal use for electricity generation is that by 2020 all new coal gasification and coal combustion plants will capture and store CO₂ emissions.

Also, member MGA states signed six additional resolutions. The resolutions establish a Carbon Management Infrastructure Partnership, a Midwestern Biobased Product Procurement Program, a Transmission Adequacy Initiative, a working group to pursue a collaborative, multi-jurisdictional transmission (including renewable energy corridors) across the Midwest, a Bioenergy Permitting collaborative, and an initiative to develop a low-carbon energy transmission infrastructure.

STATUS REPORT ON MIDWESTERN GREENHOUSE GAS ACCORD; ECONOMIC, ENVIRONMENTAL AND PUBLIC HEALTH IMPACT AND POTENTIAL REVENUES STUDY

Unique to the Midwestern Accord, a stakeholder group was formed – the Greenhouse Gas (GHG) Advisory Group - to help develop specific recommendations for meeting the goals of the Accord. A roster of the stakeholders is included as Attachment 1. Within the GHG Advisory Group, there are six sub-groups: Model Rule, Scope, Target-setting, Data and Reporting, Modeling, Allowances and Offsets.

The GHG Advisory Group and the subgroups began meeting in March 2008. To date, there have been eight face-to-face meetings of the GHG Advisory Group and numerous conference calls and meetings of the subgroups. The Model Rule sub-group was formed in October 2008 to draft a cap and trade model rule and will begin meetings in January 2009.

The GHG Advisory Group has initiated modeling the potential GHG reductions and economic impacts of a cap and trade program in the Midwest region. Preliminary modeling results should

start becoming available in January 2009. However, the final results of the modeling will probably not be available until at least April 2009. The MGA staff have been working with Minnesota stakeholders to develop a Minnesota specific study to look deeper into the economic, environmental and health impacts as well as more Minnesota specific information on potential revenue. The scope of that study is not yet final. The Minnesota specific modeling will be performed by the same consultant working on the Midwestern Accord modeling. While some of the Minnesota specific work can begin in parallel with the regional modeling, it is expected that the majority of the Minnesota modeling will follow the Midwestern Accord work. As a result, we do not expect the Minnesota study to be complete until May 2009 or, more likely, later.

Preliminary cap and trade design recommendations were developed in November and December 2008. A copy of those recommendations is included as Attachment 2. The preliminary recommendations are consistent with the Minnesota GHG reduction goals under Minnesota Stats. 216H.02 subdivision 1. However, the recommendations are not complete and several significant decisions are still pending. Final recommendations are not expected until the GHG Advisory Group has a chance to review the economic modeling results later in 2009.

The model rule subgroup will begin its work in earnest in January 2009. A draft model rule outline has been developed. A final model rule is not expected until at least September 2009 or later.

The Green Solutions Act specifically asks for information on six specific questions related to the Accord. Those questions and succinct answers are provided below:

1. “the status of the development of a model rule establishing a regional cap and trade program under the Midwestern Greenhouse Gas Accord,” *As stated above, a model rule is not expected until September 2009 or later. This is due to the fact that the Advisory Group is taking longer than originally anticipated to develop the framework for the model rule.*
2. “implementation mechanisms in the model rule, including required legislation,” *It will not be possible to answer this question until the model rule work is further along.*
3. “whether the regional cap and trade program will operate in a time frame that will allow Minnesota to meet the greenhouse gas reduction goals under Minnesota Statutes, section 216H.02, subdivision 1.” *The Advisory group still has several key issues to resolve before this question can be fully answered. However, the preliminary recommendations are consistent with the Minnesota GHG reduction goals and timeframe.*
4. “an evaluation of legislation enacted or pending in Congress to implement a federal cap and trade program and whether implementation of a regional program is

consistent with a federal program;" *No federal legislation has been enacted to date. New federal bills are being drafted at this time in anticipation of the new congress and federal administration. Some bills are anticipated to pre-empt state or regional actions such as a regional cap and trade program. However, there is interest in federal legislation providing an option to accommodate separate, regional efforts. This interest is particularly strong in the Northeast where a limited cap and trade program has recently begun.*

5. "the economic, environmental, and public health impact study under section 3, subdivision 2; and" *This scope for this study is under review. It is anticipated that the Minnesota study will begin in early 2009 and be completed sometimes around the middle of the year. This study is taking longer than expected to get underway because of the decisions needed for the multi-state regional modeling study and because the regional modeling study takes precedence over the Minnesota study for MGA's contractor. Also, in some cases, results from the regional study are needed to feed data into the Minnesota study.*
6. "a potential cap and trade revenue study under section 3, subdivision 3." *See the answer to number 5 immediately above.*

STATUS REPORT ON THE GOVERNANCE STUDY

The Minnesota Department of Commerce/Office of Energy Security, as directed by the Act, entered into a grant contract with the University of Minnesota on November 17, 2008, to complete the Governance Study. The University is expected to complete the study by January 15, 2009. The Governance Study will be transmitted under a separate cover.

Please direct questions regarding this report to Vincent Chavez at 651-296-0404.

Sincerely,

William Glahn
Deputy Commissioner
Minnesota Department of Commerce

Paul Eger
Deputy Commissioner
Minnesota Pollution Control Agency

Attachments

Midwestern Greenhouse Gas Reduction Accord Advisory Group

Jon Allan CMS Energy	Ray Hammarlund Kansas Corporation Commission	Paul Mitchell Office of Governor Mitch Daniels
David Barnes Western Michigan University	Tom Heller Missouri River Energy Services	Matthew A. Most Midwest Generation LLC
Mike Belwood Alcoa Inc.	G. Vince Hellwig Michigan Department of Environmental Quality	Jeff Muffat 3M
Drew Bergman Ohio EPA	Henry Henderson NRDC Midwest Program	Rep. Russell Olson (SD) Midwestern Legislative Conference Representative
Mark Calmes Archer Daniels Midland Company	Pat Henderson State of Wisconsin-DNR	Annabeth Reitter NewPage Corporation
Jamie Cashman Office of Iowa Governor Chet Culver	Nancy Jackson The Land Institute	Keith Reopelle Clean Wisconsin
Jim Crone Energy Development Initiative	John Johnson IBEW Local #51	Chuck Rice Kansas State University
Dale Enerson North Dakota Farmers Union	Roger Johnson North Dakota Department of Agriculture	Mike Robertson Minnesota Chamber of Commerce
Steven Frenkel Office of Governor Rod Blagojevich	Zoe Lipman National Wildlife Federation	Jerald Schnoor The University of Iowa
Josh Gackle Office of Governor Tim Pawlenty	Marc Macy SD Dept. of Environment & Natural Resources Air Quality Program	Dave M. Sparby NSP-Minnesota
Kimberly Gibson Ohio Air Quality Development Authority	Patrick Magirl The Dow Chemical Company	Rebecca Stanfield Environment Illinois
Amy Gomberg Environment Ohio	Robert Mannes Core Energy, LLC	Roy Thilly Wisconsin Public Power Energy
Bill Grant Izaak Walton League of America	David Miller Iowa Farm Bureau	Jim Whitestone Air Policy and Climate Change Ontario Ministry of the Environment
Bill Hamlin, P.Eng. Manitoba Hydro	Sen. Mark Miller (WI) Midwestern Legislative Conference Representative	Bruce Wilcoxon ConocoPhillips

Background on Midwestern Greenhouse Gas Reduction Accord Advisory Group Preliminary Design Recommendations

An advisory group to six Midwestern governors and one Canadian premier has released a much-anticipated initial draft of design recommendations for a regional “cap-and-trade” program to reduce greenhouse gas emissions in a region responsible for 14 percent of U.S. greenhouse gas (GHG) emissions and nearly three percent of global GHG emissions.

In November 2007, the governors of Illinois, Iowa, Kansas, Michigan, Minnesota and Wisconsin, and the premier of Manitoba signed the Midwestern Greenhouse Gas Reduction Accord (Accord) that calls for the development of a regional cap-and-trade program. Indiana, Ohio, and South Dakota, as well as the province of Ontario, agreed to observe the program development process.

The design recommendations describe a proposed regional program that would achieve progressive reductions in greenhouse gas emissions by capping allowed emissions and then permitting the trading of emissions allowances. Over time, the cap would decline and new technologies and practices would need to be implemented to achieve lower targets.

While the U.S. governors who signed the Accord would ultimately prefer a federal GHG reduction program, they are not willing to wait for its establishment. Since the six Midwestern governors began their work, it has become increasingly likely that we will see national climate policy sooner rather than later. The Midwestern governors look forward to working with the new Administration on federal legislation and hope to give the new Administration the benefits of the lessons learned through the Midwestern GHG Accord design process, and to influence the shape of the final federal policy. By taking action now and beginning critical steps to implement a regional greenhouse gas reduction program, they seek to get a head start on the inevitable transition to a lower-carbon energy economy. This will speed development and commercialization of new technologies, lay the foundation for new industries, and create new jobs. The region will thus be better prepared for leadership when the federal government designs a national GHG program.

Shortly after signing the Accord, the six governors and premier assembled a diverse group of leaders from business, labor, agriculture, energy, environmental advocacy groups, and academia to an Advisory Group that has met over the past year to develop program design recommendations for governors and premiers representing the signatory jurisdictions. The group was tasked with creating a cap-and-trade program that maximizes Midwestern strengths such as:

- Emerging biofuels and renewable electricity industries;
- Vast coal reserves, and experience with advanced coal technologies and CO₂ capture and storage, and significant underground formations for long-term carbon storage;
- North America’s industrial base with manufacturing capacity and know-how that can be tapped for creating new ‘green jobs’ in a carbon-constrained world; and
- Strong agriculture and forestry resources and industries that can offer carbon offsets through improved soil and forestry management practices.

North America and the world are looking to the Midwest for leadership in responding to our energy and climate challenge, the cap-and-trade program outlined in the design recommendations has been crafted for the Midwest by Midwesterners to take into account the region’s unique characteristics and advantages, while meeting the environmental obligation of achieving significant reductions in GHG emissions between now and the middle of this century.

HOW A CAP-AND-TRADE PROGRAM WORKS

In a cap-and-trade program, a government determines which greenhouse gas emitters or what emissions are covered by the program and sets an overall emissions target, or “cap,” for covered entities. This cap is the sum of all allowed emissions from all included facilities.

Once the cap has been set and covered entities specified, tradable emissions allowances (rights to emit) are distributed to the covered entities. Each allowance authorizes the release of a specified amount of greenhouse gas emissions, generally one metric ton of carbon dioxide equivalent (CO₂e). Because the total number of allowances is equal to the overall emissions cap (e.g., if a cap of one million tons of emissions is set, one million one-ton allowances will be issued), the environmental result is guaranteed.

Covered entities must surrender allowances equivalent to the level of emissions for which they are responsible at the end of each of the program’s compliance periods. Entities that have excess allowances, usually because they have reduced their emissions, may sell those allowances to entities that need them.

Allowance trading occurs because firms face different costs for reducing emissions. For some entities, implementing reductions at their own facilities may be relatively inexpensive. Those firms will then buy fewer allowances or sell surplus allowances to firms that face higher reduction costs. A ton of carbon dioxide (CO₂) emitted from one source has the same impact on the environment as a ton emitted elsewhere from another source. By giving firms a financial incentive to control emissions and the flexibility to determine how and when emissions will be reduced, the capped level of emissions is achieved in a manner that minimizes overall program costs.

ADVISORY GROUP RECOMMENDATIONS

Below are the initial recommendations of the Advisory Group. These recommendations are not final, but they do represent a general framework for how the Advisory Group sees the program being structured.

Reduction Goal

The Advisory Group has proposed target ranges for GHG emissions reductions of 15-25 percent below 2005 levels by 2020 and 60-80 percent by 2050. While the Advisory Group considered basing all reductions on 1990 levels, it chose 2005 as a baseline because better data is available from 2005.

Scope: What will be covered by the program?

The Advisory Group recommends including the following sectors in the cap-and-trade program:

- electricity generation and imports (power plants);
- industrial combustion sources (factories and other industrial facilities); and
- industrial process sources will be included to the extent credible measurement & monitoring protocols exist or can be developed prior to inclusion.

Subject to modeling results and review of other program elements, the Advisory Group also proposes to include transportation fuels.

The Advisory Group proposes to phase in heating fuels for residential, commercial and industrial buildings in the second three-year compliance period of the program.

The program will cover the following greenhouse gases: carbon dioxide, methane, nitrous oxide, hydro-fluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Allowances - How will emission allowances be distributed to factories, power plants, and others that produce greenhouse gases?

An allowance authorizes its holder to emit one ton of carbon dioxide equivalent.¹ Once the cap has been determined, a set number of allowances will be available and those entities that emit GHGs must, at the end of a three-year compliance period, have allowances equal to their emissions in order to operate.

The Advisory Group recommends that distribution of allowance value be limited to climate-related purposes, including: 1) accelerating transformational investment; 2) mitigating transitional adverse impacts of the program; and 3) addressing harmful impacts due to climate change.

The Advisory Group recognizes that the decision on whether to auction or allocate allowances resides ultimately with the jurisdictions and will depend upon the purposes to be achieved through the allowance value.

Offsets – What opportunities will the agriculture, forestry and other industries play in capturing and storing carbon?

Offsets are activities that reduce greenhouse gas emissions outside the sectors or entities covered by a cap and trade program. Offsets could include farm and forestry-based practices that GHG emitters pay owners of farms and forests to undertake in order to “offset” some of their emissions for less than it would cost the emitters, if they made all of the reductions themselves. All parties benefit financially, and net GHG emissions still decline as required under the program.

Therefore, the Advisory Group recommends that the states and province develop an offsets component as part of the cap-and-trade program. With strong agriculture and forestry industries in the Midwest, the region is well-positioned to capitalize on the potentially large economic development opportunity that offsets represent. These recommendations will position the Midwest as a leader in providing offsets when a national program is established.

The Advisory Group also recommends that all offsets follow established standards – that they be real, additional, verifiable, permanent, and enforceable – so that they do not compromise the integrity of the cap-and-trade program, while still providing flexibility and reducing the cost of achieving environmental goals.

Complementary Policies

Besides the cap-and-trade program, jurisdictions will also consider recommendations for complementary policies that focus on climate stewardship and energy security. These policies are currently being developed by advisory groups focused on energy efficiency, bioeconomy and transportation, renewable electricity, and advanced coal with carbon capture and storage.

For more information about the Accord, please visit www.midwesternaccord.org

¹ Carbon dioxide equivalent is the emissions of a greenhouse gas, by weight, multiplied by its "global warming potential (GWP)." GWPs are a system of multipliers devised to enable warming effects of different gases to be compared.