

## Clean Energy Minnesota Testimony to the Next Gen Energy Board

12/10/07

Clean Energy Minnesota is a coalition committed to addressing global warming by reducing emissions from all sectors of Minnesota's economy. Member groups include Minnesota Audubon, Clean Water Action Alliance of Minnesota, Fresh Energy, Institute for Agriculture and Trade Policy, Izaak Walton League of America–Midwest Office, Land Stewardship Project, Minnesota Center for Environmental Advocacy, Minnesota Project, MPIRG, Sierra Club North Star Chapter, and the Union of Concerned Scientists.

Clean Energy Minnesota supports the Next Generation of biofuels because of their potential to reduce emission of carbon dioxide and because they offer markets for perennial agricultural crops that have tremendous conservation benefits in the areas of water quality, flood reduction, soil retention and carbon sequestration, and wildlife habitat.

As you know, the promise of the next generation of biofuels – cellulosic ethanol – is that it can produce fuel that is many times less carbon intensive than current ethanol. In fact the latest Minnesota research indicates that many of the best native perennial systems can sequester more carbon than is released when they are converted to liquid fuels. CEM does not, however, support increasing harvest in natural forests as a source of renewable energy. Forests are tremendous carbon sinks, however, carbon lost through logging takes decades to be replaced, while carbon removed through harvest of grasses and shrubs can be replaced in a single growing season.

Many of our member organizations have been working for years to support conservation and economic development programs that will make it possible for farmers to grow conservation enhancing third crops – perennial crops – and to prosper doing so. We are as pleased as all of you are to have the chance to push forward an industry that has the potential to meet many of our environmental, energy and rural development goals at the same time.

We support the Next Gen Energy Board goals of broad rural economic development and increasing energy independence. A key objective should be to encourage development that retains wealth in rural communities through local ownership, and provides farmers with the income and flexibility that they need for long-term success.

In the quest to meet these goals, Clean Energy Minnesota supports these principles.

**1. Vehicle efficiency is essential to increasing energy independence.** Biofuels will be able to meet a significant percentage of our fuel demand only if we greatly reduce overall usage.

**2. We need to balance the dual goals of energy production and enhancing conservation.** America, and Minnesota, needs agriculture because of the food and fiber that it produces, and increasingly for fuel and energy production. We cannot forget the conservation benefits that agriculture provides, and need to make sure that the next generation of biofuels meets the promise of enhancing conservation. Neither goal can be traded off for the other. Clean Energy Minnesota is actively involved in the RIM Clean Energy technical committee, staffed

by the Board of Soil and Water Resources and we are optimistic that the program will be designed to harmonize both feedstock production and conservation. The challenge of this group is to get the market signals right to encourage the use of perennial crops and other agricultural cellulose for energy production.

**3. Clean Energy Minnesota supports a combination of “market push” and “market pull” to advance the next generation of biofuels.** Market pull – which can come in the form of incentives or mandates, have been extremely effective in Minnesota in advancing our existing ethanol industry. Minnesota is one of the states with an ethanol blending mandate and is therefore a leader in ethanol production. The reservation of ¼ of this mandate for cellulosic fuels was an important accomplishment of the 2007 legislation. Our biodiesel mandate, which kicked in once Minnesota production was up and running, has also been a success.

**4. Incentives should be based on the net energy content of the fuel, rather than volume.** Getting to the next generation of biofuels will require a transition, not a sudden shift. We have already seen some ethanol plants making a transition from powering with natural gas to various types of biomass. Ethanol from these plants will have a lower lifecycle carbon footprint than ethanol from a plant powered by coal or natural gas. Minnesota incentives should encourage these transitions and those that will become possible in the future as technology develops.

With this goal in mind, we support incentives based on net energy content of the fuel rather than volume of fuel produced.

The low carbon fuel standard (LCFS) being discussed by the Board is one promising policy option of this type. The promise of the LCFS is that biofuels will have advantages over fossil fuels. Taken further, biofuels with the lowest lifecycle carbon footprint will have economic advantages versus other biofuels - given we have initiated the carbon counting economy with the Minnesota PUC action last week.

The LCFS deserves further discussion and study to ensure that it is implemented in a way that will benefit Minnesota’s biofuels industry, keep the Minnesota ethanol we need to power our state here, while still making it possible for Minnesota producers to compete in California and other states implementing similar policies. Some policies are most effective if implemented across a region, and the LCFS may be one of those. Standards and certification of the carbon content of various biofuels may be best implemented collaboratively across several states, and ultimately through a national system.

Minnesota has a long history of biofuels production incentives (market push). If the low carbon fuel standard rises to the top of policy options, it should also be based on net energy content rather than volume.

**5. Incentives and mandates should be structured to provide clear market signals and unleash the ingenuity of Minnesota entrepreneurs to develop the technologies of the future.** Policy should create clear market signals, not try to pick technologies. Technology

is developing quickly and none of us are qualified today to pick the market winners of the future. However, the job of incentives and regulations should be to guide development of the industry in a direction that recognizes inherent limits to natural resources (land, clean water, soil productivity) and the need for the next generation of bioenergy development to incorporate sustainability practices from the beginning.

**6. Incentives for collocation of dairy/cattle with ethanol plants are not the best use of limited resources.** On the face of it, collocation of cattle and dairy with ethanol plants seems like an appealing idea, but we believe that there are limited opportunities in Minnesota and that this is not a productive area to focus limited financial resources.

Minnesota Project has been working on anaerobic digesters in partnership with the University of Minnesota, state agencies and other partners for many years. It is their understanding that it would take a very large feedlot or dairy to power an ethanol plant. There is one such facility in Nebraska with 28,000 cows, providing all of the thermal energy for a 25 million gallon ethanol plant.

According to the USDA, there are only 55 feedlot operations in the U.S. with more than 32,000 head of cattle and none of them are in Minnesota. This simply isn't the type of animal agriculture we have in our state. Ninety-six percent of Minnesota dairies have fewer than 200 cows (from the 2002 National Census on Agriculture.) And 94% of Minnesota's cows live on dairies that have fewer than 500 cows. Our state doesn't have large cattle operations either. There are significant barriers to siting large dairies and feedlots in Minnesota as they are often opposed by neighbors and townships.

With that in mind, we believe that we should not spend limited resources intended to move us to the next generation of biofuels to try to incentivize collocation of cattle or dairy with ethanol plants.

**7. Research, technology transfer, and workforce development will be critical to success of the next generation of biofuels in Minnesota.** Researchers in Minnesota have been at the forefront of our understanding of how to sustainably grow, harvest and transform cellulosic materials into clean energy. To maintain Minnesota's leadership in bioenergy innovations we must support research, focused on sustainable production, energy efficient and low carbon transformative technologies, and models maximizing local economic benefits.

Thank you for the opportunity to comment on the policy framework needed to advance the future of the next generation of biofuels. Clean Energy Minnesota looks forward to your future deliberations.