MINNESOTA DEPARTMENT OF AGRICULTURE

FROM THE FARM TO YOUR FAMILY

NextGen Energy Board

Report to the Legislature

February 2008

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The Next Generation of Biofuels

Minnesota's energy policy took a leap forward in 2007, as Governor Tim Pawlenty and the Minnesota Legislature worked with a broad range of stakeholders to pass the most aggressive energy package in state history. The initiative included:

- A goal that 25 percent of all Minnesota's energy be derived from renewable resources by 2025;
- The nation's most aggressive renewable energy standard for electricity, requiring that more than 27 percent of the state's electricity come from specified renewable sources by 2025;
- Energy efficiency requirements that effectively doubled the effort previously required of electric and natural utilities; and,
- The establishment of targets to reduce greenhouse gas emissions by 80 percent by 2050 (from a 2005 baseline), with interim reduction milestones for intervening years.

Recently, the governors of the 12-state Midwest Governors Association made similarly strong commitments on renewable electricity, energy efficiency, production and use of renewable fuels, and carbon sequestration. Six of the 12 states committed to the development of a regional cap-and-trade system to ensure greenhouse gas emission reductions.

The extraordinary promise of biofuels and bioenergy production, and the challenges associated with them, also came into sharp focus in 2007. The price of oil increased nearly 60 percent over the year, topping out at more than $100 a barrel in the first few days of 2008. More people voiced concerns about resource depletion, economic vulnerability to high energy prices and the capacity of global oil supplies to meet demand. Based on these concerns, and the opportunity to create significant new economic benefits throughout the country, Congress enacted a 36-billion-gallon Renewable Fuel Standard (RFS) in late 2007. The new RFS will increase biofuel production six-fold over the next 15 years.

It is widely recognized that there are opportunities for shifting our biofuel production focus beyond conventional row crops to other biomass fuels. The potential for perennial biomass crops, mixed stands of native grasses and trees as a bioenergy crop to provide feedstock for cellulosic ethanol production is a frequent subject of discussions at energy conferences around the country, and in the halls of the Minnesota and United States Capitols. Perennials, which require less fertilizer, also help mitigate rising prices of fossil fuels and reduce farm input costs. Research at the University of Minnesota examined the potential for mixed prairie grasses to provide biomass feedstock for carbon-neutral and carbon-negative fuels, sequester carbon, preserve and enhance land and water quality. This research demonstrated that a win-win scenario can be created for bioenergy production if policy, research, technology and economics are successfully aligned.

It was in this context that the NextGen Energy Board was created, and has conducted its work over the course of the summer, fall and winter of 2007.

NextGen Energy Board Background and Role

Governor Pawlenty and the 2007 Minnesota Legislature established the NextGen Energy Board to ensure that Minnesota continues to lead the nation with policies to promote the next generation of biofuels. The Board is specifically tasked with developing recommendations and building consensus for the development of the "Next Generation" of biofuels in the state.

<u>NextGen Energy Board - Minn. Stat. 41A.105</u>

The board shall research and report to the commissioner of agriculture and to the legislature recommendations as to how the state can invest its resources to most efficiently achieve energy

independence, agricultural and natural resources sustainability, and rural economic vitality. The board shall:

(1)Examine the future of fuels, such as synthetic gases, biobutanol, hydrogen, methanol, biodiesel, and ethanol within Minnesota;
(2) Develop equity grant programs to assist locally owned facilities;
(3) Study the proper role of the state in creating financing and investing and providing incentives;
(4) Evaluate how state and federal programs, including the Farm Bill, can best work together and leverage resources;
(5) Work with other entities and committees to develop a clean energy program; and,
(6) Report to the legislature before February 1 each year with recommendations as to appropriations and results of past actions and projects.

The Board's primary focus is to examine the use of the state's resources to decrease our reliance on fossil fuels; to increase our use of home-grown energy sources; to work towards agricultural and natural resources sustainability; and to ensure rural economic vitality.[1]

Minnesota has long been the national leader for enacting policies to promote the use of biofuels, and to ensure local benefits from their production. Briefly, those policies include:

- Becoming the first state in the nation to enact a 10 percent statewide ethanol blending requirement;
- Implementing an ethanol production incentive to support and promote farmer-owned cooperative ethanol production;
- Becoming the first state in the nation to implement a 2 percent statewide biodiesel blending requirement; and
- Implementing the nation-leading E85 Everywhere program, providing E85 fuel for flex-fuel vehicles at more than 320 stations in the state as of early 2008.

Board Membership

The Board is comprised of 19 members, seven of which were appointed by the Governor. The total membership includes:

- State Senator Ellen Anderson (District 66);
- Robert Elde, University of Minnesota Initiative for Renewable Energy and the Environment (IREE);
- John Frey, Minnesota State Colleges and Universities (MnSCU);
- Tim Gerlach, American Lung Association;
- Shalini Gupta, Izaak Walton League;
- State Representative Bill Hilty (District 8A);
- Commissioner Mark Holsten, Minnesota Department of Natural Resources;
- Commissioner Gene Hugoson, Minnesota Department of Agriculture;
- State Representative Al Juhnke (District 13B);
- Rob King, Minnesota Institute for Sustainable Agriculture (MISA);
- State Representative Doug Magnus (District 22A)

[1] Although not directly germane to the NextGen Energy Board's charge, the Board acknowledges the importance of energy conservation and the use of renewable energy sources other than biomass, such as solar, wind, geothermal, to supplement biomass energy initiatives. Placing biomass energy initiatives in this context will help ensure that these initiatives remain consistent with sustainable, available biomass and environmental needs.

- Commissioner Dan McElroy, Minnesota Department of Employment and Economic Development;
- Commissioner Brad Moore, Minnesota Pollution Control Agency;
- Thom Petersen, Minnesota Farmers Union;
- State Senator Julie Rosen (District 24);
- Teresa Spaeth, Agriculture Utilization Research Institute (AURI);
- Paul Stark, Minnesota Farm Bureau Federation;
- State Senator Jim Vickerman (District 22); and,
- Commissioner Glen Wilson, Minnesota Department of Commerce.

NextGen Energy Board Strategic Vision

Building on state initiatives that launched and supported the successful development of Minnesota's biofuel industry, the Next Generation Energy Board supports policies for the production and use of biomass-based energy and fuels to provide maximum benefits to the state's economy. These Next Generation policies are guided by the principles of rural economic vitality, environmental sustainability, and energy security through energy conservation, increased use of homegrown renewable resources, and reducing our reliance on fossil energy.

Minnesota's biofuel policies have helped create prosperity for Minnesota farming communities, improved air quality, reduced carbon emissions, displaced petroleum use and led to public acceptance of biofuels for widespread use. The Next Generation Energy Board's policies promote the continued improvement of biofuel technologies currently in use in Minnesota and spur aggressive innovation in the development and deployment of the next generation of bioenergy feedstocks and technologies in the state.

Objectives

Through a series of facilitated discussions, the NextGen Energy Board narrowed its focus on achieving the following objectives to promote the Strategic Vision:

- Build on and improve the technological capacity of those industries that will produce the next generation of biofuels. Such industries include those involved in the production of biomass-based fuels for transportation, heat and power; the pulp and paper sector; and other emerging technologies;
- Use an integrated strategy that supports research and development, education initiatives, technology transfer, production incentives and market creation focused on next generation fuels;
- Harness and support the state's renewable energy entrepreneurial spirit through policies that provide all interested parties the opportunity to evaluate and determine which technologies and business models are most efficient and profitable, and which best achieve the public interest;
- Expand renewable fuel economic opportunities throughout all of Minnesota;
- Create and retain local community investments in current and new bioenergy enterprises;
- Promote creation and investment of Bioenergy technical and manufacturing support enterprises;
- Strengthen the current biofuels industry, which includes corn-based ethanol and soy-based biodiesel, to ensure improving economic and environmental performance as the industry contributes to state energy policies and goals;
- Ensure the efficient, innovative and sustainable use of energy and natural resources such as water and wood products; and the continued improvement in air quality;
- Expand reliance on perennial crops that improve habitat and water quality while reducing soil water runoff and providing an effective means of storing carbon; and,
- Provide greater energy self-reliance in the state by displacing the use of fossil fuels with energy conservation and the production and use of our homegrown renewable resources.

Strategies

To help meet the Strategic Vision and objectives, the Board adopted the following strategies:

- Develop sustainable production systems for bioenergy crops, crop residues and woody biomass materials that minimize water, chemical and fossil energy inputs while sequestering carbon and enhancing wildlife habitat, water and air quality;
  Encourage the evolution of current biofuel production technology toward processes that are more energy efficient, use less water and consume less fossil energy;
- Help commercialize new biomass-based energy and fuel technologies that exhibit improved carbon and other greenhouse gas emissions performance relative to fossil energy alternatives;
- Help develop biomass feedstock collection, processing, transportation and storage systems that can reduce overall fields-to-facility costs; and,
  Create market-based policies that allow farmers, loggers, landowners and producers to benefit economically from the next generation of bioenergy production.

With this vision in mind, the Board adopted the following set of recommendations.

Recommendations

Recommendation #1: Modify the NextGen Board statute

The Board identified three modifications in the enabling statute that will provide the Board with the resources needed to achieve its responsibilities.

A. Add a forest sector representative to the NextGen Energy Board

Discussion: Forestry resources are expected to play a large role in the next generation of biofuel production. In order to make informed policy recommendations, the Board identified the need for a forest sector representative to be engaged in future discussions. One possible representative organization could be the Minnesota Forest Resources Council. The MFRC is made up of representatives of a wide range of forest sector stakeholders, and was created in 1995 to advise the governor and federal, state and local governments on sustainable forest resource policies and practices.

Action item: Propose legislation to expand the Board by one member, representing the forest products industry.

B. Repeal the expiration of the NextGen Energy Board

Discussion: The NextGen Board is set to expire June 30, 2009, but biofuel development will require thoughtful policy development and coordination deeper into the future. Members found the Board to be an effective forum to address the diverse and interlinked issues associated with the development of the next generation of biofuels in the state.

Action item: Propose legislation to repeal the expiration date of the NextGen Energy Board (Minn. Stat.§ 41A.105, subdivision 5).

C. Extend the NextGen grant program appropriation

Discussion: In 2007, the legislature appropriated $3 million for grants to bioenergy projects. A request for proposals for this grant program is currently under development, to be issued in the spring of 2008.

These funds were appropriated for fiscal year 2008 and do not roll into fiscal year 2009. In contrast, legislative hearing records confirm that it was indeed the Legislature's intent that this funding be available until spent. In order that the funds can be expended in a fair and prudent manner, the appropriation should be extended through FY2009 or until spent.

Action Item: Propose legislation to provide that these funds do not cancel to the state's general fund, and are available through FY 2009 or until spent.

D. Identify peak oil and resource depletion

Discussion: The Board has identified resource depletion and peak oil in particular, as a major driver behind the need for NextGen energy development. Concerns over Peak Oil and its attendant impacts on the economy are growing. Peak oil can be defined as the point when global petroleum production is reached, after which the rate of production enters declines toward depletion. As described in the article "The End of Cheap Oil" (National Geographic, June 2004), "The peak will be a watershed moment, marking the change from an increasing supply of cheap oil to a dwindling supply of expensive oil. Some experts foresee dire consequences: shortages, price spikes, economic disruption, and a desperate push to wrest oil from "unconventional" sources such as tar sands, oil shale, or coal. Others think that by curbing our oil use and developing sustainable alternatives now, we can delay the peak and wean ourselves more easily when the inevitable happens."

Action Item: Add the concept of petroleum depletion and planning for its impacts as one of the drivers for NextGen Energy Board policies and recommendations.

Recommendation #2: Dedicate NextGen funding to projects that support the Board's strategic vision

Discussion: In addition to the amounts appropriated for NextGen Energy activities in the 2007 legislative session (discussed above), it is expected that future appropriations will also be allocated for NextGen Energy purposes. The Board had a wide-ranging discussion about the use of future funds and determined that funding to the NextGen Energy Board by the legislature should be dedicated to projects supporting the Board's objectives and strategies, as described in the Strategic Vision.

Specific areas discussed for funding in fiscal year 2009 include:

- Increasing the use of biomass as an industrial fuel through feasibility studies:
    - The Board recommends that funding be targeted to existing bioenergy production facilities, paper recycling facilities, pulp and paper mills, and other commercial entities in the state that have biomass supply and storage available and can use biomass as an energy feedstock. Feasibility studies should examine ways to improve and/or increase the use of biomass at existing bioenergy production facilities in the state. Studies should examine opportunities to enhance the development and collection of feedstocks needed to produce the next generation of fuels in line with the NextGen Board's Strategic Vision.
- Establishing a biomass infrastructure needed to support the next generation of biofuels:
    - Areas of focus should include biomass densification research, the development of a biomass resource inventory, building on and integrating existing inventories and providing information about both the gross and net availability of biomass resources in the state.

- Improving energy and water efficiency in biofuel production:

    - Technical assistance should be focused on bioenergy creation that improves energy and water consumption rates while reducing air emissions. Efforts in feedstock development at municipalities, at existing bioenergy facilities, and paper mills should be considered for any available assistance.

- Funding of policy research and technical analysis:

    - Research and analysis is needed to evaluate the potential for investment in the next generation of bioenergy production within the state, including smaller or modular bioenergy technologies, and policies needed to further the strategic vision and goals outlined by the NextGen Energy Board.

    To secure the maximum benefit of funds, project guidelines should leverage federal and private funds to the greatest extent possible. Guidelines should also encourage that funding be used to compliment other state-funded or state-managed programs, thereby exploiting potential synergies without inefficient duplication of effort. To that end, the Board recommends that the Minnesota Department of Commerce prepare an annual report of the projects funded through the Agricultural Utilization Research Institute (AURI), the University of Minnesota's Initiative for Renewable Energy and the Environment (IREE), the Minnesota Department of Commerce, the Minnesota Department of Agriculture, the Minnesota Department of Natural Resources, the Minnesota Pollution Control Agency, the U.S. Department of Agriculture, the Xcel Energy® Renewable Development Fund, and other sources. Further, the Board requests that these entities explore, to the extent feasible, mechanisms to allow for coordinated grant making or coordinated priority setting for grants.

    Action Item: Develop and implement guidelines for allocating available NextGen Energy funding to these and other NextGen Energy purposes identified by the Board.

Recommendation #3: Support legislation in the 2008 legislative session to increase the biodiesel blending requirement from 2 percent to 20 percent

Discussion: In 2005, Minnesota became the first state in the nation to implement a biodiesel blending requirement, requiring that each gallon of diesel fuel sold or offered for sale in Minnesota contain 2 percent biodiesel (a fuel blend known as "B2"). To maintain this leadership role in biodiesel development, a B20 fuel blending requirement should be explored in Minnesota. Governor Pawlenty, Minnesota's Biodiesel Task Force, Minnesota farm groups and Minnesota lawmakers have all expressed a desire to pursue a 20 percent biodiesel initiative.

Action Item: Support legislation in the 2008 session to increase the blending requirement incrementally from B2 to B20, and ask the Biodiesel Task Force to develop criteria and recommendations for increasing the sustainability of biodiesel fuel at each enhanced blend level.

Recommendation # 4: Support policies and activities to promote lower carbon fuels

A. Establish a Lower Carbon Fuels Standard (LCFS)

Discussion: The NextGen Energy Board believes that Minnesota needs to continue its support of lower carbon fuels. Corn-based ethanol and biodiesel are the current generation of lower carbon fuels and will

continue to serve as the foundation of Minnesota's biofuel industry. New technologies and feedstock offer opportunities to significantly lower the carbon emissions associated with the production and use of these current biofuels and of next generation fuels. The NextGen Energy Board supports the development and implementation of policies to encourage the production and use of lower carbon fuels.

The NextGen Energy Board advocates for the development of a LCFS, much like the one being considered in California. However, a Minnesota-appropriate LCFS should be designed to take advantage of the fact that Minnesota already uses more lower carbon fuels (ethanol and biodiesel) than any other state and is developing policies to increase that usage. As a first step, more analysis is needed to design a LCFS with maximum benefits to Minnesota's consumers, farmers and businesses, while ensuring the continued viability of the state's current biofuel industry.

Action Item: Support the development of a LCFS that takes advantage of the progress Minnesota has made in biofuels development. A study should focus on a LCFS that measures progress on a full life-cycle basis and includes analysis of:

(1) The initial increment of carbon reduction based on the state's plans for 20 percent ethanol by 2013 and 20 percent biodiesel by 2015 and testing a number of assumptions about reducing fossil fuel inputs in the production of those fuels during this time frame;

(2) The next increment of carbon reduction on assumptions and policies about the commercialization and penetration of biomass-based fuels, using various feedstocks, including algae and prairie grasses;

(3) An analysis of the impact the LCFS would have on the competitiveness of the state's current ethanol and biodiesel industries; and,

(4) An outline of the steps necessary to implement a Minnesota-appropriate LCFS.

B) Develop a Green Fuels Certification program

Discussion: A LCFS is a relatively major undertaking that will require greater study, as noted.

To encourage the sale of lower carbon and more sustainable fuels during the development stage of a LCFS, a Green Fuels Certification program could be launched. A certification program that establishes tiered standards and a compliance mechanism could help differentiate and add value to the fuels produced by Minnesota producers striving to reduce their overall environmental impact.

Action Item: Support development of a Green Fuels Certification program. Under such a program, producers' fuels that meet certain specified tiered criteria (yet to be developed, but that may include life-cycle carbon and water use profiles) would be certified as a "green fuel" by the state, or other neutral party designated by the state.

Recommendation #5: Encourage the purchase of bio-based products in public purchasing programs

Discussion: A biomass-based fuel industry requires the development of a biomass market. One way to support the development of a biomass market is to encourage the procurement and use of bio-based products in state and local government purchasing programs. The federal bio-preferred product program defines biobased products as "commercial or industrial products (other than food or feed) composed wholly or in significant part of biological products including renewable agricultural materials (plant, animal, and marine materials) or forestry materials."

Action Item: Support, through legislation or other means such as executive order, the procurement of bio-based products in public purchasing programs.

Recommendation #6: Promote the installation of methane digesters

Discussion: Various initiatives at the state and federal level support the viability of methane digesters, including:

- The Governor and the Minnesota Legislature's goal of 25 percent renewables for all energy produced in the state by 2025;
- The Governor's 800 MW Community-Based Energy Development goal, which counts baseload generation from locally owned methane digesters at three times the nameplate capacity toward the goal;
- Digester projects are eligible for $1 million in capital grant funding available for renewable natural gas and electricity production. NextGen funds may also be available for these projects;
- State production incentives of 1.5 cents/kwh produced by on-farm digesters are available;
- Utilities are able to offer a front-end loaded rate for locally owned digesters, providing the opportunity for investors to pay for the digester in the early, debt-serving years of a power purchase agreement; and,
- USDA's Section 9006 grant program provides grants for renewable energy projects such as digesters.

Action Item: AURI, the Minnesota State Colleges and University System (MnSCU), the University of Minnesota and private colleges should work with the Departments of Agriculture and Commerce to attract more investment in on-farm and community-based methane digesters by increasing the public's awareness of state and federal programs and incentives available for such projects.

Recommendation #7: Create a supply of biomass through farm incentives

Discussion: In 2007, the Minnesota Legislature created the Reinvest in Minnesota – Clean Energy (RIM-CE) program, and directed the Board of Water and Soil Resources (BWSR) to convene a technical advisory committee to develop program guidelines and operational criteria. The Committee's report, "Reinvest in Minnesota – Clean Energy Program Guidelines and Standards: A Working lands conservation program for growing native perennial crops for bioenergy" is available online at http://www.bwsr.state.mn.us/RIM-CE.html

This program will provide incentives designed to initiate the sustainable production of biomass through the use of perennial native species. These native energy crops should provide significant water quality, wildlife and carbon sequestration benefits as well as biomass for energy feedstock.

Action Item: Support funding to implement a RIM-CE program in the 2008 Capital Investment bill.

Recommendation #8: Education and Training

A well-trained labor force is critical to the development of a long-term renewable energy industry in Minnesota. This labor force will require a top-to-bottom commitment on the part of the education and workforce development community, such as the one that has been outlined in the Talent Development Initiative developed under the auspices of AURI and the leadership of MnSCU.

The five components to the Talent Development Initiative are:

1) K-12 Curriculum Development;
2) Post-Secondary Curriculum Development;
3) Workforce Gap Analysis;
4) Communication Processes, Structures and Incentive Creation; and,
5) Customized Training, Lifelong Learning and Faculty Development.

Action Item: The NextGen Energy Board recommends that AURI, MnSCU, the University of Minnesota and private colleges work closely with the Minnesota Department of Employment and Economic Development and the education and workforce training committees in the legislature to integrate the components of the Talent Development Initiative into the work of that agency and those committees.

Recommendation #9: Improve biomass energy permitting to encourage biomass energy development

Discussion: Due to limited information available to project developers and regulators, the permitting process required by state and federal law/regulation may thwart timely biomass energy development and adequate protection of the state's natural resources and public health. For example, the availability of diverse biomass feedstocks, the potential combinations of these feedstocks, and the scope of available biomass combustion technologies presents environmental regulators, communities, and project developers with the difficult puzzle of fitting unknown emission profiles into the regulatory framework. This frustrates project developers as the permitting process becomes longer and more costly. In addition, stakeholders may not be fully informed about the state's groundwater resources and the constraints placed on those resources in some regions. This can lead to permitting difficulties during project development.

Action Item: The NextGen Energy Board recommends a legislative discussion of these processes to determine if there are appropriate actions the state could take to improve permitting, thus encouraging widespread and timely sustainable biomass energy development, environmentally sustainable siting of bioenergy facilities, and improved public health. Chief among these actions could be: (1) improving the understanding and characterization of different biomass air emission profiles; (2) improving the understanding and characterization of the capacity and extent of water resources, including ground water aquifers and surface water throughout Minnesota; and (3) encouraging technologies and processes that promote more efficient use of water and greater sensitivity to water availability when determining the location of proposed facilities.

APPENDIX A: Next Generation Energy Board Enabling Legislation and Grant Appropriation

Minnesota Session Laws 2007 Chapter 45

Creation of the Board:

Sec. 47. **[41A.105] NEXTGEN ENERGY.**

Subdivision 1. **Purpose.** It is the goal of the state through the Department of Agriculture to research and develop energy sources to displace fossil fuels with renewable technology.

Subd. 2. **NextGen Energy Board.** There is created a NextGen Energy Board consisting of the commissioners of agriculture, commerce, natural resources, the Pollution Control Agency, and employment and economic development; the chairs of the house and senate committees with jurisdiction over energy finance; the chairs of the house and senate committees with jurisdiction over agriculture finance; one member of the second largest political party in the house, as appointed by the chairs of the house committees with jurisdiction over agriculture finance and energy finance; one member of the second largest political party in the senate, as appointed by the chairs of the senate committees with jurisdiction over agriculture finance and energy finance; and the executive director of the Agricultural Utilization Research Institute. In addition, the governor shall appoint seven members: two representing statewide agriculture organizations; two representing statewide environment and natural resource conservation organizations; one representing the University of Minnesota; one representing the Minnesota Institute for Sustainable Agriculture; and one representing the Minnesota State Colleges and Universities system.

Subd. 3. **Duties.** The board shall research and report to the commissioner of agriculture and to the legislature recommendations as to how the state can invest its resources to most efficiently achieve energy independence, agricultural and natural resources sustainability, and rural economic vitality. The board shall:

(1) examine the future of fuels, such as synthetic gases, biobutanol, hydrogen, methanol, biodiesel, and ethanol within Minnesota;

(2) develop equity grant programs to assist locally owned facilities;

(3) study the proper role of the state in creating financing and investing and providing incentives;

(4) evaluate how state and federal programs, including the Farm Bill, can best work together and leverage resources;

(5) work with other entities and committees to develop a clean energy program; and

(6) report to the legislature before February 1 each year with recommendations as to appropriations and results of past actions and projects.

Subd. 4. **Commissioner's duties.** The commissioner of agriculture shall administer this section.

Subd. 5. **Expiration.** This section expires June 30, 2009

Grant Program Appropriation

Sec. 3. **DEPARTMENT OF AGRICULTURE …**

Subd. 4.**Bioenergy and Value-Added Agricultural Products…**

$3,000,000 the first year is for grants to bioenergy projects. The NextGen Energy Board shall make recommendations to the commissioner on grants for owners of Minnesota facilities producing bioenergy, organizations that provide for on-station, on-farm field scale research and outreach to develop and test the agronomic and economic requirements of diverse stands of prairie plants and other perennials for bioenergy systems, or certain nongovernmental entities. For the purposes of this paragraph, "bioenergy" includes transportation fuels derived from cellulosic material as well as the generation of energy for commercial heat, industrial process heat, or electrical power from cellulosic material via gasification or other processes. The board must give priority to a bioenergy facility that is at least 60 percent owned and controlled by farmers, as defined in Minnesota Statutes, section 500.24, subdivision 2, paragraph (n), or natural persons residing in the county or counties contiguous to where the facility is located. Grants are limited to 50 percent of the cost of research, technical assistance, or equipment related to bioenergy production or $500,000, whichever is less. Grants to nongovernmental entities for the development of business plans and structures related to community ownership of eligible bioenergy facilities together may not exceed $150,000. The board shall make a good faith effort to select projects that have merit and when taken together represent a variety of bioenergy technologies, biomass feedstocks, and geographic regions of the state. Projects must have a qualified engineer certification on the technology and fuel source. Grantees shall provide reports at the request of the commissioner and must actively participate in the Agricultural Utilization Research Institute's Renewable Energy Roundtable. No later than February 1, 2009, the commissioner shall report on the projects funded under this appropriation to the house and senate committees with jurisdiction over agriculture finance. The commissioner's costs in administering the program may be paid from the appropriation.

APPENDIX B: Summary of NextGen Energy Board Activities

The Board held eight meetings, including one field trip. During the first four meetings, the Board took presentations from groups focused on advancing renewable energy production. The remaining meetings focused on preparing a list of recommendations to be delivered to the legislature. The following is a summary of the meetings:

June 28: Biofuels Industry Background and Overview

Minnesota Department of Agriculture Commissioner Gene Hugoson, State Senator Ellen Anderson and State Representative Al Juhnke were elected to lead the Board. Presenters included Michael Swanson, Wells Fargo; Jeff Fox, POET; and Richard Hemmingsen and Robert Elde, University of Minnesota Initiative for Renewable Energy and the Environment (IREE).

July 26: Gasification Technology and Linkage between Pulp and Paper Industry

The Board toured Verso Paper, Sartell, Minnesota and the Central Minnesota Ethanol Cooperative, Little Falls, Minnesota. The Board met at the Morrison County Government Center and heard presentations from Eric Dykhuis, Verso Paper; Kerry Nixon, Central MN Ethanol Coop; Bill Lee, Chippewa Valley Ethanol Company; Cecil Massie, Sebesta Blomberg & Associates; and Jerod Smeeck, Frontline Bioenergy.

August 30: Federal Policy and Project Finance

The Board heard presentations from federal officials as well as experts in lending and equity drives pertaining to renewable energy projects, including U.S. Senator Amy Klobuchar; Matt Ketelsen, U.S. Senator Norm Coleman; Toni Merdan, U.S. Congressman Collin Peterson; Alana Petersen, U.S. Congressman Jim Oberstar; Jacques Beaudry-Losique, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy; David Gaffney, Minnesota Rural Development Office, USDA; Jim Jones, AgriBank and Jerry Larson, Ottertail Ag Enterprises.

September 25: Feedstocks and Natural Resources Issues

Presentations on research plans and initiatives regarding renewable energy projects were made by Bob Elde, IREE and Kenneth Brown, Minnesota Department of Commerce. Teresa Spaeth provided an update on AURI's Renewable Energy Roundtable. The Board heard from representatives from state agencies and organizations regarding biofuel development and the issues surrounding water resources and feedstocks. Presenters on this topic were Larry Kramka, Minnesota Department of Natural Resources; Myrna Halbach, Minnesota Pollution Control Agency and Mike Reese, University of Minnesota, West Central Research and Outreach Center. The impact of biofuel production on habitat and wildlife communities was also covered by Matt Holland, Pheasants Forever and Joe Forgoine, The Nature Conservancy.

October 30: Policy Framework Development
A facilitated discussion was lead by Mark Lindquist, Minnesota Department of Natural Resources on developing a policy framework of specific directives and tools that would achieve the Board's goals and objectives.

November 29: Prairie Management, RIM Clean Energy Legislative Reports and Policy Framework Development

The Board heard from Edward Garvey, Minnesota Department of Commerce and Mark Lindquist, Minnesota Department of Natural Resources (DNR) on emerging energy projects and initiatives in the state. Other reports and updates on renewable energy activities included a Prairie Technical Advisory report by Jason Grams of the DNR, and an update on the Board of Water and Soil Resources (BWSR) RIM-Clean Energy Program by Shelley Shreffler, Minnesota Environmental Initiative.

An update on AURI's Renewable Energy Roundtable was provided by John Frey, MnSCU and Robert Elde, IREE. Mark Lindquist provided the Board with a summary of a strategic policy framework that emerged from the Board's October discussion.

December 10: Economic and Policy Modeling Tools and Public Input

Presentations were provided to the Board by Amy Johnson and Dale Wahlstrom, BioBusness Alliance of Minnesota; Steve Taff, University of Minnesota; Dave Zumeta, Minnesota Forest Resources Council; Kristin Weeks-Duncanson, Biodiesel Task Force; Paul Torkelson, Minnesota Farm Bureau; Doug Peterson, Minnesota Farmers Union; Warren Formo, Minnesota Corn Growers; Bob Lefebvre, Minnesota Milk Producers Association; Don Arnosti, Clean Energy Minnesota; Linda Meshke, Rural Advantage; Loren Forrest, Rural Energy Marketing; and, Susie Schatz, Neighbors Against the Burner.

December 19: Pulp and Paper Linkages and Recommendation Development

Sandy Layman, Iron Range Resources, discussed the relationship between the state's forestry industry and the continued development of biofuels. Dr. Joann Fredrickson, Bemidji State University and Dennis Hampel, MN West Community and Tech College provided an update on AURI's Talent Development Initiative. Commissioner Hugoson, Minnesota Department of Agriculture, presented a working draft of the policy framework developed by the Board.

January 8: Recommendation and Report Development

Mike Bull, Minnesota Department of Commerce, presented a draft legislative report for board discussion and revision.

January 22: Review of Legislative Report

The Minnesota Pollution Control Agency gave a presentation on permitting of biofuels production plants. Mike Bull, Minnesota Department of Commerce, presented the Biodiesel Task Force recommendations. The Board continued to review and edit the draft legislative report.