Legislative Analysis

Mitchell Bean, Director
Phone: (517) 373-8080
http://www.house.mi.gov/hfa

AGRICULTURAL BIOMASS LOANS

Senate Bill 538 (Substitute H-1)
Sponsor: Sen. Cameron S. Brown
House Committee: Agriculture
Senate Committee: Agriculture, Forestry, and Tourism

First Analysis (10-5-05)

BRIEF SUMMARY: The bill would provide loans from the Small Business Pollution Prevention Assistance Revolving Fund for qualified agricultural energy production systems, and the increase the maximum amount of a loan from the Fund from $150,000 to $200,000.

FISCAL IMPACT: This bill would not have a fiscal impact on the state or on local governmental units. It would expand the scope of eligible uses of loan funds and provide larger loan amounts, but no new funds would be available for the program.

THE APPARENT PROBLEM:

The proper management of manure, animal wastes, and other agricultural waste is essential to the safeguarding of the state's natural resources. This has become an even more salient issue with the trend in agriculture toward very large farming operations and the spread of exurban residential development out into formerly rural areas.

In recent years, a number of programs have been developed through the collaboration of state and federal officials and representatives of farmers, other participants from the agricultural sector, and environmental groups that aim to take proactive and cost-effective approaches to reducing pollution and related problems stemming from agricultural operations. (See Background Information.)

There is also developing technology that some people believe can be effectively employed to reduce the impact of agricultural waste and other pollutants on the natural environment and to prevent conflicts (about odor, for example) between agricultural operations and their residential neighbors. As an added benefit, some of these technologies can use agricultural waste to generate energy. These include the use of methane digesters and other systems that that reduce gases and odors emanating from the farm and reduce runoff of manure into lakes, rivers, and streams.

A methane digester is a concrete tank or covered lagoon that utilizes anaerobic digestion to breakdown manure and produces two byproducts: biogas (largely methane and carbon dioxide) and compost. The gas produced is a renewable energy source and the compost is less odorous and contains fewer pathogens that untreated manure. The cost of this technology, however, is quite high, and it has been recommended that the state make low-interest loans available to assist in their acquisition by agricultural operations.

THE CONTENT OF THE BILL:

The bill would amend Part 145 (Waste Reduction Assistance) of the Natural Resources and Environmental Protection Act to provide loans from the Small Business Pollution Prevention (P2) Assistance Revolving Loan Fund for qualified agricultural energy production systems. The bill also would increase the maximum amount of a loan from the Fund from $150,000 to $200,000.

Under Part 145 of NREPA, the Department of Environmental Quality (DEQ) must spend money from the Small Business Pollution Prevention Assistance Revolving Loan Fund for loans to small businesses to implement pollution prevention projects. For each loan, the DEQ must disburse the money to a lending institution that has entered into a loan participation agreement with the Department.

Currently, the definition of "pollution prevention" includes environmentally sound on-site or off-site reuse or recycling. Under the bill, this would include the use of agricultural biomass by qualified agricultural energy production systems.

To be eligible for a loan for a qualified agricultural energy production system, an applicant would have to be an eligible farmer or agricultural processor, or a for-profit farmer cooperative corporation. The applicant also would have to be verified under the appropriate system of the Michigan Agriculture Environmental Assurance Program administered by the MDA. In addition, within a three-year period immediately preceding the date the application was submitted, the applicant could not have been found guilty of a criminal violation under NREPA.

The bill would define "eligible farmer or agricultural processor" to mean a person who processes agricultural products or a person who is engaged as an owner-operator of a farm in the production of agricultural goods.

The bill would define "agricultural biomass" as residue and water generated on a farm or by farm cooperative members from the production and processing of agricultural products, animal waste, food processing waste, or other materials as approved by the DEQ Director.

"Qualified agricultural energy production system" would mean the structures, equipment, and apparatus to be used to produce a gaseous fuel from the noncombustive decomposition of agricultural biomass and the apparatus and equipment used to generate electricity or heat from the gaseous fuel or store the fuel for future generation of electricity or heat. A system could include, but would not be limited to, a methane digester, biomass gasification technology, or thermal depolymerization technology.

MCL 324.14501 and 324.14513

HOUSE COMMITTEE ACTION:

The House Committee on Agriculture reported the bill with recommendation and an H-1 Substitute that incorporates one amendment that strikes a provision that required that the applicant for a loan for a qualified energy production system not be found responsible for a civil violation of NREA that resulted in a civil fine of at least $10,000 within three years prior to the application date. (An applicant would still be disqualified if found guilty of a criminal violation of NREPA within three years prior to date of application.)

For additional information, see the analysis of the Senate-passed version dated 6-15-05.

BACKGROUND INFORMATION:

Pollution Prevention

Under the act, "pollution prevention" means all of the following: (1) "source reduction" as defined in the federal Pollution Prevention Act of 1990 (42 USC 13102); (2) "pollution prevention" as described in the U.S. Environmental Protection Agency's pollution prevention statement dated June 15, 1993; and (3) environmentally sound on-site or off-site reuse or recycling.

The federal Pollution Prevention Act of 1990 defines "source reduction" to mean any practice that (1) reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise released into the environment (including fugitive emissions) prior to recycling, treatment, or disposal; and (2) reduces the hazards to public health and the environment associated with the release of such substances, pollutants, or contaminants.

The June 1993 EPA policy statement on pollution prevention defines it to mean "source reduction" (as defined under the federal Pollution Prevention Act of 1990), but also includes protecting natural resources through conservation or increased efficiency in the use of energy, water, or other materials. The policy statement is available through the EPA's website at www.epa.gov/opptintr/p2home/p2policy/policy.htm.

Michigan Agricultural Environmental Assurance Program (MAEAP)

The bill requires farmers be verified under the Michigan Agricultural Environmental Assurance Program as a condition of being eligible for a loan under the bill. The MAEAP was created in May of 1998 by a coalition of agricultural, environmental, and conservation groups, with the purpose of assisting farmers in taking a voluntary, proactive approach to reduce agricultural pollution. Public Act 176 of 2001 created Part 82 (Conservation Practices) of the Natural Resources and Environmental Protection Act, which provides the Department of Agricultural with the statutory authority to administer MAEAP and the Conservation Reserve Enhancement Program (CREP).

Specifically, the MAEAP has three stages designed to allow the farmer flexibility to meet specific goals for a farming operation. The first phase of the program is an educational program (5-7 hours) designed to raise a farmer's awareness of practices that reduce legal and environmental risks associated with the operation. Once the first phase is completed, a farmer completes an on-farm assessment and develops a management plan specific to his or her farm. After the management plan is approved and implemented, the next phase is third-party verification. At the request of the farmer, the MDA completes an on-site inspection and verifies that the management plan has been implemented according to schedule. Farmers that complete the necessary requirements of the program receive a certificate that recognizes their accomplishment and commitment to sound environmental stewardship

The MAEAP focuses on three main components of a farming operation, (1) livestock, (2) farmstead, and (3) cropping. The livestock component includes the development and implementation of a Comprehensive Nutrient Management Plan (CNMP), which is a planning tool that helps the farmer comply with the Generally Accepted Agricultural and Management Practices (GAAMPs), particularly those related to manure management. The purpose of the CNMP is to protect water quality, obtaining beneficial uses from animal manure and organic by-products, and minimize the farming operation's adverse impacts on the environment and public health.

The farmstead component is designed to assist the farmer in addressing the environmental risks around their farmstead, such as how the storage and handling of pesticides or manure are impacting water supplies. The cropping component focuses on the environmental impacts of activities related to field cropping.

In June 2005, the House adopted House Resolution 105, which encourages the Department of Agriculture and the Department of Environmental Quality to continue participating in the MAEAP. The resolution states, in part, "MAEAP is nationally recognized for its innovative alternative approach to agricultural environmental regulation and is used as a model for partnership-based pollution prevention programs." It further states, "Through participation in MAEAP, more and more Michigan farmers are learning how to identify and prevent pollution on their farms. Over 3,000 farmers have completed the Phase I educational component of MAEAP and over 100 farmers have completed one or all three of the system [livestock, farmstead, or cropping] verifications. Participation in MAEAP positions farmers to participate in other pollution prevention programs at the state and federal levels…"

Previous Legislation

Last session, the legislature passed and Governor Granholm vetoed Senate Bills 953 and 955. Senate Bill 953 would have permitted the state treasurer to provide up to $25 million in certificates of deposits for the purpose of facilitating loans of up to $5 million for the construction and operation of agricultural biomass plants, methane digesters, and other equipment used to generate electricity from agricultural biomass. Senate Bill 955

would have exempted methane digesters and other thermal decomposing systems used in agricultural operations from property taxes.

In vetoing Senate Bill 953, Governor Granholm stated, "the program would divert for up to 15 years money that the state uses daily to pay bills and issue refunds to Michigan taxpayers. That is not fiscally sound. The state currently has no surplus funds to invest, nor, according to the Department of Treasury, will surplus funds be available for loan investments in the foreseeable future. Enactment of this legislation would do nothing more than create false expectations of government intervention in the marketplace.

In vetoing Senate Bill 955, Governor Granholm state, "While proponents have argued that this would offer a new source of alternative energy, I am concerned that this exemption would provide financial rewards for generators of high volumes of manure, such as factory farms, including violators of environmental protection laws, while failing to address the threat to our groundwater posed by nitrates and other pollutants that are the byproducts of high concentrations of manure."

Small Business Pollution Prevention (P2) Assistance Revolving Loan Fund

The Small Business Pollution Prevention (P2) Assistance Loan program is funded in part by the Clean Michigan Initiative (CMI) bond approved by voters in 1998, and provides low-interest (five percent or less) loans of up to $300,000 (half from the state and half from the private lender) to small businesses seeking to reduce or eliminate waste generated, energy used, or hazards to public health associated with waste generated at a business. The P2 program has the stated goal of trying "to change business behavior through economic incentives that promote capital investment in pollution prevention projects and activities that would concurrently benefit the businesses' bottom line."

To be eligible for a loan under the P2 program, a firm must be independently owned and operated, not dominant in its field, and employ up to 500 people. The P2 program provides loans to a variety of businesses, including manufacturing, dry cleaning, metal finishing, printing and agriculture, and can be for projects as varied as equipment of technology modifications, employee training, and energy and water conservation projects.

Further information is available through the Department of Environmental Quality, Environmental Science and Services Division's website at www.michigan.gov/deqessd.

ARGUMENTS:

For:

The bill provides farmers with financial assistance in constructing methane digesters and similar equipment on their farms. A single dairy cow produces about 120 pounds of wet manure a day. For large farming operations, proper manure management becomes a major component of the operation, as there is a great potential for environmental contamination and health hazards when manure is not properly handled. However, the

EPA notes that the use of methane digesters and similar equipment provides benefits such as odor control, improved air and water quality, improved nutrient management flexibility, and the opportunity to reduce greenhouse gas emissions and capture biogas, which can be a useful energy source. Biogas recovery systems employ a process called anaerobic digestion, where bacteria break down manure in an oxygen-free environment. This produces biogas (60 – 70 percent methane and 30 – 40 percent carbon dioxide), which can then be used to generate energy for the farm, thereby reducing the farms energy costs.

Over the long term, the use of methane digesters and similar systems can be cost competitive compared to conventional waste management practices. Moreover they are a particularly attractive alternative to conventional manure management practices because of the potential to use the gases generated by the system as a source of energy. However, the start-up costs for these systems are estimated to be between $200,000 and $2 million, depending on the scope of the system. Even with loans obtained through the private market, the costs can preclude certain farms from constructing methane digesters. The bill, then, provides farmers with low interest loans through the DEQ's Small Business Pollution Prevention Assistance Loan program. This is consistent with the program's intended purpose of providing loans for pollution prevention activities.

Response:

The DEQ has testified in committee that the bill is not really necessary. Loans are already available under the P2 program for agriculture-related pollution prevention activities. This includes the acquisition of a methane digester or other similar systems. If a farmer was interested in constructing a methane digester on his or her farming operation, he or she could already apply to the department.

For:

The bill increases the maximum allowable loan from state funds from $150,000 to $200,000. When combined with the matching share obtain through a participating private lender, this increases the maximum total loan from $300,000 to $400,000. This would make loans available to more businesses and, perhaps, for larger projects, which would greatly enhance the state's pollution prevention efforts.

Against:

The Department of Environmental Quality has testified that, notwithstanding the bill's eligibility criteria, the bill would make loans available to farming operations that have violated state and federal environmental protection laws. The MAEAP program is not a regulatory program per se and may not be completely consistent with state environmental protection laws. A farming operation could comply with the requirements of the MAEAP program and still violate other state and federal environmental laws. In addition, while the bill precludes an applicant who recently was convicted of a criminal violation of NREPA from qualifying from a loan, this in and of itself does not adequately ensure that the applicant has complied with all relevant state and federal environmental laws. A violation that was remedied civilly or administratively would not preclude an applicant from qualifying for a loan. Moreover, there may be a situation where a farming operation violates both state and federal laws, although the DEQ may defer to the EPA

and let it enforce the law. In this instance, the farmer might be guilty of the violating the federal law (although the action would violate state environmental laws as well), and still be eligible for a loan under the bill. It's the DEQ's position that public dollars should not be used to provide financial support to businesses that violate state environmental laws.

Against:

Environmental groups have argued that given the cost of a methane digester and similar systems, the bill largely provides financial assistance to concentrated animal feeding operations (CAFOs), as scope of the small and medium-sized farming operations simply do not warrant the construction of a methane digester. While it has been suggested that smaller operations combine their manure to make a methane digester practical, this would require manure to be transported, which itself presents a serious threat to the environment should a spill occur. Moreover, to the extent that only CAFOs would be eligible for a loan, the bill could actually encourage the proliferation of these large-scale farming operations, threatening the existence of smaller family farms.

Further, the environmental benefits associated with methane digesters are questionable. The Sierra Club has testified that methane digesters do not eliminate most pollutants from animal waste, which will still contaminate the surface and groundwater. Moreover, the amounts of ammonia and nitrous oxide could actually increase, thus not solving any problems with greenhouse gas emissions.

POSITIONS:

The Michigan Farm Bureau supports the bill. (9-20-05)

The Department of Environmental Quality opposes the bill. (9-20-05)

The Michigan Environmental Council opposes the bill. (9-20-05)

The Sierra Club opposes the bill. (9-20-05)

Legislative Analyst: Mark Wolf
Fiscal Analyst: Kirk Lindquist

■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.