



Report to the Legislature

Minnesota Bioincentive Program



Bob Patton and Kevin Hennessy, 651-201-6223

625 Robert Street North, Saint Paul, MN 55155

www.mda.state.mn.us

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Pursuant to Minn. Stat. § 3.197, the cost of preparing this report was approximately \$500.

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Executive Summary

The Bioincentive Program was established by the Legislature during the 2015 session to encourage commercial-scale production of advanced biofuels, renewable chemicals, and biomass thermal energy through production incentive payments (Minnesota Statutes sections 41A.15-41A.19).

Incentive payments are available for three types of production: advanced biofuels, renewable chemicals, and biomass thermal energy. Payment rates are established in statute. Also established by statute are criteria for minimum production levels, and standards for the sourcing of biomass feedstock. A minimum of 80 percent of the biomass must be obtained (“sourced”) from Minnesota¹. Harvest standards intended to protect natural resources and the environment have been established for forestry and agricultural cellulosic biomass (i.e. fibrous material, such as wood or plant stalks).

The Bioincentive Program receives funding from the Agricultural Growth, Research, and Innovation (AGRI) program appropriation. Current funding is \$1.5 million for each year of the biennium. For each fiscal year, funding is available for an additional year. The funds in the additional year are available for the AGRI program as a whole.

To date, there have been only two payments to one claimant, totaling approximately \$58,000, for production of renewable chemicals. However, we expect an increase in claims for production incentive payments in FY18 and that the total amounts claimed could approach the \$1.5 million available for the fiscal year.

¹ If production facilities are 50 miles or less from the state border, biomass may be sourced within a 100-mile radius.

Introduction

This report is submitted pursuant to Minnesota Statutes section 41A.19:

41A.19 REPORT; INCENTIVE PROGRAMS

By January 15 each year, the commissioner shall report on the incentive programs under sections 41A.16, 41A.17, and 41A.18 to the legislative committees with jurisdiction over environment and agriculture policy and finance. The report shall include information on production and incentive expenditures under the programs.

Background

During the 2015 legislative session, the Legislature adopted statutory language (Minnesota Statutes sections 41A.15-41A.19) and appropriated funds for incentive payments for the production of advanced biofuels, renewable chemicals, and biomass thermal energy. An eligible producer may receive payment per unit of production under the program. Minimum production levels are required for eligibility, with maximum total payment amounts that can be claimed in any one year. A producer may collect payments through the program for ten years. The program is scheduled to end in 2035.

How the Program Works

The Bioincentive Program was established to encourage commercial-scale production, within Minnesota, of advanced biofuels, renewable chemicals, and biomass thermal energy through production incentive payments.

Production facilities must:

- begin producing biofuels, renewable chemicals, or biomass thermal energy before June 30, 2025;
- meet quarterly minimum production levels;
- use biomass from agricultural or forestry sources, or the organic portion of solid waste,
- source 80 percent of biomass from Minnesota²; and
- harvest agricultural and forestry cellulosic biomass (i.e. fibrous material, such as wood or plant stalks) in ways that do not harm natural resources or the environment.

Production facilities may receive payments for up to ten years on a first-come, first-served basis while funding lasts.

The following sections describe the incentive payment programs for the three types of production: advanced biofuels, renewable chemicals, and biomass thermal energy.

Advanced Biofuels

Generally, advanced biofuels must meet the definition of the national Renewable Fuel Standard (RFS) Program. Biobutanol from cornstarch may be reimbursed through the Bioincentive Program without meeting RFS advanced biofuel requirements.

² If production facilities are 50 miles or less from the state border, materials may be sourced within a 100-mile radius.

Production must not have exceeded the equivalent of 23,750 million British Thermal Units (MMBtu, a standard unit of measurement of heat energy) per quarter before July 1, 2015. Facilities must produce at least the equivalent of 23,750 MMBtu per quarter to enter the program and for each quarter for which a reimbursement claim is made.

Producers of advanced biofuels are reimbursed at a rate of:

- \$2.1053 per the equivalent of MMBtu for production from cellulosic biomass, and
- \$1.053 per the equivalent of MMBtu for production from sugar or starch.

The following table shows BTUs converted to gallons for several examples of advanced biofuels.

Table 1 Payments per gallon for several examples of advanced biofuels

| Fuel | Feedstock | Btu/gal | Payment/ gallon |
|---------|-------------------|---------|--------------------|
| Butanol | Corn starch | 99,837 | \$0.11 |
| Ethanol | Sugar beets | 76,330 | \$0.08 |
| Ethanol | Corn kernel fiber | 76,330 | \$0.16 |

Renewable Chemicals

Renewable chemicals produced from agricultural biomass, forestry materials, or the organic portion of solid waste qualify for Bioincentive Program payments.

Production must not have exceeded 750,000 pounds per quarter before January 1, 2015. Renewable chemicals produced through processes that were fully commercial before January 1, 2000 are not eligible. Facilities must produce at least 750,000 pounds per quarter to enter the program and for each quarter for which a reimbursement claim is made.

Producers of renewable chemicals are reimbursed at a rate of:

- \$0.06 per pound made from cellulosic biomass, and
- \$0.03 per pound made from sugar, cellulosic sugar, or starch.

Production using agricultural cellulosic feedstock of perennial or cover crop biomass is eligible for a 20 percent bonus payment for each pound of chemicals produced. Total payments for an eligible producer may not exceed 99,999,999 pounds of production in a fiscal year.

Biomass Thermal Energy

Thermal energy produced from biomass combustion, gasification, or anaerobic digestion qualifies for Bioincentive Program payments.

Production of biomass thermal energy that was in place before July 1, 2015 is not eligible. Facilities must produce at least 250 MMBtu per quarter to enter the program and for each quarter for which a reimbursement claim is made.

Producers of biomass thermal energy are reimbursed at a rate of \$5.00 per MMBtu of production. Facilities may blend cellulosic feedstock with other fuel, but only the percentage attributable to cellulosic material is eligible to receive payments. Production using agricultural cellulosic feedstock of

perennial or cover crop biomass is eligible for a 20 percent bonus payment for each MMBtu of biomass thermal energy produced. Total payments for an eligible producer may not exceed 30,000 MMBtu of production in a fiscal year.

Cellulosic Biomass Sourcing

The Bioincentive Program statute contains standards for the sourcing of cellulosic biomass feedstock, meant to ensure that the harvest of cellulosic biomass for advanced biofuel, renewable chemical, or biomass thermal production does not harm natural resources or the environment. Separate standards exist for cellulosic biomass from forestry sources and from agricultural sources.

The standards for sourcing cellulosic biomass from forestry are based on certifications from forestry-certifying organizations or state biomass harvesting guidelines.

To receive incentive payments for production that uses agricultural cellulosic biomass as feedstock, applicants are required to submit an “agricultural cellulosic biomass sourcing plan” to the Minnesota Department of Agriculture. The plan must contain a detailed explanation of how the agricultural cellulosic biomass is to be produced in a way that will be protective of natural resources and the environment (soils, water quality, wildlife, etc.). A more stringent plan is required for cellulosic biomass harvest for advanced biofuels than for renewable chemicals or biomass thermal energy.

Funding

Funding for the Bioincentive Program is from the Agricultural Growth, Research, and Innovation (AGRI) program appropriation. Funds appropriated from AGRI for the Bioincentive Program are shown below:

Table 2 Bioincentive Program appropriations

| Biennium | Year 1 | Year 2 |
|------------------|---------------|---------------|
| 2016-2017 | \$500,000 | \$1,500,000 |
| 2018-2019 | \$1,500,000 | \$1,500,000 |

For both biennia, the appropriation language provides that funds are available for an additional year (for example, the FY18 appropriation is available until June 30, 2019), and that the balance remaining after the end of the end of the fiscal year (e.g., June 30, 2018 in the case of FY18) is available to the AGRI program as a whole in the following fiscal year (e.g., July 1, 2018 to June 30, 2019 in the case of the FY18 appropriation).³

³ For FY17, however, the remaining balance of \$1.47 million was cancelled.

Production and Incentive Expenditures

At this early point in the Bioincentive Program, there have been only two payments to one claimant (Central Minnesota Renewables) for production of renewable chemicals. Details are in the table below.

Table 3 Renewable chemical incentive payments made

| Quarter | Pounds | Rate | Total Reimbursement |
|----------------|---------|--------|---------------------|
| FY17 Q3 | 989,636 | \$0.03 | \$29,689.08 |
| FY18 Q1 | 952,873 | \$0.03 | \$28,586.19 |

We expect an increase in claims for production incentive payments in FY18, and that the total amounts claimed could approach the \$1.5 million available for the fiscal year.