DEPARTMENT OF AGRICULTURE

Minnesota Bioincentive Program

Annual Report

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Contents

Introduction

This report is required by the Minnesota Legislature (MINN. STAT. 41A.19):

> *By January 15 each year, the commissioner shall report on the incentive programs under sections 41A.16, 41A.17, 41A.18, and 41A.20 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.*

About the Bioincentive Program

The bioincentive production programs were established by the Minnesota Legislature to encourage commercial-scale production of advanced biofuels, renewable chemicals, biomass thermal energy, and siding. Production incentive payments are currently available for four types of production: advanced biofuels, renewable chemicals, biomass thermal energy, and building siding. The Minnesota Legislature established the payment rates, criteria for minimum production levels, and standards for the sourcing of the biomass feedstock. A minimum of 80% of the biomass must be obtained ("sourced") from Minnesota, with statutory exceptions, and there are standards for harvest of forestry and agricultural cellulosic biomass (i.e., fibrous material, such as wood or plant stalks) intended to protect natural resources and the environment. As of Quarter 1, fiscal year (FY) 26, claims for bioincentive payments have been made and paid for advanced biofuels, renewable chemicals, and biomass thermal energy. At this time, no claims for incentive payments have been made for siding.

Funding for the four current bioincentive programs (MINN. STAT. 41A.16, 41A.17, 41A.18, and 41A.20) is from the Minnesota Department of Agriculture's (MDA) Agricultural Growth, Research, and Innovation (AGRI) program appropriation. Funding was $4.5 million for FY22 and $5.75 million each year for FY23, FY24, and FY25. Ongoing funding is $3 million each year beginning in FY26.

The Bioincentive Program funding does not meet the demand for production incentive payments. Each year since FY19, claims for production incentive payments have exceeded the legislative appropriation. From FY17 to the first quarter of FY26, the MDA has received claims totaling $44,760,701, exceeding available funding by $14,477,911. The MDA has made $30,282,790 in payments for eligible claim reimbursement.

An eligible producer may receive payment per unit of production under the program. There are minimum production levels required for eligibility and a maximum amount that can be claimed in any one year; both thresholds are defined in statute. A producer may collect payments through the program for ten years. The deadline to enter the program was June 30, 2025, and payments for advanced biofuels, renewable chemicals, biomass thermal, and siding are scheduled to end in 2035.

Background

During the 2015 legislative session, the Minnesota Legislature adopted statutory language (MINN. STAT. 41A.16-41A.19) and appropriated funds for incentive payments for production of advanced biofuels, renewable chemicals, and biomass thermal energy.

During the 2016 legislative session, the Minnesota Legislature adopted statutory language (MINN. STAT. 41A.20) and appropriated funds for incentive payments for production of siding. During the 2017 legislative session, the appropriation for this program was rescinded. During the 2021 1st Special Session, the Legislature included the siding production incentive (MINN. STAT. 41A.20) in the Minnesota Department of Agriculture's (MDA) Agricultural Growth, Research, and Innovation (AGRI) program appropriation that funds incentives for advanced biofuels, renewable chemicals, and biomass thermal energy (MINN. STAT 41A.16-41A.18).

During the 2021 1st Special Session, the Minnesota Legislature added a new production incentive program to encourage the commercial-scale production of oriented strand board (OSB) through production incentive payments (MINN. STAT. 41A.21). In 2023, the Legislature repealed MINN. STAT. 41A.21 and eliminated the OSB incentive.

During the 2022 legislative session, the Minnesota Legislature increased FY23 funding by $1.25M to $5.75M and increased the annual base appropriation to $5.75M starting in FY24. During the 2023 legislative session, the base appropriation was reduced to $3M in FY26 and thereafter.

How the Program Works

The four production incentive programs were established to encourage commercial-scale production of advanced biofuels, renewable chemicals, biomass thermal energy, and siding.

Production facilities must:

- Be located in Minnesota and begin producing biofuels, renewable chemicals, biomass thermal energy, or siding before June 30, 2025.
- Meet quarterly minimum production levels.
- Use renewable biomass from agricultural or forestry sources, or the organic portion of solid waste (only for advanced biofuels and renewable chemicals).
- Source 80% of renewable biomass from Minnesota, with statutory exceptions.
- 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.
- Eligible facilities include existing companies and facilities that are adding siding production capacity, or retrofitting existing capacity, as well as new companies and facilities.

Production facilities may receive payments for up to 10 years. If funding for the program should be depleted in any quarter, the eligible claims are paid on a pro-rata basis to those applicants.

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

Advanced biofuels

Generally, advanced biofuels must demonstrate that its lifecycle greenhouse gas emissions are at least 50% less than baseline lifecycle greenhouse gas emissions of the fuel the advanced biofuel replaces. Biobutanol from cornstarch may be reimbursed through the incentive program without demonstrating the 50% greenhouse gas emission reduction.

Current eligibility

Production must begin at a specific location after April 1, 2023, and before June 30, 2025, and must not have started operating above 23,750 Metric Million British Thermal Units (MMBtu) of quarterly advanced biofuel production before July 1, 2015. Production of conventional corn ethanol and conventional biodiesel is not eligible and eligible advanced biofuel facilities must produce at least 23,750 MMBtu of biofuel quarterly.

Payment amounts and limits

Producers of advanced biofuels are reimbursed at a rate of:

- $2.1053 per the equivalent of MMBtu for production from cellulosic biomass.
- $1.053 per the equivalent of MMBtu for production from sugar, starch, oil, or animal fat.

There is a maximum program reimbursement per year for each eligible producer of 2.85 million MMBtu, and a total maximum program reimbursement per year for all eligible facilities of 17.1 million MMBtu. See the tables in the maximum reimbursements section for the corresponding dollar amounts.

Table 1 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/gallon	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 incentive payments.

Current eligibility

Production must begin at a specific location after April 1, 2023, and before June 30, 2025, and must not begin production of 750,000 pounds or more of chemicals quarterly before January 1, 2015. Eligible renewable chemical facilities must produce at least 750,000 pounds of renewable chemicals quarterly. Renewable chemicals produced through processes that are fully commercial before January 1, 2000, are not eligible.

Payment amounts and limits

Producers of renewable chemicals are reimbursed at a rate of:

- $0.06 per pound made from cellulosic biomass.
- $0.03 per pound made from cellulosic sugar, oil, animal fat, or starch.

Production using agricultural cellulosic feedstock of perennial or cover crop biomass is eligible for a 20% bonus payment for each pound of chemicals produced.

There is a maximum program reimbursement per year for each eligible producer of 99,999,999 pounds, and a total maximum program reimbursement per year for all eligible facilities of 599,999,999 pounds. See the tables in the maximum reimbursements section for the corresponding dollar amounts.

Biomass thermal energy

Thermal energy produced from biomass combustion, gasification, or aerobic digestion qualifies for incentive payments.

Current eligibility

Production must begin at a specific location after April 1, 2023, and before June 30, 2025, and must not begin production before July 1, 2015. Eligible biomass thermal production facilities must produce at least 250 MMBtu of biomass thermal quarterly.

Payment amount and limits

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% bonus payment for each MMBtu of biomass thermal energy produced.

There is a maximum program reimbursement per year for each eligible producer of 30,000 MMBtu, and a total maximum program reimbursement per year for all eligible facilities of 150,000 MMBtu. See the tables in the maximum reimbursements section for the corresponding dollar amounts.

Siding production

Siding production from forest resources (raw wood logs and material primarily made up of cellulose, hemicellulose, or lignin, or a combination of these ingredients) qualifies for incentive program payments.

Eligibility

Production must begin at a specific location by June 30, 2025, and must not begin operating before July 1, 2019. Facilities must produce at least 200,000,000 siding square feet on a 3/8-inch nominal basis of siding per year to enter the program and for each year for which a reimbursement claim is made.

Payment amount and limits

Producers of siding are reimbursed at a rate of $7.50 per 1,000 siding square feet on a 3/8-inch nominal basis of siding production at a specific location.

There is a maximum program reimbursement per year for each eligible producer of 400,000,000 siding square feet on a 3/8-inch nominal basis, and a total maximum program reimbursement per year for all eligible facilities of 400,000,000 siding square feet on a 3/8-inch nominal basis. See the tables in the maximum reimbursements section for the corresponding dollar amounts.

Cellulosic biomass sourcing

The incentive program specifies standards for the sourcing of the 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 rely on certifications from several forestry-certifying organizations, or state biomass harvesting guidelines.

To receive incentive payments for production that uses agricultural cellulosic biomass as feedstock, an "agricultural cellulosic biomass sourcing plan" is required to be submitted to the MDA. The plan contains 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 advanced biofuels cellulosic biomass harvest than for renewable chemicals or biomass thermal.

Maximum reimbursements

Maximum reimbursements that could be received through the program are listed in Table 2 (all collective producers per year) and Table 3 (individual producer per year). It should be noted that a 20% bonus payment is also available for renewable chemicals and biomass thermal energy producers utilizing agricultural perennials and/or cover crops as feedstock.

Table 2. Maximum program reimbursements per year, for each production type (MINN. STAT. 41A.16-41A.20)

Production type	Maximum per production type	Unit	Low rate	High rate	Compensation at low rate	Compensation at high rate
Advanced biofuel	17,100,000	MMBtu	$1.053	$2.1053	$18,006,300	$36,000,630
Renewable chemical	599,999,999	pounds	$0.03	$0.06	$18,000,000	$36,000,000
Biomass thermal	150,000	MMBtu	$5.00	$5.00	$750,000	$750,000
Siding production	400,000,000	square feet	$7.50	$7.50	$3,000,000	$3,000,000

Table 3. Maximum reimbursements per producer per year (MINN. STAT. 41A.16-41A.20)

Production type	Maximum per facility	Unit	Low rate	High rate	Compensation at low rate	Compensation at high rate
Advanced biofuel	2,850,000	MMBtu	$1.053	$2.1053	$3,001,050	$6,000,105
Renewable chemical	99,999,999	pounds	$0.03	$0.06	$3,000,000	$6,000,000
Biomass thermal	30,000	MMBtu	$5.00	$5.00	$150,000	$150,000
Siding production	400,000,000	square feet	$7.50	$7.50	$3,000,000	$3,000,000

Funding

Funding for bioincentive payments (MINN. STAT 41A.16, 41A.17, 41A.18, and 41A.20) is from the MDA's AGRI program appropriation. Annual appropriation amounts are shown in Table 4.

Table 4. Bioincentive programs appropriations

Biennium	Year 1	Year 2
2016-2017	$500,000	$1,500,000
2018-2019	$1,500,000	$1,500,000
2020-2021	$2,500,000	$2,500,000
2022-2023	$4,500,000	$5,750,000
2024-2025	$5,750,000	$5,750,000
2026-2027	$3,000,000	$3,000,000

For all biennia, the appropriation language provides that the balance of unspent funds at the end of a fiscal year (e.g., June 30, 2023, in the case of FY23) is available to the entire AGRI program in the following fiscal year (e.g., July 1, 2023, to June 30, 2024, in the case of the FY23 appropriation). However, in FY17, the remaining balance of $1.47 million was cancelled.

In FY16, $3 million was separately appropriated for the siding production incentive (MINN. STAT. 41A.20). In FY17, the appropriation was rescinded. In FY21, the Minnesota Legislature combined the siding production incentive with the AGRI incentive programs appropriation (MINN. STAT. 41A 16-20).

Production Incentive Expenditures

FY19 was the first year that claims were higher than funding, where total claims exceeded the $1.5 million funding by $26,890, and the last applicant to enter the program was not reimbursed their full claim.

FY20 and FY21 also witnessed claims which exceeded the $2.5 million in funding. Total claims for FY20 amounted to $5,069,164, exceeding the total funding available by $2,569,164 and the total claims for FY21 amounted to $6,302,927, exceeding the total funding available program by $3,802,927. Unpaid claims in FY20 and FY21 totaled $6,372,091.

Similar trends were observed for FY22 through FY25, where claim totals exceeded funding, resulting in pro-rata payments, and with unpaid claims. Claims for FY22 through FY25 totaled $29,781,549, exceeding total funding by $8,078,930. Total unpaid claims through all years of the program total $14,477,911.

During the first quarter of FY26, $1,935,592 in claims were reimbursed of the available $3,000,000 (65% of total annual funding). In FY26, we anticipate the funding will be depleted in the second quarter and the claims will be distributed on a pro-rata basis in accordance with the statutory language. There have now been claims in 10 fiscal years of the incentive programs. Details of reimbursements made to date are summarized in Table 5 by fiscal year and production type.

Throughout FY24, The Office of the Legislative Auditor (OLA) reviewed the Agricultural Growth, Research, and Innovation (AGRI) Bioincentive Program (PDF) to examine the policies and procedures of the MDA to ensure public resources were safeguarded through evaluating the internal controls of the program. Upon reviewing all 55 payments for accuracy, eligibility, timeliness, and compliance with statutory requirements, no significant issues were found. Despite this program complexity, the MDA is especially proud of the fact that we processed more than $12.1 million in Bioincentive Program payments during the period covered by the audit without a single finding. We strive to maintain this level of excellence as the program continues to move forward.

Table 5. Program reimbursement amount (amt) by production type for Fiscal Year (FY) 2017 through Quarter 1 of FY2026.

Fiscal Year	Production Type	Amt Claimed (unit)	Units	Amt Claimed ($)	Amt Paid ($)	Amt Not Paid ($)
FY17	Advanced Biofuel	0	MMBtu	$0	$0	$0
FY17	Renewable Chemical	986,636	Pounds	$29,599	$29,599	$0
FY17	Biomass Thermal	0	MMBtu	$0	$0	$0
Total FY17	All	--	--	$29,599	$29,599	$0
FY18	Advanced Biofuel	0	MMBtu	$0	$0	$0
FY18	Renewable Chemical	3,234,517	Pounds	$97,036	$97,036	$0
FY18	Biomass Thermal	3,589	MMBtu	$17,945	$17,945	$0
Total FY18	All	--	--	$114,980	$114,980	$0
FY19	Advanced Biofuel	0	MMBtu	$0	$0	$0
FY19	Renewable Chemical	23,150,016	Pounds	$1,291,385	$1,264,495	$26,890
FY19	Biomass Thermal	47,101	MMBtu	$235,505	$235,505	$0
Total FY19	All	--	--	$1,526,890	$1,500,000	$26,890
FY20	Advanced Biofuel	595,667	MMBtu	$1,254,058	$435,706	$818,352
FY20	Renewable Chemical	56,963,361	Pounds	$3,417,802	$1,739,672	$1,678,130
FY20	Biomass Thermal	79,461	MMBtu	$397,304	$324,623	$72,682
Total FY20	All	--	--	$5,069,164	$2,500,000	$2,569,164
FY21	Advanced Biofuel	851,192	MMBtu	$1,792,015	$761,053	$1,030,963
FY21	Renewable Chemical	69,424,667	Pounds	$4,165,480	$1,438,001	$2,727,479
FY21	Biomass Thermal	69,086	MMBtu	$345,432	$300,946	$44,485
Total FY21	All	--	--	$6,302,927	$2,500,000	$3,802,927
FY22	Advanced Biofuel	1,320,201	MMBtu	$2,779,420	$1,458,565	$1,320,854
FY22	Renewable Chemical	69,684,633	Pounds	$4,181,078	$2,550,498	$1,630,580
FY22	Biomass Thermal	174,609	MMBtu	$448,235	$397,185	$51,050
Total FY22	All	--	--	$7,408,733	$4,406,248	$3,002,484
FY23	Advanced Biofuel	2,002,722	MMBtu	$4,216,330	$2,817,488	$1,398,843
FY23	Renewable Chemical	66,188,635	Pounds	$3,971,318	$2,682,979	$1,288,339
FY23	Biomass Thermal	125,636	MMBtu	$420,695	$395,904	$24,791
Total FY23	All	--	--	$8,608,344	$5,896,370	$2,711,973
FY24	Advanced Biofuel	2,133,207	MMBtu	$4,491,040	$3,485,482	$1,005,558
FY24	Renewable Chemical	40,404,115	Pounds	$2,424,247	$1,828,364	$595,883
FY24	Biomass Thermal	84,523	MMBtu	$402,085	$386,154	$15,931
Total FY24	All	--	--	$7,317,372	$5,700,000	$1,617,372
FY25	Advanced Biofuel	2,234,582	MMBtu	$4,704,466	$4,209,897	$494,568
FY25	Renewable Chemical	24,874,917	Pounds	$1,492,495	$1,246,403	$246,092
FY25	Biomass Thermal	50,028	MMBtu	$250,140	$243,699	$6,441
Total FY25	All	--	--	$6,447,101	$5,700,000	$747,101
FY26 Q1	Advanced Biofuel	601,677	MMBtu	$1,266,710	$1,266,710	$0
FY26 Q1	Renewable Chemical	10,253,083	Pounds	$615,185	$615,185	$0
FY26 Q1	Biomass Thermal	10,739	MMBtu	$53,697	$53,697	$0
Grand Total	**All**	--	--	**$44,760,702**	**$30,282,790**	**$14,477,911**

Production Projections for Fiscal Years 2026 and 2027

The MDA has estimated incentive payment reimbursement claims expected in the coming fiscal years. The breakdowns of estimated production volumes and reimbursement amounts are listed in Table 6.

Table 6. Projections for claims in FY26-27

Fiscal year	Production type	Estimated production amounts	Approximate claims
26	Advanced biofuel	2,400,000 MMBtu	$5,052,720
26	Renewable chemical	60,000,000 Pounds	$3,600,000
26	Biomass thermal	80,000 MMBtu	$400,000
26	Projected total	--	$9,052,720
27	Advanced biofuel	2,400,000 MMBtu	$5,052,720
27	Renewable chemical	60,000,000 Pounds	$3,600,000
27	Biomass thermal	80,000 MMBtu	$400,000
27	Projected total	--	$9,052,720
26 & 27	**Projected total**	**--**	**$18,105,440**

To date, there has been no discussion with producers interested in making claims in the siding production incentive (MINN. STAT. 41A.20).