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State of Minnesota  
HOUSE OF REPRESENTATIVES

EIGHTY-EIGHTH SESSION

H. F. No. **1167**

03/04/2013 Authored by Melin, Hornstein, Atkins, Masin, Falk and others  
The bill was read for the first time and referred to the Committee on Energy Policy

1.1 A bill for an act  
1.2 relating to energy; allocating certain funds from the renewable development  
1.3 account; creating an account; providing for financial incentives for solar  
1.4 photovoltaic modules manufactured in Minnesota; requiring studies;  
1.5 appropriating money; amending Minnesota Statutes 2012, section 116C.779,  
1.6 subdivision 2; proposing coding for new law in Minnesota Statutes, chapter 216C.

1.7 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

1.8 Section 1. Minnesota Statutes 2012, section 116C.779, subdivision 2, is amended to  
1.9 read:

1.10 Subd. 2. **Renewable energy production incentive.** (a) Until January 1, 2021,  
1.11 \$10,900,000 annually must be allocated from available funds in the account to fund  
1.12 renewable energy production incentives. \$9,400,000 of this annual amount is for  
1.13 incentives for electricity generated by wind energy conversion systems that are eligible for  
1.14 the incentives under section 216C.41 or Laws 2005, chapter 40.

1.15 (b) The balance of this amount, up to \$1,500,000 annually, may be used for  
1.16 production incentives for on-farm biogas recovery facilities and hydroelectric facilities  
1.17 that are eligible for the incentive under section 216C.41 or for production incentives for  
1.18 other renewables, to be provided in the same manner as under section 216C.41.

1.19 (c) Any portion of the \$10,900,000 not expended in any calendar year for the  
1.20 incentive is ~~available for other spending purposes under subdivision 1~~ transferred to  
1.21 the commissioner for deposit in the "Made in Minnesota" solar energy production  
1.22 incentive account established under section 216C.412. This subdivision does not create an  
1.23 obligation to contribute funds to the account.

1.24 (d) The Department of Commerce shall determine eligibility of projects under  
1.25 section 216C.41 for the purposes of this subdivision. At least quarterly, the Department of

2.1 Commerce shall notify the public utility of the name and address of each eligible project  
2.2 owner and the amount due to each project under section 216C.41. The public utility shall  
2.3 make payments within 15 working days after receipt of notification of payments due.

2.4 **EFFECTIVE DATE.** This section is effective the day following final enactment.

2.5 Sec. 2. **[216C.411] DEFINITIONS.**

2.6 For the purposes of sections 216C.411 to 216C.414, the following terms have the  
2.7 meanings given.

2.8 (a) "Made in Minnesota" means the manufacture in this state of solar photovoltaic  
2.9 modules:

2.10 (1) at a manufacturing facility located in Minnesota that is registered and authorized  
2.11 to manufacture and apply the UL 1703 certification mark to solar photovoltaic modules by  
2.12 Underwriters Laboratory (UL), CSA International, Intertek, or an equivalent UL-approved  
2.13 independent certification agency;

2.14 (2) that bear UL 1703 certification marks from UL, CSA International, Intertek, or  
2.15 an equivalent UL-approved independent certification agency, which must be physically  
2.16 applied to the modules at a manufacturing facility described in clause (1); and

2.17 (3) that are manufactured in Minnesota:

2.18 (i) via manufacturing processes that must include tabbing, stringing, and lamination;

2.19 or

2.20 (ii) by interconnecting low-voltage direct current photovoltaic elements that produce  
2.21 the final useful photovoltaic output of the modules.

2.22 A solar photovoltaic module that is manufactured by attaching microinverters, direct  
2.23 current optimizers, or other power electronics to a laminate or solar photovoltaic  
2.24 module that has received UL 1703 certification marks outside Minnesota from UL, CSA  
2.25 International, Intertek, or an equivalent UL-approved independent certification agency is  
2.26 not "Made in Minnesota" under this paragraph.

2.27 (b) "Solar photovoltaic module" has the meaning given in section 116C.7791,  
2.28 subdivision 1, paragraph (e).

2.29 **EFFECTIVE DATE.** This section is effective the day following final enactment.

2.30 Sec. 3. **[216C.412] "MADE IN MINNESOTA" SOLAR ENERGY PRODUCTION**  
2.31 **INCENTIVE ACCOUNT.**

2.32 Subdivision 1. **Account established; account management.** A "Made in  
2.33 Minnesota" solar energy production incentive account is established as a separate account

3.1 in the special revenue fund in the state treasury. The commissioner of management  
 3.2 and budget shall credit to the account the amounts authorized under this section and  
 3.3 appropriations and transfers to the account. Earnings, such as interest, dividends, and  
 3.4 any other earnings arising from account assets, must be credited to the account. Funds  
 3.5 remaining in the account at the end of a fiscal year do not cancel to the general fund but  
 3.6 remain in the account. The commissioner shall manage the account.

3.7 Subd. 2. **Purpose.** The purpose of the account is to pay the "Made in Minnesota"  
 3.8 solar renewable energy production incentive to owners of solar photovoltaic modules that  
 3.9 have received a "Made in Minnesota" certificate from the commissioner under section  
 3.10 216C.413.

3.11 Subd. 3. **Allocations; deposit.** (a) Beginning January 1, 2014, and each January 1  
 3.12 thereafter through 2024, each public utility, rural electric association, and municipality  
 3.13 subject to section 216B.241 must annually transfer to the commissioner five percent of the  
 3.14 total amount spent by the utility the previous year on energy conservation improvements  
 3.15 under section 216B.241 for the purposes of this section. The commissioner shall, upon  
 3.16 receipt of the funds, deposit them in the account established in subdivision 1.

3.17 (b) Notwithstanding section 116C.779, subdivision 1, paragraph (g), beginning  
 3.18 January 1, 2014, and continuing each January 1 until 2024, the utility that manages  
 3.19 the account under section 116C.779 must annually transfer from that account to the  
 3.20 commissioner an amount that, when added to the amount transferred to the commissioner  
 3.21 under paragraph (a), totals \$20,000,000 for the purposes of this section. The commissioner  
 3.22 shall, upon receipt of the funds, deposit them in the account established in subdivision 1.

3.23 **EFFECTIVE DATE.** This section is effective the day following final enactment.

3.24 Sec. 4. **[216C.413] "MADE IN MINNESOTA" SOLAR ENERGY PRODUCTION**  
 3.25 **INCENTIVE; QUALIFICATION.**

3.26 Subdivision 1. **Application.** A manufacturer of solar photovoltaic modules seeking  
 3.27 to qualify those modules as eligible to receive the "Made in Minnesota" solar energy  
 3.28 production incentive must submit an application to the commissioner on a form prescribed  
 3.29 by the commissioner. The application must contain:

3.30 (1) a technical description of the solar photovoltaic module and the processes used  
 3.31 to manufacture it, excluding proprietary details;

3.32 (2) documentation that the solar photovoltaic module meets all the required  
 3.33 applicable parts of the "Made in Minnesota" definition in section 216C.411, including  
 3.34 evidence of the UL 1703 right to mark for all solar photovoltaic modules seeking to  
 3.35 qualify as "Made in Minnesota";

4.1 (3) documentation, including, but not limited to, purchase orders, invoices, and  
4.2 shipping documents, establishing:  
4.3 (i) the origin of components used to manufacture the solar photovoltaic modules;  
4.4 (ii) the costs of raw materials, direct manufacturing labor in Minnesota, and  
4.5 overhead to manufacture the solar photovoltaic module; and  
4.6 (iii) the total costs of manufacturing the solar photovoltaic module, expressed in  
4.7 dollars per watts-peak governed by Standard Test Conditions under UL 1703;  
4.8 (4) any additional information requested by the commissioner of commerce; and  
4.9 (5) certification signed by the chief executive officer of the manufacturing company  
4.10 attesting to the truthfulness of the contents of the application and supporting materials  
4.11 under penalty of perjury.

4.12 Subd. 2. **Plant inspection.** After reviewing the application materials submitted  
4.13 under subdivision 1, the commissioner, or the commissioner's designee, shall physically  
4.14 inspect the manufacturer's Minnesota plant to verify that the manufacturing processes  
4.15 meet the requirements of subdivision 1. The Department of Commerce shall contract with  
4.16 an independent technical advisor with expertise in the manufacture of solar photovoltaic  
4.17 modules to accompany the commissioner, or the commissioner's designee, on the  
4.18 inspection. The Department of Commerce may assess a fee on the manufacturer that is  
4.19 equal to the costs billed by the contractor for the contractor's services with respect to the  
4.20 inspection, including review of the application and the writing of a postinspection report.

4.21 Subd. 3. **Certification.** If the commissioner determines that a manufacturer's solar  
4.22 photovoltaic module meets the definition of "Made in Minnesota" in section 216C.411, the  
4.23 commissioner shall issue the manufacturer a "Made in Minnesota" certificate containing  
4.24 the name and model numbers of the certified solar photovoltaic modules and the date of  
4.25 certification. A copy of the certificate must be provided to each purchaser of the solar  
4.26 photovoltaic module.

4.27 Subd. 4. **Reinspection.** The commissioner may reinspect the manufacturing facility  
4.28 of a manufacturer who has received certification under subdivision 3 at any time, but  
4.29 must do so at least every two years.

4.30 Subd. 5. **Notice of change; certification review.** A manufacturer that has received  
4.31 a "Made in Minnesota" certificate under subdivision 3 must notify the commissioner  
4.32 of commerce at least 60 days in advance of any changes in the components used  
4.33 in production, manufacturing processes, or any other changes that could affect the  
4.34 manufacturer's solar photovoltaic modules' certification as "Made in Minnesota," and  
4.35 must submit to the commissioner detailed information describing and documenting the  
4.36 changes. The commissioner shall, after reviewing the submitted material and, if necessary,

5.1 conducting a reinspection of the manufacturer's manufacturing facility, determine  
 5.2 whether the proposed changes warrant revoking the manufacturer's "Made in Minnesota"  
 5.3 certification. Within ten days of making a determination under this subdivision, the  
 5.4 commissioner shall inform the manufacturer of the determination in writing.

5.5 Subd. 6. **Data.** Any data submitted as part of an application under subdivision 1 or  
 5.6 collected as a result of an inspection under subdivision 2 or 4 is trade secret information  
 5.7 under section 13.37 and is classified as nonpublic data.

5.8 **EFFECTIVE DATE.** This section is effective the day following final enactment.

5.9 Sec. 5. **[216C.414] "MADE IN MINNESOTA" SOLAR ENERGY PRODUCTION**  
 5.10 **INCENTIVE; CALCULATION.**

5.11 Subdivision 1. **Components.** (a) By October 1, 2013, the Department of Commerce  
 5.12 shall calculate a "Made in Minnesota" solar energy production incentive for each solar  
 5.13 photovoltaic module that has received certification under section 216C.413 as being  
 5.14 manufactured in Minnesota. The "Made in Minnesota" solar energy production incentive  
 5.15 is a performance-based financial incentive expressed as a per kilowatt-hour amount that,  
 5.16 when added to the amount paid by a utility to the owner of a solar photovoltaic module  
 5.17 under section 216B.164 or other rate approved by the commission, reduces the payback of  
 5.18 the owner's investment in the solar photovoltaic modules to a period of ten years. The  
 5.19 Department of Commerce shall calculate the "Made in Minnesota" solar energy production  
 5.20 incentive by utilizing a financial model composed of the following components:

5.21 (1) an estimate of the installed cost per kilowatt-direct current, based on the cost data  
 5.22 supplied by manufacturers in the application submitted under section 216C.413, and an  
 5.23 estimate of the average installation cost based on a representative sample of Minnesota  
 5.24 solar photovoltaic projects installed by installers certified by the North American Board of  
 5.25 Certified Energy Practitioners and the Minnesota Joint Apprenticeship Training Committee;

5.26 (2) the average insolation rate in Minnesota;

5.27 (3) an estimate of the decline in the generation efficiency of the solar photovoltaic  
 5.28 modules over time;

5.29 (4) the rate paid by utilities to owners of solar photovoltaic modules under section  
 5.30 216B.164 or other law;

5.31 (5) applicable federal tax incentives for installing solar photovoltaic modules;

5.32 (6) the maximum amount of debt the project can support based on current  
 5.33 commercial borrowing rates and a ten-year term; and

5.34 (7) the estimated levelized cost per kilowatt-hour generated.

6.1 (b) In determining the amount of the incentive, the Department of Commerce shall  
6.2 consider, after consulting with Minnesota solar photovoltaic manufacturers, the degree to  
6.3 which solar photovoltaic modules contain components manufactured in Minnesota; the  
6.4 solar photovoltaic modules' estimated length of life, taking into account design, quality of  
6.5 materials used, and independent testing results; UL 1703 or equivalent fire safety ratings  
6.6 and additional integrated safety features; and the ability to use the solar photovoltaic  
6.7 modules in innovative applications, including for purposes other than solely electric  
6.8 generation.

6.9 (c) "Made in Minnesota" solar photovoltaic modules shall receive:

6.10 (1) 100 percent of the incentive calculated in paragraph (a) if they are manufactured  
6.11 under the process described in section 216C.411, paragraph (a), clause (3), item (i); or

6.12 (2) 65 percent of the incentive calculated in paragraph (a) if they are manufactured  
6.13 under the process described in section 216C.411, paragraph (a), clause (3), item (ii).

6.14 Subd. 2. **Notice; recalculation.** A manufacturer that has received a "Made in  
6.15 Minnesota" certificate under section 216C.413 must notify the commissioner of commerce  
6.16 at least 60 days in advance of any changes in the parameters listed in subdivision 1  
6.17 that may affect the department's calculation of the "Made in Minnesota" solar energy  
6.18 production incentive, and must submit to the commissioner detailed information  
6.19 describing and documenting the changes. The commissioner of commerce, after reviewing  
6.20 the submitted material, shall determine whether the changes warrant recalculation of  
6.21 the "Made in Minnesota" solar energy production incentive for the manufacturer's  
6.22 solar photovoltaic modules and, if so, shall conduct the recalculation. Within ten days  
6.23 of recalculating the incentive, the commissioner shall inform the manufacturer of the  
6.24 recalculation in writing. A recalculated incentive is effective 90 days after the first day of  
6.25 the first month following the date of notice of the recalculation.

6.26 Subd. 3. **Annual review.** Unless a review of the calculation of the "Made in  
6.27 Minnesota" solar energy production incentive has been conducted under subdivision 2  
6.28 in a calendar year, the commissioner of commerce shall annually review the calculation  
6.29 of the "Made in Minnesota" solar energy production incentive for each manufacturer  
6.30 receiving the incentive. As part of the review, the commissioner of commerce may  
6.31 require the manufacturer to submit current information to support the calculation of the  
6.32 "Made in Minnesota" solar energy production incentive. A manufacturer shall submit the  
6.33 information requested by the commissioner of commerce in a timely fashion.

6.34 **EFFECTIVE DATE.** This section is effective the day following final enactment.

7.1 Sec. 6. **[216C.415] "MADE IN MINNESOTA" SOLAR ENERGY PRODUCTION**  
 7.2 **INCENTIVE; PAYMENT.**

7.3 Subdivision 1. **Incentive payment.** Incentive payments may be made under this  
 7.4 section only to an owner of solar photovoltaic modules with a total nameplate capacity  
 7.5 below 100 kilowatts who:

7.6 (1) has submitted to the commissioner, on a form established by the commissioner,  
 7.7 an application to receive the incentive;

7.8 (2) has received from the commissioner a "Made in Minnesota" certificate under  
 7.9 section 216C.413; and

7.10 (3) has installed on or adjacent to residential or commercial property solar  
 7.11 photovoltaic modules that are generating electricity and has received a "Made in  
 7.12 Minnesota" certificate under section 216C.413.

7.13 Subd. 2. **Eligibility window; payment duration.** (a) Payments may be made  
 7.14 under this section only for electricity generated from solar photovoltaic modules that are  
 7.15 operational and generating electricity from January 1, 2014, through December 31, 2034.

7.16 (b) Payment of the incentive begins and runs consecutively from the date the solar  
 7.17 photovoltaic modules begin generating electricity.

7.18 (c) An owner of solar photovoltaic modules shall receive payments under this  
 7.19 section for a period of ten years.

7.20 (d) No payment may be made under this section for electricity generated after  
 7.21 December 31, 2034.

7.22 (e) No owner of solar photovoltaic modules may first begin to receive payments  
 7.23 under this section after December 31, 2024.

7.24 Subd. 3. **Amount of payment.** (a) An incentive payment is based on the number  
 7.25 of kilowatt-hours of electricity generated by the solar photovoltaic modules installed at  
 7.26 a single property, except as provided in paragraph (b). The per-kilowatt amount of the  
 7.27 payment is the "Made in Minnesota" solar energy production incentive for those modules  
 7.28 determined by the commissioner of commerce under section 216C.414.

7.29 (b) The owner of solar photovoltaic modules eligible to receive incentives under this  
 7.30 section and whose total nameplate capacity exceeds 40 kilowatts DC but is less than 100  
 7.31 kilowatts DC shall be paid an incentive according to the formula:

7.32  $I = (M) \times [(P \text{ kWh AC}) \div (C \text{ kW DC})] \times (40 \text{ kW DC})$ , where:

7.33 (1) I equals the incentive paid to an owner of solar photovoltaic modules whose  
 7.34 nameplate capacity exceeds 40 kilowatts DC, but is less than 100 kilowatts DC;

7.35 (2) M equals the "Made in Minnesota" solar energy production incentive calculated  
 7.36 under section 216C.414;

8.1 (3) P equals the number of kilowatt-hours AC generated by the solar photovoltaic  
8.2 modules whose nameplate capacity exceeds 40 kilowatts DC, but is less than 100  
8.3 kilowatts DC; and

8.4 (4) C equals the nameplate capacity of the solar photovoltaic modules whose  
8.5 nameplate capacity exceeds 40 kilowatts DC, but is less than 100 kilowatts DC.

8.6 (c) For purposes of this subdivision, (i) "AC" means alternating current; (ii) "DC"  
8.7 means direct current; (iii) "kWh" means kilowatt-hours; and (iv) "kW" means kilowatts.

8.8 Subd. 4. **Allocation of payments.** (a) Fifty percent of the funds deposited in the  
8.9 account established in section 216C.412 available each year to pay incentives shall be for  
8.10 owners of eligible solar photovoltaic modules installed on residential property, and 50  
8.11 percent shall be for owners of eligible solar photovoltaic modules installed on commercial  
8.12 property.

8.13 (b) The commissioner may not award more than 25 percent of the annual  
8.14 contribution made by the public utility that owns a nuclear generating plant in this state  
8.15 to the account established in section 216C.412 to owners of solar photovoltaic modules  
8.16 that are installed in buildings located outside the area where that public utility provides  
8.17 electric service in this state.

8.18 (c) The commissioner shall endeavor to geographically distribute incentives paid  
8.19 under this section to owners of solar photovoltaic modules installed throughout the state.

8.20 (d) For purposes of this subdivision:

8.21 (1) "residential property" means residential real estate that is occupied and used as a  
8.22 homestead by its owner or by a renter and includes "multifamily housing development" as  
8.23 defined in section 462C.02, subdivision 5, except that residential property on which solar  
8.24 photovoltaic modules (i) whose capacity exceed 10 kilowatts is installed; or (ii) connected  
8.25 to a utility's distribution system and whose electricity is purchased by several residents,  
8.26 each of whom own a share of the electricity generated, shall be deemed commercial  
8.27 property; and

8.28 (2) "commercial property" means real property on which is located a business  
8.29 establishment classified under the North American Industrial Classification System as  
8.30 codes 42, 44, or 45.

8.31 Subd. 5. **Limitation.** An owner receiving an incentive payment under this section  
8.32 may not receive a rebate under section 116C.7791 for the same solar photovoltaic modules.

8.33 Subd. 6. **Appropriation.** There is annually appropriated from the "Made in  
8.34 Minnesota" solar energy production incentive account established under section 216C.412  
8.35 an amount to the commissioner of commerce sufficient to make the payments required

9.1 under this section and to reimburse the Department of Commerce for actual and reasonable  
 9.2 costs of administering the incentive program under sections 216C.411 to 216C.415.

9.3 **EFFECTIVE DATE.** This section is effective the day following final enactment.

9.4 **Sec. 7. VALUE OF ON-SITE ENERGY STORAGE STUDY.**

9.5 (a) The commissioner of commerce shall contract with an independent consultant  
 9.6 selected through a request for proposal process to produce a report analyzing the potential  
 9.7 costs and benefits of installing utility-managed energy storage modules in residential and  
 9.8 commercial buildings in this state. The study must:

9.9 (1) estimate the potential value of on-site energy storage modules as a  
 9.10 load-management tool to reduce costs for individual customers and for the utility,  
 9.11 including, but not limited to, reductions in energy, particularly peaking, costs, and  
 9.12 capacity costs;

9.13 (2) examine the interaction of energy storage modules with on-site solar photovoltaic  
 9.14 modules; and

9.15 (3) analyze existing barriers to the installation of on-site energy storage modules  
 9.16 by utilities, and examine strategies and design potential economic incentives, including  
 9.17 using utility funds expended under Minnesota Statutes, section 216B.241, to overcome  
 9.18 those barriers.

9.19 By January 1, 2014, the commissioner of commerce shall submit the study to the chairs  
 9.20 and ranking minority members of the legislative committees with jurisdiction over energy  
 9.21 policy and finance.

9.22 (b) The commissioner of commerce shall assess an amount necessary under  
 9.23 Minnesota Statutes, section 216B.241, subdivision 1e, for the purpose of completing the  
 9.24 study described in this section.

9.25 **EFFECTIVE DATE.** This section is effective the day following final enactment.

9.26 **Sec. 8. VALUE OF SOLAR THERMAL STUDY.**

9.27 (a) The commissioner of commerce shall contract with an independent consultant  
 9.28 selected through a request for proposal process to produce a report analyzing the potential  
 9.29 costs and benefits of expanding the installation of solar thermal projects, as defined in  
 9.30 Minnesota Statutes, section 216B.2411, subdivision 2, in residential and commercial  
 9.31 buildings in this state. The study must examine the potential for solar thermal projects to  
 9.32 reduce heating and cooling costs for individual customers and to reduce utilities' costs.  
 9.33 The study must also analyze existing barriers to the installation of solar thermal projects

10.1 by utilities, and examine strategies and design potential economic incentives, including  
10.2 using utility funds expended under Minnesota Statutes, section 216B.241, to overcome  
10.3 those barriers. By January 1, 2014, the commissioner of commerce shall submit the study  
10.4 to the chairs and ranking minority members of the legislative committees with jurisdiction  
10.5 over energy policy and finance.

10.6 (b) The commissioner of commerce shall assess an amount necessary under  
10.7 Minnesota Statutes, section 216B.241, subdivision 1e, for the purpose of completing the  
10.8 study described in this section.

10.9 **EFFECTIVE DATE.** This section is effective the day following final enactment.