



Solar Rebate Programs

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Made in Minnesota Solar Incentive Program

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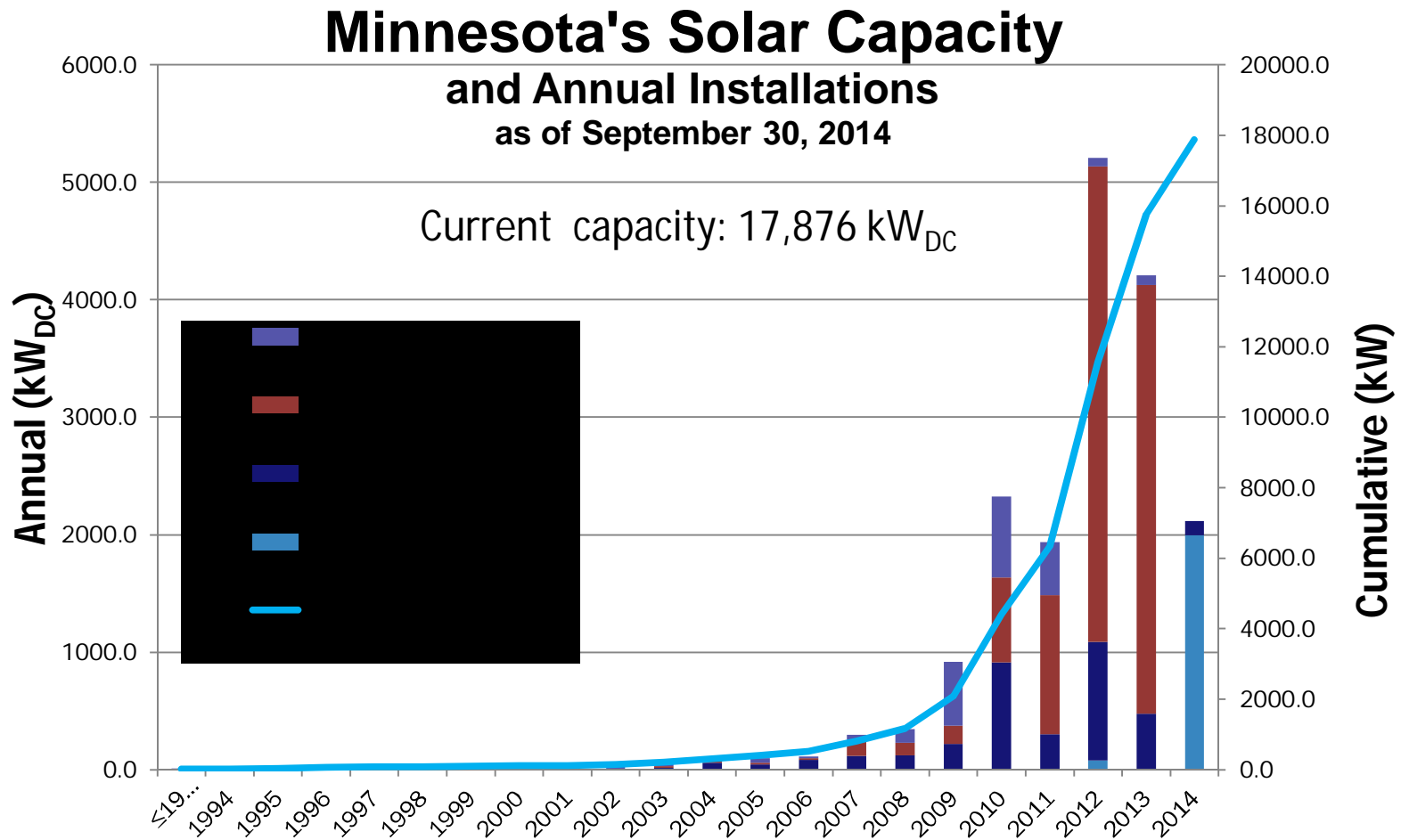
Presentation Agenda

- How much solar does MN have installed today?
- Made in Minnesota Solar Incentive Program (MiM)
- MiM results in 2014 and 2015
- Other Utility Sponsored Solar Incentives
- Overview of solar consumer financing programs



Minnesota's PV

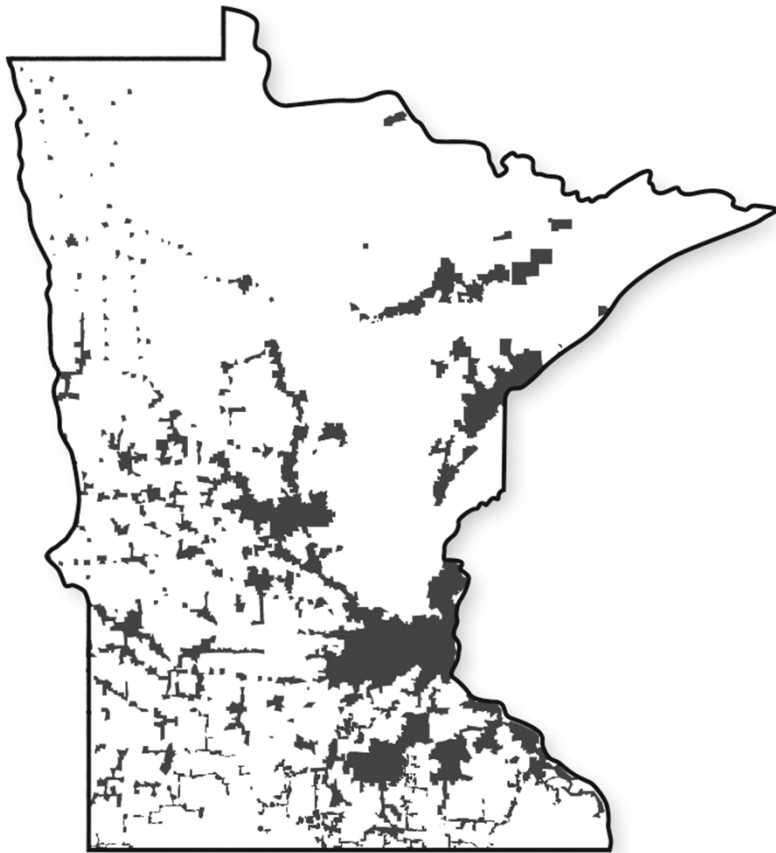
Minnesota's Solar Capacity and Annual Installations



Made in Minnesota (MiM)

- \$15M awarded annually 2014-2023
(=\$150M)
- Electric: Production Based Incentives (PBI)
- Thermal: Rebate
- CIP (Conservation Improvement Program)
and RDF (Renewable Development Fund)

Four Participating Utilities



Xcel Energy
Minnesota Power
Alliant Energy
Otter Tail Power

Made in Minnesota: PV

- Commercial systems up to 40 kW
- Residential Systems up to 10 kW
- 50% Commercial & 50% Residential mix
- Distribution proportional to funding by utility



Made in Minnesota: PV, Continued

- Applications accepted annually: January 1- February 28
- Lottery selection method
- Incentives paid annually
- 10 years of payments
- Projects must be installed in the calendar year



2015 PV Incentives per kWh

Solar Module	Commercial For Profit 2015 Incentive Amount below 40 kW DC	Nonprofit/Public 2015 Incentive Amount below 40 kW DC	Residential 2015 Incentive Amount up to 10 kW DC
Heliene 60P250, 60M265 BB, 60M280*, 72M300, 72M320* and 72M335*	\$0.13/kWh	\$0.15/kWh	\$0.25/kWh
iTek Energy 260, 265 and 270	\$0.13/kWh	\$0.15/kWh	\$0.28/kWh
Silicon Energy Voyageur SiE-V-275	\$0.35/kWh	\$0.35/kWh	\$0.37/kWh
tenKsolar XT-A 400, XT-A 410	\$0.13/kWh	\$0.15/kWh	\$0.25/kWh

How to Calculate a PBI 5 kW Residential System Using Silicon Energy Modules

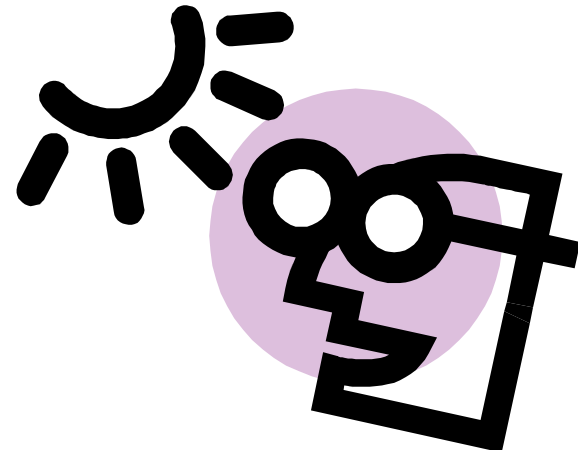
6,446 kWh

X \$.37/kWh

\$2,385.02

X 10 years

\$23,850.20



Solar Thermal Rebate Program

- \$250,000 annually
- Currently on a first-come, first-serve basis
- Applications are being accepted
- As popularity for program increases, the incentives will be split 50-50 between water heating and air heating

Approved Solar Thermal Collectors

Solar Collector	Commercial Properties	Multi-Family Residential	Single Family Residential
Energy Conservation Solarway 6000 Solar Skies Rural Renewable Energy Alliance	The lesser of 25% of the installed cost of a complete system or \$25,000	The lesser of 25% of the installed cost of a complete system or \$5,000	The lesser of 25% of the installed cost of a complete system or \$2,500

MiM 2014 and 2015 Summary

- Commercial + Nonprofit PV: 2014-332: 2015-635
- Applications for Residential PV: 14-287: 15-608
- Total PV applications: 14-619: 15-1243
- Total Thermal applications: 14-14: 15-4
- Total funding requested 14-\$30m: 15-\$60m+
- PV capacity of all 2015 applications: 27.3MWs

2020: MiM and Solar* Rewards Program Capacity Estimates



- Made in Minnesota 2,700 systems: 40 MW
- Solar* Rewards 1,600 systems: 24 MW
- 4,300 new small PV systems under 40 kW
- 1.5% standard to achieve 400 MWs statewide

Xcel Energy Solar* Rewards

- \$5 million Annual Production Based Incentive (PBI)
- 20 kW system size maximum
- 2014, 15, 16 rate of \$.08/kWh for 10 years
- Solar system size is limited to 120% of the customer's on-site annual energy consumption
- 2015 Program is currently accepting applications.
- More information at www.xcelenergy.com

MN Power Solar Sense

- Rebate program based on PV installed capacity
- Up to \$2,000 per kW installed up to a project maximum of \$20,000
- Program accepts applications January 1 – February 28th annually. Awarded by Lottery.
- Solar Thermal 25% rebate up to \$2,000 for residents or \$25,000 for businesses
- Visit mnpower.com/Environment/SolarSense

Electric Coops

- Electric Cooperative Customers are not eligible for in the Made in MN Solar Program
- Several cooperatives do offer customers the opportunity to participate in Community Solar Gardens
- All residential and commercial systems are eligible for a 30% federal tax credit through 2016

Other Utilities Offering Solar Incentives

- Austin/Owatonna/Rochester PV \$.50/watt up to \$5,000 and thermal water heating up to \$1200
- New Ulm – PV
- Moorhead – PV - \$1500 per kW
- Brainerd – PV \$2/watt up to \$2,000
- Marshall – Solar Thermal up to \$2,000

Residential Loans for Solar

- Fixed rate 10 year term
- Maximum loan amount of \$20,000
- Maximum size of 8 kW
- More information: www.mnlendingcenter.org

Commercial Energy Efficiency Loan Program

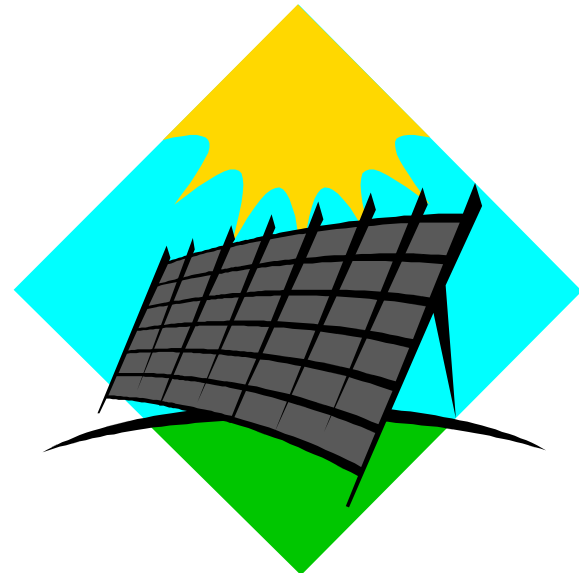
- Must be existing commercial property in MN
- Fixed interest rate of 3.99%, 6-120 month term
- Includes solar
- More information at www.mnlendingcenter.org

Energy Savings Fund for 501 (c)(3) Nonprofits

- 0% fixed interest rate up to \$25,000 – 7 year loan
- Improvements must achieve a payback of 2-10 years, includes solar
- More info at www.mnlendingcenter.org

Other Financing for Solar

- Property Assessed Clean Energy (PACE)
- Trillion BTU
- Guaranteed Energy Savings Program
- Federal tax incentives



Incentives Database



The screenshot shows the DSIRE website interface. At the top is a red banner with the DSIRE logo and the text "Database of State Incentives for Renewables & Efficiency". To the right of the banner is the U.S. Department of Energy logo and the IRE logo. Below the banner is a navigation menu with links for Home, Glossary, Links, FAQs, Contact, and About. On the left side, there is a "DSIRE SOLAR" logo with the text "solar policy information" and a play button icon. To the right of this is a map of Minnesota and the heading "MINNESOTA RESIDENTIAL INCENTIVES Incentives/Policies for Renewable Energy". Below the heading is a link "See All Summaries". On the left side, there is a "Resources" menu with options: RPS Data, Summary Maps, Summary Tables, Library, What's New?, and Search. On the right side, there is a "Financial Incentives" section with the following sub-sections and links:

- Local Loan Program**
 - [City of Duluth - Residential Energy Efficiency Loan Program](#)
- Local Rebate Program**
 - [City of Duluth - Residential Energy Efficiency Rebate Program](#)
- PACE Financing**
 - [Local Option - Energy Improvement Financing Programs](#)
- Performance-Based Incentive**
 - [Made in Minnesota Solar Energy Production Incentive](#)
 - [Renewable Energy Production Incentive](#)
 - [Value of Solar Tariff](#)
 - [Xcel Energy - Solar Production Incentive](#)

www.dsireusa.org

Thank You

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mn.gov/made-in-minnesota
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