



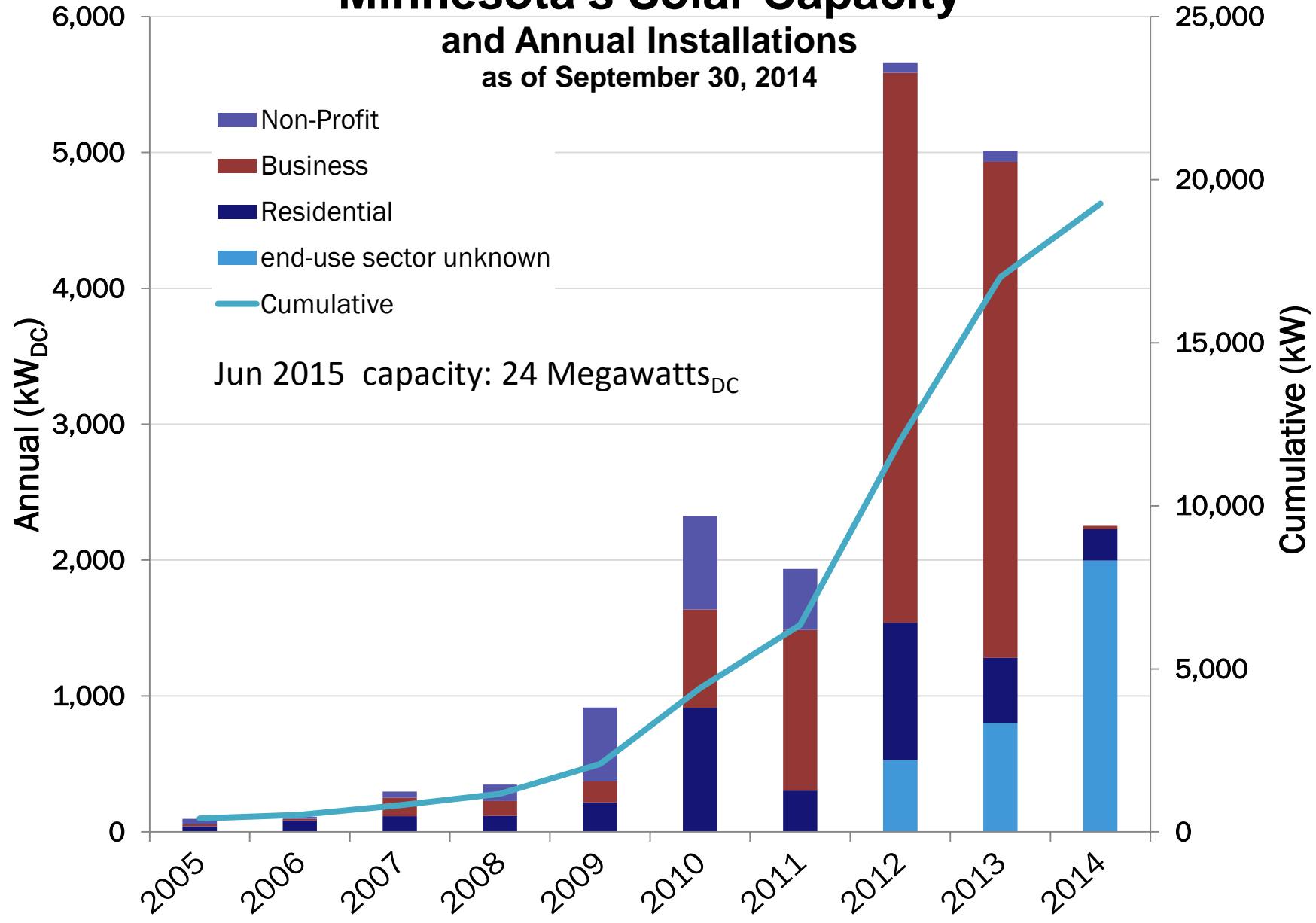
Incentives, Grants, and Loans for Renewable and Energy Efficient Systems

Stacy Miller

Solar Policy Specialist

Minnesota's Solar Capacity

and Annual Installations
as of September 30, 2014



Solar Ready Design

- Building new? Plan for solar—even if you aren't ready to invest in solar now.
- This saves \$\$money\$\$ in the future!
- Consider:
 - Roof orientation
 - Structural capacity
 - Placement of mechanicals
- State resources: solar.help@state.mn.us

Net Metering

- **Investor owned utilities:**
 - Net metering cap raised to 1 MW in 2013
 - Single-customer meter aggregation on contiguous property
 - No standby charges < 100kW
 - Systems 40 kW - 1,000 kW



Net Metering

- **Cooperative & municipal utilities:** Changes effective July 1, 2015
 - Net metering limit remains 40 kW
 - Net metering fees authorized under certain conditions:
 - A cooperative ... or municipal utility may charge an additional fee to recover the fixed costs not already paid for by the customer through the customer's existing billing arrangement. Any additional charge by the utility must be reasonable and appropriate for that class of customer based on the most recent cost of service study.
 - Customers forfeit excess generation at the end of the year
 - Customers interconnected prior to July 1, 2015 unaffected.

Federal Incentives

Investment Tax Credit

- 30% for systems placed in service by Dec 31, 2016
- Modified Accelerated Depreciation expires Dec 31, 2016

Made in Minnesota



- **Made in Minnesota PV**
 - \$15 million/year through 2023
 - Xcel Energy, MN Power , Alliant, & Otter Tail Power
 - Production Based Incentive (PBI)
 - Projects < 40 kW Commercial, < 10 kW Residential
 - Applications accepted annually **Jan 1st – Feb 28th**

Made in Minnesota



- **Made in Minnesota Solar Thermal Water and Air Heating Systems**
 - \$250,000 per year
 - One time rebate = 25% of installed cost
 - Currently accepting applications
 - Available to all Minnesota residents and businesses

2015 MiM Solar Thermal Rebates

Solar Module	Commercial Properties	Multifamily Residential	Single Family Residential
<p>Energy Conservation and Products Solarway 6000</p> <p>Solar Skies SS-16, SS-18, SS-21, SS-24, SS-26, SS-28, SS-32, SS-40, SS-50. NSC-21, NSC-24, NSC-26, NSC-28, NSC-32, NSC-40 <i>*Production in MN has been discontinued as of January 31, 2015</i></p>	<p>The lesser of 25% of the installed cost of a complete system or \$25,000</p>	<p>The lesser of 25% of the installed cost of a complete system or \$5,000</p>	<p>The lesser of 25% of the installed cost of a complete system or \$2,500</p>
<p>Rural Renewable Energy Alliance Solar Powered Furnace (SPF) 26, SPF 32, SPF 40,</p> <p>SolarWall Transpired Air Heat</p>			

Xcel Energy Solar* Rewards

- \$5 million annually 2014-2017
- Production Based Incentive (PBI) of \$.08/kWh paid annually over 10 years
- Available to customers of Xcel Energy
- Dakota Electric, Rochester, MP, OTP also have small solar programs

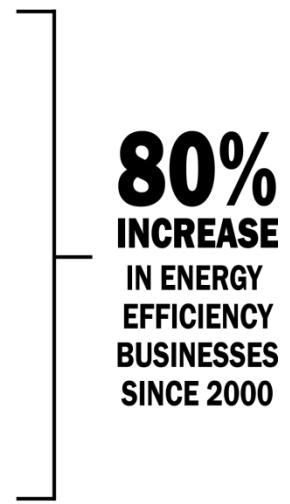
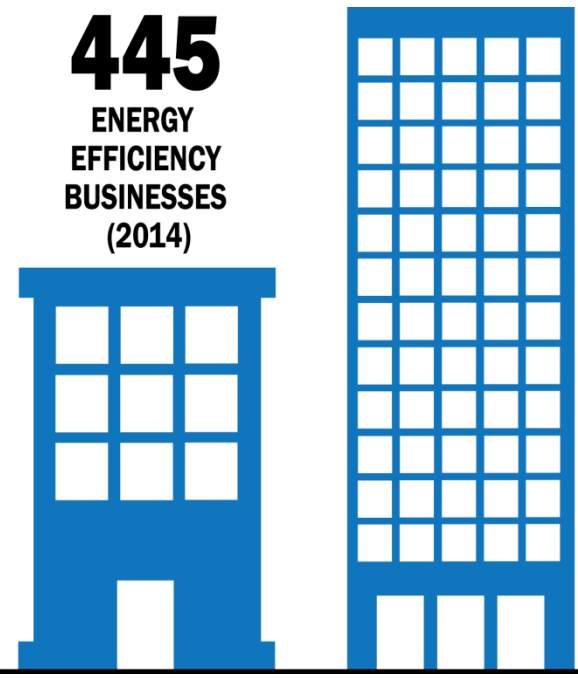
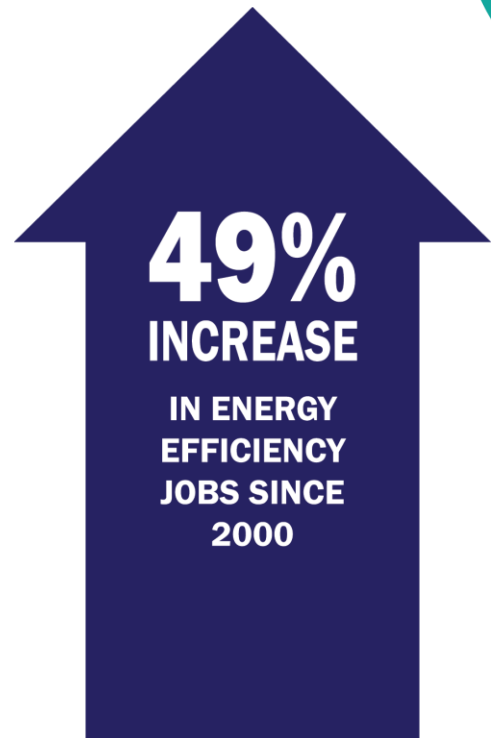
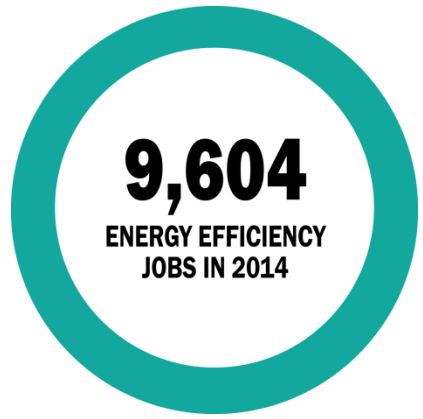


Community Solar

- Xcel Energy Program will be the largest
 - Minimum of 5 subscribers who must be in a contiguous county.
 - A single subscriber may subscribe to 40% of a system
 - Subscribers receive on-bill credit
- Several co-ops and Moorhead Public Service have Community Solar programs planned or available

Efficiency First!

Energy Efficiency Impacts



CIP Performance 2009-2011

- *2.5 million MWh* and *7.3 million Dth* saved.
- Enough energy saved to heat, cool and power *46,203 homes* annually.
- Over *40 million tons* of CO2 emissions avoided over the life of the projects.
- Avoided *two 500 MW combined cycle plants* since 2007.

CIP CARD Grant Studies

- Maximizing Rural Electric Cooperative Farm Energy Efficiency Programming (in progress)
- Improving Energy Efficiency and Crop Production in Controlled Environment (in progress)
- Dairy Cooperative Partnerships for Improved Efficiency Program Adoption (complete)
- LEDs: Energy Savings and Replicability in MN Livestock Facilities (complete)

Incentives Database



The screenshot displays the DSIRE website interface. At the top, the header features the DSIRE logo and the U.S. Department of Energy logo. Below the header is a navigation menu with links for Home, Glossary, Links, FAQs, Contact, and About. The main content area is titled "MINNESOTA RESIDENTIAL INCENTIVES" and includes a sub-header "Incentives/Policies for Renewable Energy" and a link to "See All Summaries". A sidebar on the left contains a "Resources" dropdown menu with options: RPS Data, Summary Maps, Summary Tables, Library, What's New?, and Search. The main content area lists several categories of incentives:

- 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!

Stacy Miller

Minnesota Department of Commerce,
Division of Energy Resources

Solar.Help@state.mn.us

Energy Info Hotline - 651-539-1886 or
1-800-657-3710