

Solar Works For Minnesota



A 2013 Minnesota Clean Energy Success Story

North Dakota Alliance for Renewable Energy

February 4, 2014

Lynn Hinkle,

Minnesota Solar Energy Industries Association

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In May 2013 MN passed a clean energy bill:

- 10% by 2030 solar goal, 1.5% by 2020 solar standard for IOUs, w/ carve out for <20kW projects
- Raises customer net metering cap to 1MW
- Community-Shared Solar projects
- Value of Solar Tariff (MN first in nation!)
- Improves PACE, adds new solar incentives and Made in Minnesota
- Commissions 40% by 2030 study
- Increases utility energy saving goal to at least 1.5% annual sales, requires prioritizing energy savings over all other power

How did we get here?



Building for a Big Vision

- No fossil fuels resources in Minnesota, burgeoning solar industry, overwhelming public support for solar
- Build a big, powerful, united coalition
- Solar Works for Minnesota – a coalition formed three years ago
- Public education and outreach, educate policymakers
- Legislative successes in 2010, 2011 and 2012, big win in 2013.
- Strategy: governor Dayton as a champion



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What will be the impact of producing 10% solar energy for our state?

- Generating enough power for more than 700,000 homes.
- Or enough energy to power 2.3 million electric vehicles in our state.



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- Why Solar works better than other resources in Minnesota because we have:
- No Oil
- No Coal
- No Natural Gas
- No Uranium
- And No Large-Hydropower



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Minnesota's Story!

- ❑ Minnesotans export at least **\$20 billion (\$3800 per Minnesotan)** per year to other states and countries to pay for energy, according to 2008 U.S. DOE, Energy Information Administration data. *Keeping more energy dollars cycling in the state will have a significant positive impact on our economy.*

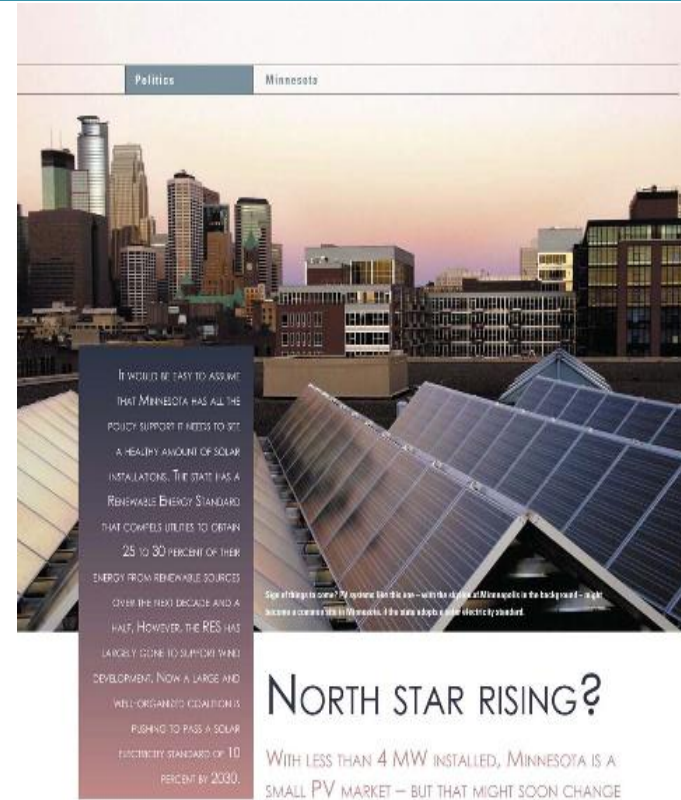


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Three most important aspects of any campaign!

- Public Support
- Building a Strong Coalition
- Developing a Campaign with Compelling Talking Points



Like so many new solar manufacturers, Bloomington, Minnesota-based TenKolar has its sights firmly set on the world solar market. With the company's unique photovoltaic (PV) system, which combines modules, reflectors and sucking in one package and is designed to sit atop flat commercial roofs, TenKolar hopes to meet demand from California to India, and everywhere in between. Joel Can-

non, the company's CEO, points out that since TenKolar began production last September, it has already shipped 1 MW of product and developed a backlog of orders.

For now, though, it's unlikely that all that many of the company's PV systems will end up on rooftops around the North Star State. At first glance, it would seem that Minnesota is well-positioned for solar development. Indeed,

the state has one of the more aggressive Renewable Electricity Standards (RES) in the nation—although the law has some quirks. The RES requires 30 percent of retail electricity sales by the state's largest utility, Xcel Energy, to come from renewable sources by 2020. Of that 30-percent requirement, though, no more than 1 percent can come from solar. The RES also mandates that the state's other utilities—

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Public Support for Solar

- *92% of Americans think it is important for the nation to develop and use solar energy.*
- *77% of Americans believe the Federal government should make solar power development a national priority, including the financial support needed.*
- *Almost half (49%) of all Americans are currently pondering solar power options for their home or business.*
- *43% of Americans favor solar as their top energy source, far behind the public's second choice, wind.(17%)*

Kelton Research , October 08, 2009

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Reasons why solar is so popular!

- ❑ Costs are declining.
- ❑ Greater concern about energy security.
- ❑ Greater concern about environmental impacts of fossil fuels.
- ❑ Better understanding of the benefits of distributed generation.
- ❑ Better understanding local economic benefits.
- ❑ Society now understands systems-technology can change quickly, such change is embraced and desired.
- ❑ Solar Industry is better organized and more sophisticated in its strategies.



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- Annual poll conducted before MN legislative session
- 500 telephone interviews with registered Minnesota voters
- Bipartisan research team of Fairbank, Maslin, Maullin, Metz and Associates (D) and Public Opinion Strategies (R)
- Results from January 2012

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Minnesota's Polling Numbers

- 2/3 of voters a candidate who wants to promote more use of clean, renewable energy – like wind and solar power;
- A strong majority of voters back 10% solar requirement, across party lines: 88% of Democrats, 66% of Independents and 57% of Republicans;
- Four out of five voters support legislation to encourage solar use on public buildings with 94% of Democrats, 79% of Independents and 68% of Republicans;
- Voters are willing to pay more for solar and efficiency (if needed) with 56% supporting paying as much as \$6



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Minnesota's Polling Numbers

- Solar Energy has strong support across party lines;
- Both men and women support solar overwhelmingly 90% women and 83% men;
- In MN 87% of those polled supported solar energy;
- In MN 86% support solar on roof tops of homes, businesses or public buildings;
- 2/3 of Voters believe that increasing the use of efficiency, wind and solar will create jobs;



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Turning support data into action

- ❑ Citizen outreach
- ❑ Media
- ❑ Events: tabling, State Fair
- ❑ Websites/email campaigns
- ❑ District meetings
- ❑ Presentations
- ❑ Creativity!



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Putting the Sun to Work for Minnesota Short Film Contest



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- Solar Works for Minnesota is a coalition that includes more than 150 non-profits, businesses and unions with Legislative victories in 2010, 2011 and 2012 help position us for 2013 and 2015.



- The campaign was endorsed by the MN Solar Energy Industries Association, the Minnesota Environmental Partnership, The Blue Green Alliance of Minnesota and others, including the MN-AFL-CIO

- Minnesota Clean Energy & Jobs Campaign launched early 2013



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Industrial Union Guy

30 years here. Ford Twin Cities Assembly Plant. 10 yrs on the rivet line and 20 as a UAW rep bargaining for sustainable jobs.

Produced the “Green Product, Green Plant” plan to transform the plant for mfg jobs in the clean energy economy. State PHEV committee, Mayors Green Mfg Initiative followed.

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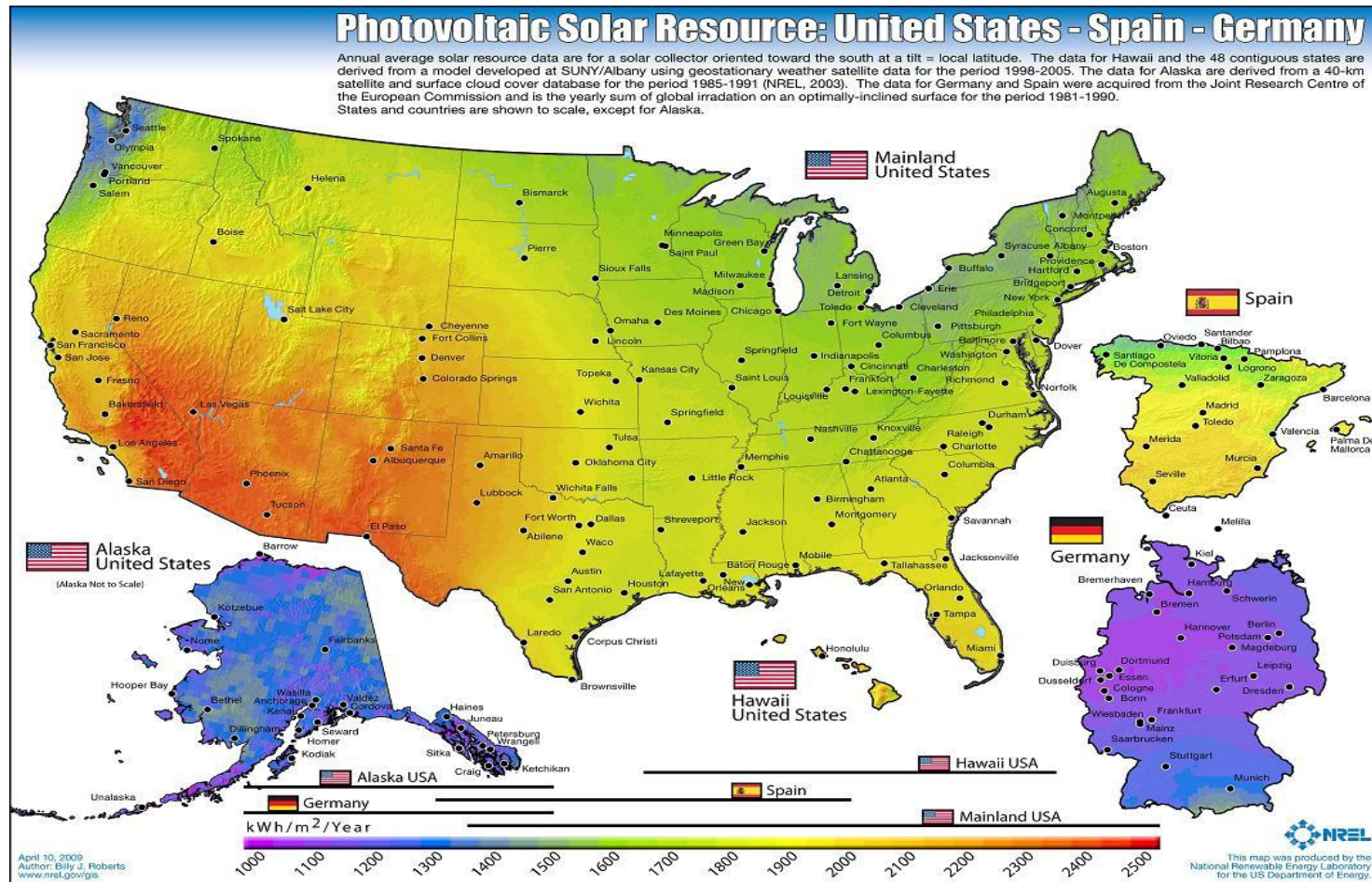


Solar Industry Guy

Lynn Hinkle is now Policy Director for the Minnesota Solar Energy Industries Association (MnSEIA) standing in front of a solar array he helped develop on Spruce Tree Center at University and Snelling in St Paul.

www.solarmn.org

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SES Makes Minnesota target for Investment

- Minnesota presently has more than 100 companies producing Solar products and services and a 1.5% SES moves Minnesota from “not considered” to a state targeted for significant investment
- Information from the MN DEED/MnSEIA/DER Dec. 2010 Solar Manufacturing Supply Chain Roundtable

MINNESOTA SOLAR MANUFACTURING SUPPLY CHAIN ROUNDTABLE

December 14, 2010 / 10:30 am – 12:30 pm

Solar energy is increasingly recognized as a viable alternative to fossil fuel derived energy. As costs become more competitive and state and federal policy support ramps up, demand for solar energy continues to increase. A recent survey revealed there are Minnesota companies currently participating in the solar manufacturing sector and there are several others that are poised to enter the sector.

This event is designed to convene those manufacturers to support and participate in the further development of the Minnesota solar supply chain. The two-hour roundtable will feature a guest speaker addressing the current and expected market dynamics of this industry and time to compare notes and discuss opportunities for Minnesota manufacturers to participate in the solar industry supply chain.

When: December 14, 2010
Time: 10:30 am* – 12:30 pm*
Where: Minnesota Department of Employment and Economic Development
332 Minnesota Street, St. Paul
*Informal networking 30 minutes before and after the event.
Registration opens at 10:00 am.
Cost: Cost: \$25 (lunch included)
Checks (sorry, no credit cards) should be made payable to “DEED” and sent to:
Ms. Mary Babaya
MN Dept of Employment and Economic Development
332 Minnesota Street, Suite E200
St. Paul, MN 55101
OR Pay at the door (cash or check)
RSVP: by 5:00 pm on Friday, December 10, 2010. RSVP to Mary Babaya at 651/259-7434 or Mary.Babaya@state.mn.us. Please include your name, title, company and contact information, including e-mail address.

In partnership with:
Minnesota Department of Commerce, Office of Energy Security,
Minnesota Solar Energy Industry Association, Biobusiness Alliance of Minnesota,
Minnesota Renewable Energy Marketplace, and Blue Green Alliance

Questions?
Kari Howe, Renewable Energy and Clean Technology Specialist
Department of Employment and Economic Development
Direct: 218-755-4478 • Cell: 218-766-5282 or Kari.Howe@state.mn.us

www.PositivelyMinnesota.com

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So how does the much larger market for solar in the private Commercial and Industrial (C&I) Sector Grow? PACE



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Solar - Minnesota's Jobs Engine

- ❑ Family Supporting Jobs Now
- ❑ Jobs Grow Across the State
- ❑ Energy Independence Adds Jobs
- ❑ SES Makes Minnesota an Investment Target
- ❑ New Reliable Grid and More Solar Jobs

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Good Paying Jobs All Over Minnesota – Jobs that support families:

- ❑ Installing solar projects;
- ❑ Designing and engineering solar products;
- ❑ Manufacturing materials, equipment, and components;
- ❑ Training solar professionals; and
- ❑ Developing and financing projects



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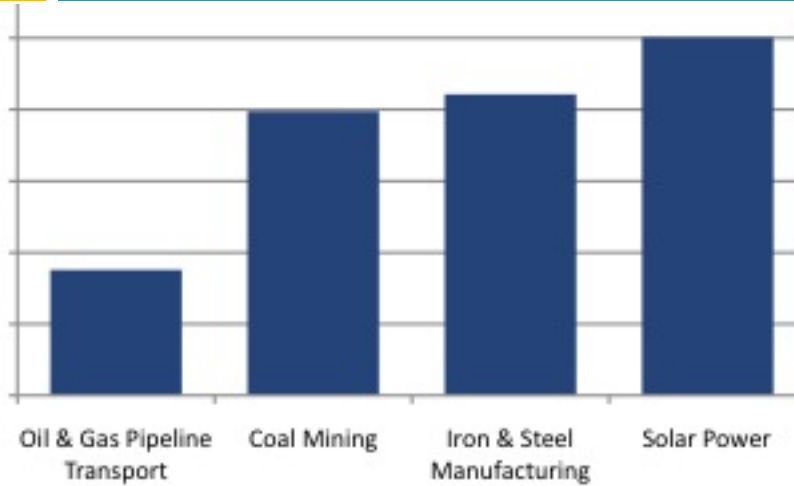


Lots of Jobs

- **At least 3,000 family wage jobs (most manufacturing) thru 2020 with 58 MW of Solar each year** (DOE's National Renewable Energy Lab's Jobs and Economic Development Impacts (JEDI) calculator).
- **14.1 jobs per \$1M invested is created by solar** compared to 5.3 jobs for fossil fuel energy development (Political Economy Research Institute - PERI at the University of Massachusetts)
- **Inclusion:** The solar industry creates job across all skill and educational levels, with significant opportunity for workers with lower skill and education credentials. (PERI)

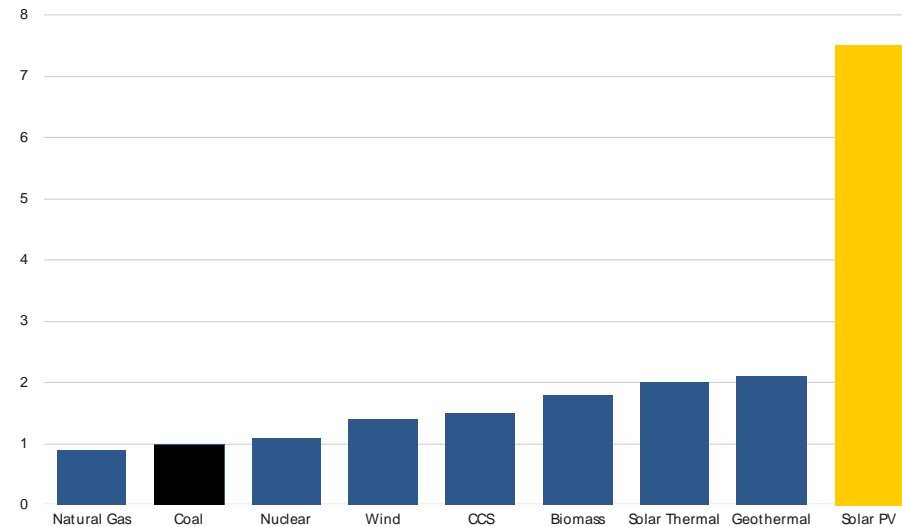


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100,237 Americans work in solar today

Solar employment grew 6.8% while the general economy grew 0.7%



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Minnesota's Environmental Community

- Environment Minnesota, Sierra Club, Fresh Energy and others
- Selected by MN Environmental Partnership as a priority issue in 2011 and 2012
- Membership audience of nearly 500,000 Minnesotans
- Long legacy of successful environmental and clean energy policies

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How Environmental Organizations are Helping

- Grassroots mobilization to support lobbying and outreach efforts
- Access to professional lobbyists and communications staff
- Technical expertise
- Positive branding and additional credibility for the coalition

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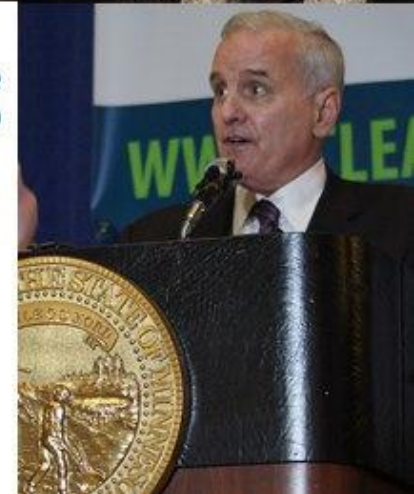


Governor Dayton...Clean Energy Champion



"We owe it to ourselves, we owe it to our children, and we owe it to our grandchildren to look for ecologically sustainable, environmentally renewable sources of energy, and if we put our ingenuity together, we'll find it."

- Governor Mark Dayton



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What's next for the coalition?

- Solar Works for Minnesota
 - ▣ Celebrating and promoting our successes
 - ▣ Community solar projects already underway
 - ▣ Expand participation and access for rural communities to use solar
- Clean Energy & Jobs Campaign
 - ▣ Expand Minnesota's Renewable Energy Standard to 40% by 2050

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