

## **Minnesota Clean Energy Supply Chain Businesses:**

Good for Jobs, Good for Economic Growth, and Good for Our Environment









## **Minnesota's Clean Energy Supply Chain**

## **Report Findings At A Glance:**

The Environmental Law & Policy Center identified 241 companies in Minnesota's clean energy industry supply chain in the summer of 2020. Many companies serve both the solar and wind sectors, and some perform multiple roles supporting the growing clean energy economy. The numbers below incorporate that overlap of services.



**204** Minnesota companies are engaged in the **solar** energy industry supply chain.



130 Minnesota companies are engaged in the wind energy industry supply chain.

#### Minnesota clean energy businesses play a wide range of roles in the supply chain, including:



**84** Manufacturers that build or assemble clean energy equipment or key components for solar energy, wind power, and/or energy storage.



**119** Developers/Designers/Contractors/Installers that install, maintain, or repair clean energy equipment and physical systems.



**141** Professional Services/Other that provide essential services to clean energy deployment, including design, finance, legal, insurance, tax, communications, and marketing; also includes alternative retail electric suppliers.

### **Top-Line Recommendations:**

Smart policies, technological innovations, and declining costs are accelerating Minnesota's renewable energy economy. To ensure continued equitable growth in the clean energy sector, Minnesota should adopt policies to:

- 1. Accelerate the transition to renewable energy by enhancing the utility planning process to replace retiring coal and gas plants with wind, solar, and energy storage projects. Responsibly designed wind and solar projects can provide multiple environmental benefits, such as pollinator habitat and water pollution buffers.
- 2. Support clean distributed energy resources by improving the implementation of Minnesota's interconnection standards, strengthening deployment of distributed energy resources (DERs) in utility planning processes, and improving DER compensation by fulling implementing state and federal law.
- 3. Promote equity in utility grid planning and investment by supporting programs to make solar more accessible to lower-income families, improving Xcel's community solar and Solar\*Rewards programs, clarifying the legality of third-party financing tools, and improving utility distribution plans to enhance transparency and equity.

## **Table of Contents**

Minnesota's Clean Energy Economy	. 1
Clean Energy Policy Landscape	. 3
Recommendations & Next Steps	6
Clean Energy Sector Spotlights	12
Solar Energy	13
Wind Energy	17
2020 Minnesota Clean Energy Business Directory	21

#### **Authors**

Brad Klein

Lena G. Reynolds

Lucas Stephens

#### **Contributors**

Paul Dailing

Rebecca Lazer

**Howard Learner** 

Mary McClelland

Andy Olsen

Ariel Salmon

Scott Strand

#### **Interns**

Defne Aksel

**Daniel Kiefus** 

Abby Kremer

Cora Lutes

**Evan Williams** 

### **Designer**

Steve Connell

#### **Data providers**

Clean Energy Project Builder

Clean Jobs Midwest

**Energy Sage** 

Fresh Energy

Green-e Certified Resources

Institute for Local Self Reliance (LSR)

Minnesota Center for Environmental

Advocacy (MCEA)

Minnesota Commerce Department Division

of Energy Resources

**Momentum Technologies Energy** 

**Source Guides** 

SolarWorld Directory

Solar Energy Industries Associates (SEIA)

Vote Solar

<sup>©</sup> October 2020. All rights reserved. Full reproduction permitted. This report is available at ELPC.org. ELPC requests acknowledgement, in print, on any information or excerpts reproduced in another publication. Important: The information contained in this document is for general guidance only, and with the understanding that ELPC is not providing any specific legal, accounting, tax, or other professional advice.

## **Minnesota's Clean Energy Economy**

Clean energy business growth makes Minnesota's economy more sustainable. This report highlights 241 companies that are accelerating solar energy and wind power in Minnesota.

The growing clean energy economy encompasses companies and communities of many types across Minnesota. In this report, we focus on wind and solar power in particular, although Minnesota's clean energy economy also includes jobs in geothermal energy, hydroelectric power, energy efficiency, and other related industries and services. Many companies perform multiple roles in both the wind and solar industries, and many also overlap roles with the wider interconnected clean energy economy.

Solar energy and wind power businesses are located in all 8 U.S. House districts, in 100 of the 134 State House districts, and in 63 of the 67 State Senate districts. Renewable energy supports jobs in multiple industries while helping to reduce pollution. Communities in rural, suburban, and urban areas all benefit when local businesses supply the growing clean energy markets, and we all benefit from improvements to environmental quality and public health. According to Clean Jobs Midwest, wind and solar businesses employed about 7,297 Minnesota workers at the end of 2019. Since then, the COVID-19 pandemic and resultant economic crisis have been damaging for many Minnesota businesses, including renewable energy companies. Strong state and federal support are necessary to revive these jobs, so Minnesota does not lose momentum on the path to a clean energy future.

> "Minnesota's 25% by 2025 renewable energy standard will be met five years early"

Clean energy supply chain businesses include:

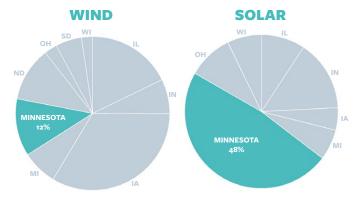
**Manufacturers:** Companies that build or assemble clean energy equipment or key components for solar power and wind energy.

Developers/Designers/Contractors/Installers: Companies that initiate, design, or coordinate clean energy projects, including architectural and engineering design and technical consultants. They install, maintain, or repair clean energy

equipment and physical systems.

**Professional Services/Other:** Provide essential professional services to support clean energy deployment, including design, finance, legal, insurance, tax, communications, and marketing.

Minnesota has adopted strong clean energy policies. The state is well ahead of its already aggressive wind power and solar energy targets and is improving the planning processes for the future of its electric grid. Renewable energy supplied approximately one quarter of Minnesota's in-state electricity generation in 2019, with wind coming in at about 20% and solar at almost 3% of the state's net generation. Minnesota's 25% by 2025 renewable energy standard will be met five years early and the state's utilities are establishing more aggressive goals and plans. While most of this renewable energy comes from large utility-scale facilities, continued policy support is necessary to ensure that rooftop solar and other distributed energy resources are not left behind. This report demonstrates the job creation and economic development potential of Minnesota's growing wind and solar energy industries.



#### **Minnesota compared to rest of Midwest**

Minnesota is a clean energy leader in the Midwest and nationally. The state ranks 7th nationally and 3rd regionally for installed wind power, with more than 3500 MW online, according to the American Wind Energy Association. Solar energy is growing quickly as well, with 1428 MW installed as of Q2 2020, according to the Solar Energy Industries Association soon to join the American Clean Power Association. This makes Minnesota #1 in the Midwest for installed solar energy.

Our nation is shifting away from fossil fuels. A high carbon footprint is becoming an economic liability, as companies respond to growing consumer demand to reduce global warming pollution. Major Minnesota companies have adopted strong goals to slash carbon pollution from their operations, including Target, Cargill, Best Buy, and General Mills. By embracing sustainability, these companies can both provide a safer environment and meet growing market demand for products with a low carbon footprint.

With legislative and regulatory policy leadership, a carbon-lean economy is possible statewide. Minnesota does not have its own coal and natural gas resources, so burning these fossil fuels sends energy dollars out of state to import these resources. Growing in-state renewable energy makes Minnesota more energy independent and economically resilient.

Minnesota has done well by the wind and solar supply chain. The good news is that Minnesota can do even better and enjoy even more jobs and business by adopting better, proven policies. A robust and stable policy framework will accelerate solar energy, battery storage, and wind power resources.



Minnesota Native Landscapes, Otsego.

## **Clean Energy Policy Landscape**

Strong supportive federal and state policies are vital to encouraging investment in clean energy industries, thereby creating jobs, economic growth, and environmental benefits.

#### Minnesota's Current Policies & Programs -

Minnesota's clean energy policy leadership is driving significant wind and solar industry growth and providing a good model for other states to follow.

• Renewable Energy Standard – Minnesota's renewable energy standards require all Minnesota utilities, including municipal power agencies and rural electric cooperatives, to generate 25% of their retail energy sales from renewable energy resources by 2025. Investorowned utilities must also provide an additional 1.5% of solar energy resources by 2020. Xcel Energy, the state's largest utility, not only has to meet the 1.5% solar mandate, but must achieve 30% of its retail energy sales coming from

renewables by 2020. All of these targets either have already been met or are easily within reach for the state's utilities. Xcel Energy has announced a plan to reduce carbon emissions more than 80% by 2030 and to deliver 100% carbon-free electricity (consisting of renewables and nuclear power) by 2050.

• Community solar – Shared solar projects allow multiple electric customers to own or subscribe to a shared solar project and receive credit for the energy it produces. Minnesota adopted a strong statewide community solar policy in 2013. It is now the U.S. leader for installed community solar capacity, with more than 700 MW installed across nearly 300 statewide community solar gardens. Minnesota's policy is uncapped, meaning that developers are not



Juhl Energy, Chanhassen.

- subject to an upper limit on program capacity. Subscribers to community solar gardens receive a bill credit based on the value of solar energy to the grid and society.
- Interconnection Standards When distributed energy resources like solar panels and batteries are connected to the energy grid, utilities require various steps to ensure a safe and reliable grid. A streamlined process can make this process easier, while difficult bureaucratic paperwork makes it more expensive and difficult to complete renewable energy installations. In 2018, Minnesota adopted sweeping updates to its early-2000's vintage interconnection standards. The standards are greatly improved and contain several innovations to streamline the interconnection process for smaller rooftop solar systems, among other best practices. There is still room for improvement, though, as solar installers are still reporting delays in the interconnection process.
- Net Metering and "Value of Solar" Net metering allows customers with distributed energy systems to receive a credit for any excess energy supplied to the public grid, effectively running their meter backward. To qualify for net metering in Minnesota, projects must be less than 1 MW for investor-owned utilities and less than 40 kW at municipal utilities and rural electric co-ops. In 2014, Minnesota became the first state to approve a statewide "value of solar" methodology that utilities could use instead of net metering. The methodology quantifies the value of operating distributed solar generation systems interconnected to the grid to the utility, its customers, and society. To date, no eligible utility has voluntarily implemented a valueof-solar tariff, but Minnesota regulators have required Xcel Energy to offer a value of solar-based credit for subscribers to their community solar program.

Distribution Grid Modernization Planning

 Minnesota utilities, including Xcel Energy, are required to file Integrated Distribution
 Plans (DPI), which describe the utilities' plans for investing in and modernizing their distribution systems to meet medium-term needs. A modernized grid and transparent distribution planning process can, over time, enable Minnesota to meet its energy policy goals by promoting the integration of variable renewable and distributed energy resources to optimize value. An integrated, modern grid would improve system efficiency, flexibility,

and reliability. It would also enable clean energy

innovation by providing customers with the necessary information and tools to integrate

clean energy into their energy choices.

- Third-Party Financing of Distributed Generation

  Installing solar panels or other on-site energy generation has an up front cost, but it often saves people money in the long run. Using third-party financing arrangements such as power purchase agreements (PPAs) and leases can help stretch out these costs, just like one might finance a car or a house and pay it over time. Despite supportive case law and background legal principles, Minnesota policymakers and courts have not yet conclusively ruled on the legality of third-party financing options in Minnesota. This policy ambiguity is creating uncertainty and risk for customers and installers in Minnesota.
- Pollinator-Friendly Solar Standards Minnesota
  was the first state to establish science-based
  standards in 2016 to encourage development
  of pollinator-friendly solar. Solar projects that
  claim these benefits must follow the Minnesota
  Habitat Assessment scorecard. Flowering plants
  provide habitat for important pollinators, while
  deep-rooted prairie plants build healthy soils
  and reduce stormwater runoff that thereby
  increases water quality and reduces flooding.

#### **Federal Policies**

Federal policies also provide important support for clean energy growth in Minnesota. The imminent ramp-down and expiration of federal renewable energy tax credits could slow development. Extended renewable energy tax credits and strong complementary policies would greatly benefit the economy in Minnesota and the Midwest.

#### **Federal Tax Credits**

**Production Tax Credit (PTC)** – Prior to 2017, the PTC provided a credit of 2.3 cents per kilowatt-hour for wind power projects. The funds would be paid over time as the wind project produces electricity. PTC funds have been ramping down since then, and are due to expire this year, so this option will no longer be available to developers in 2021 unless federal policy changes. The PTC has provided vital foundation funding for the now-booming wind industry.

**Investment Tax Credit (ITC)** – The ITC offers an immediate tax credit equal to 30% of the expenditures for commercial solar energy and small wind energy projects. This tax credit is received as soon as the project starts operation. The credit ramps down to 26% in 2020 and 22% in 2021. Thereafter, the credit is expected to decrease to 10%.

**Residential Renewable Energy Tax Credit** – Originally, homeowners could receive a personal income tax credit for up to 30% of the cost of solar thermal or photovoltaic systems (100 kw or less) installed on their residence. This credit decreased to 26% in 2020, and it is expected to decrease to 22% in 2021 and then expire.

Rural Energy for America Program – The Rural Energy for America Program (REAP), part of the federal Farm Bill, drives renewable energy and energy efficiency investments for agricultural producers and rural small businesses in Minnesota and nationally. REAP provides competitive grants and loan guarantees to cost-share purchase of renewable energy systems and to make energy efficiency improvements. It also supports energy audits and technical assistance. REAP received strong bipartisan support in the 2018 Farm Bill. As of 2019, Minnesota farmers and rural small businesses have received over \$48 million in REAP grants and about \$90 million worth of loan guarantees, leveraging nearly \$388 million in private investment.



Redwind Renewables, Eden prairie.

## **Recommendations & Next Steps**

Minnesota businesses and workers have benefited from strong state policies and clean energy leadership. However, there is still room for improvement. Advanced policies can further accelerate Minnesota's clean energy markets, which will be good for economic growth and good for the environment, while also diversifying the state's generation mix and promoting equity. The following eight policy recommendations fall into three overarching categories: (1) Grow large-scale renewable energy generation projects in responsible ways; (2) Support "distributed energy resources" (DERs), including wind, solar, battery storage, and energy efficiency; and (3) Promote equity in utility grid planning and investment. Together, these recommendations lay out a strategic approach for Minnesota to promote a clean, equitable, competitive, and economically vibrant future.

#### Grow large-scale renewable energy responsibly:

- 1. Replace retiring coal and gas generation with renewables and storage.
- 2. Ensure consideration of land use, water quality, and pollinator habitat when siting and planning large energy projects.

#### Support clean distributed energy resources (DERs):

- 3. Improve interconnection implementation.
- 4. Strengthen consideration of DERs in utility planning processes.
- 5. Improve DER compensation by properly implementing the Public Utility Regulatory Policies Act (PURPA) and Minnesota's Distributed Generation (DG) Tariff.

#### Promote equity in utility grid planning and investment:

- 6. Support policies and programs that make solar more accessible to lower-income families.
- 7. Clarify that third-party PPA financing is legal.
- 8. Continue improving Integrated Distribution Plan (IDP) processes to enhance transparency and equity.

## Recommendation 1: Replace retiring coal and gas generation with renewables and storage.

Xcel Energy and Great River Energy (GRE) have both announced plans to exit coal generation, by closing facilities such as Xcel's "Sherco" coal plant in Becker and GRE's massive Coal Creek plant in North Dakota. State regulators must ensure a full and fair consideration of wind, solar, battery storage, energy efficiency, and other distributed energy resources (DERs) to replace this retiring coal capacity. DERs offer a wise alternative to large investments in new natural gas plants that will produce carbon pollution and could lead to stranded costs for consumers. The Minnesota

Public Utilities Commission (PUC) will address these questions in Xcel Energy's next Integrated Resource Plan, which Xcel will file later this year.

## Recommendation 2: Ensure consideration of land use, water quality, and pollinator habitat when siting and planning large energy projects.

Minnesota's transition from large, polluting, central-station power plants to wind and solar projects presents opportunities to design and locate these new renewable energy facilities in a manner that is compatible with the natural landscape and creates environmental co-benefits. For example, wildflower prairie gardens support the pollinator

habitat, and water pollution buffers can reduce runoff into Minnesota lakes and streams. State policymakers should ensure that the siting and planning process for renewable energy facilities includes appropriate consideration of these cobenefits to create a "race-to-the-top" for project design and siting.

## Recommendation 3: Improve interconnection implementation.

Utility customers need an interconnection agreement from the electric utility in order to install and energize new solar, wind, or other "distributed generation" projects. Thus, the interconnection process is where the "rubber hits the road" for customer-owned energy generation. Minnesota recently adopted new statewide interconnection standards to update and modernize the state's interconnection process, but project developers are still facing obstacles related to utility implementation of the new rules, including significant delays and missed deadlines that are holding up project development. Interconnection standards only work if the state is willing to enforce them. The Minnesota PUC should scrutinize utility compliance with Minnesota's interconnection requirements and consider appropriate penalties if necessary. At a minimum, customer complaints related to the interconnection process should be counted against the utilities' Quality of Service Plan (QSP) which is used by the PUC to determine appropriate utility penalties.

## Recommendation 4: Strengthen consideration of DERs in utility planning processes.

State law requires electric utilities to develop and file long-term plans describing how the utility intends to develop its generation and distribution infrastructure to meet the public's long-term need for electricity. Historically, the utilities have not fully considered the role of distributed energy resources (DERs) like distributed solar generation, energy storage, energy efficiency, and demand response technologies. Instead of modeling these new

technologies as utility resources (like traditional generating plants), utilities have typically just used crude forecasts to model customer-generation as a reduction in customer demand. That outdated approach fails to capture the unique value of DERs as real generation and distribution resources. Strategically deployed DERs can also help utilities to avoid or defer the need for investment in new poles, wires, transformers, and other traditional utility infrastructure. State regulators must ensure that utilities are using advanced modeling tools to capture the full value of DER in upcoming "integrated resource planning" and "integrated distribution planning" cases in Minnesota.

#### Recommendation 5: Improve DER compensation by properly implementing PURPA and Minnesota's DG Tariff.

State and federal law require electric utilities to purchase the energy generated and supplied by qualified customer-generation at transparent, fair prices that reflect the utility's "avoided cost." These laws—derived from the federal Public Utility Regulatory Policies Act (PURPA)—have been largely neglected in Minnesota, but there are new opportunities to revitalize compliance. The Minnesota PUC recently announced a new process to examine utility Distributed Generation Tariffs (DG Tariffs) for compliance with state and federal law. At the same time, Minnesota courts are considering measures necessary to enhance the transparency of utility "avoided cost" data required by PURPA. State policymakers should ensure that Minnesota utilities improve their policies so that all customers have an opportunity to generate and sell renewable energy to their utility at transparent and fair prices.

## Recommendation 6: Support policies and programs that make solar more accessible to lower-income families.

Pollution from electric power generation has had a disproportionate impact on lowerincome communities and communities of color. Minnesota's transition to a clean energy future should include intentional policy designs to address these disproportionate impacts and ensure an equitable energy economy for all of Minnesota's citizens. Xcel Energy's Community Solar and Income-Qualified Solar\*Rewards programs enable renters and residents of multi-family buildings to subscribe and directly benefit from low-cost solar generation by providing incentives specifically designed to overcome barriers faced by lowincome households. However, state policymakers should explore other avenues to further enable robust low-income access to the benefits of solar energy in Minnesota. For example, Xcel Energy should continue work to enhance the incomequalified side of its Solar\*Rewards program to ease challenges around eligibility and increase participation of low-income residential customers. In addition, financing small/low-income projects remains a challenge and the state should consider steps to enhance financing and thereby unlock project development, such as the establishment of a green bank.

## Recommendation 7: Clarify that third-party PPA financing is legal.

On-site solar has become a very good long-term investment, but the upfront cost to purchase and install new solar panels remains a barrier to widespread solar deployment, especially for lowerincome families. Third-party financing models using power purchase agreements (PPAs) or equipment leases are good options for customers that want to spread the upfront cost of a solar project across several years. This model is particularly important for nonprofits, municipal governments, and individuals who cannot take direct advantage of federal tax credits for renewable energy investment. Despite some examples of third-party ownership models in Minnesota and favorable utility law precedent, state policymakers and courts have not yet conclusively ruled on the legality of thirdparty PPA financing in Minnesota. As a result, the market is somewhat uncertain, and developers have been discouraged from offering third-party

options to their customers. The state legislature or PUC should clarify that third-party financing is legal and does not subject the third-party owner of distributed generation to regulation as a "public utility."

## Recommendation 8: Continue improving utility distribution planning to enhance transparency and equity.

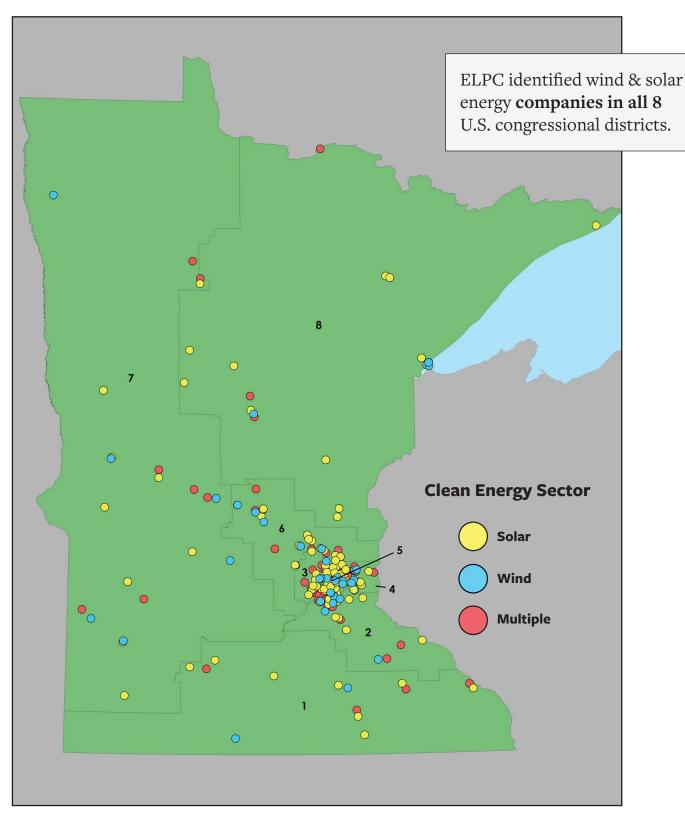
Minnesota has made recent progress to improve the way utilities plan and develop the wires, poles, and other distribution infrastructure necessary to serve their customers. In the past, this was mostly done in a "black box" with little transparency into utility investments. Today, Minnesota utilities must file integrated distribution plans (IDPs) that propose and justify future investments. There are opportunities to further improve this process to promote greater transparency and equity. Minnesota utilities can plan for the grid of the future to enable customer access and ownership of distributed energy resources. For instance, utilities do not currently track and report their performance on a locational level which makes it hard to evaluate whether their distribution investments are truly helping customers access clean, safe, and reliable electricity. Strategic distribution planning can enhance access of frontline communities to the benefits of DERs (including community solar, microgrids, targeted energy efficiency, and demand response programs) to democratize access to clean energy, to the grid, and to the benefits of the green economy.



Alexandria Industries, Alexandria

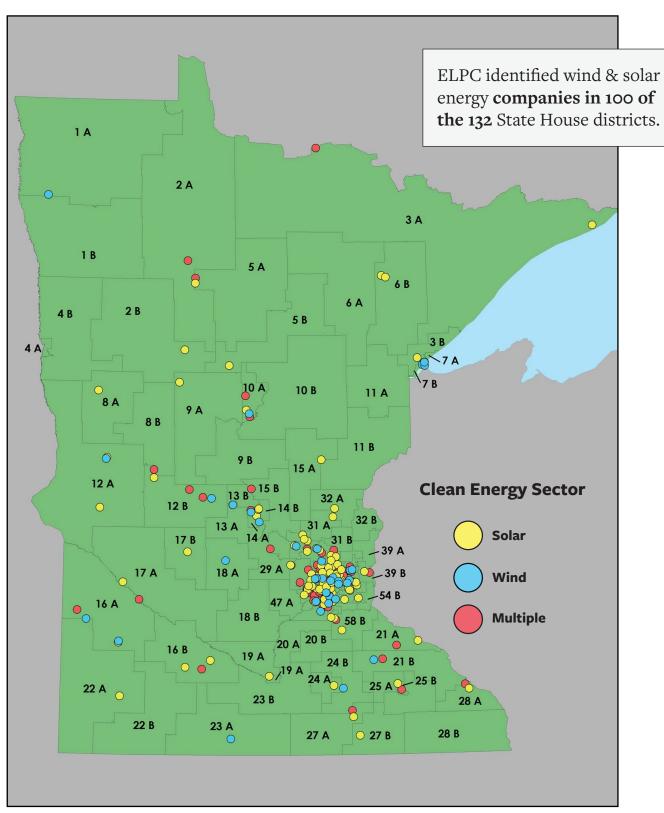
## **Minnesota Wind & Solar Energy Companies**

(U.S. Congressional Districts)

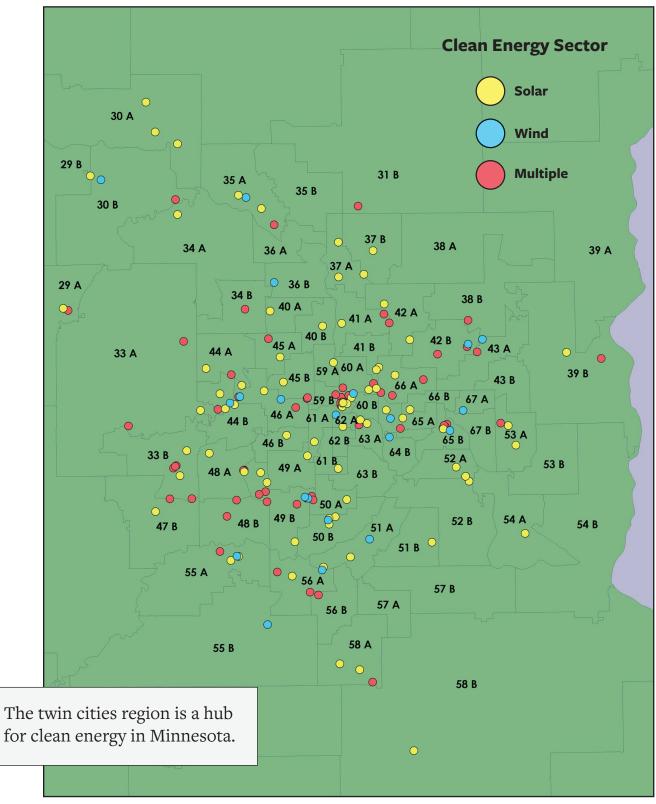


## **Minnesota Wind & Solar Energy Companies**

(State House Districts)



# Minneapolis/St. Paul Wind & Solar Energy Companies (State House Districts)





## Clean Energy Sector Spotlights: Solar Energy

Solar energy is accelerating across Minnesota. The Environmental Law & Policy Center identified 204 businesses engaged in the solar energy supply chain across the state, as of August 2020. Solar projects range from small residential installations to utility-scale arrays. According to Clean Jobs Midwest, the solar industry employed 4,927 Minnesotans at the end of 2019. Many solar companies were hit hard this spring amid the coronavirus pandemic. Things are starting to look up again, but supportive state and federal policies would help to prevent this important industry from losing momentum.

Many electrical and construction companies have added solar power installation to their service offerings, providing new opportunities for existing companies. Minnesota has several training programs to provide education for renewable energy installation and operations, such as Minnesota

State, The University of Minnesota, Fond Du Lac Tribal & Community College, Minnesota West CTC, and several other schools. These educational institutions understand that the growing Minnesota solar energy industry creates jobs.

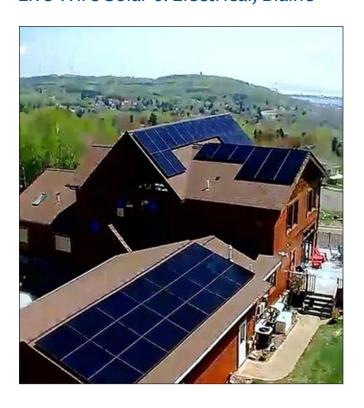
Minnesota is a solar leader among Midwestern states with 1428 MW of installed solar capacity in 2020. Solar energy currently supplies about 3% of the state's energy mix, and the solar industry is growing rapidly. With a strong emphasis on pollinator-friendly planting, many solar farms provide rich habitat for birds, bees, and wildflowers. In addition to large utility-scale solar, there are also many companies and organizations working to expand distributed energy resources and improve energy equity across the state with rooftop panels and shared community solar installations.



Connexus Energy, Ramsey.

## **Solar Energy Company Profiles**

#### Live Wire Solar & Electrical, Blaine



"Our team is mostly outdoorsmen, which is common in Minnesota. We fish, we hunt, we've got kids, we understand the impact of energy on the environment. We know renewable energy is important for the future of the planet." – *Mark Brinkman, Sales Manager* 

Livewire Solar and Electrical is a company of 25 employees, combining electrical and solar expertise for customers across the upper Midwest. Originally founded as an electrical company in 2000, Livewire joined the renewable energy sector in 2008 by merging with Solarized. Today, they have a strong contingent of electricians available at all times, while diversifying the business with renewable energy. Currently, they're doing both the electrical and solar work on a new LEED certified building for a repeat customer, where even the elevators in the building run on regenerative electricity. Livewire completes about 40 to 50 installations a year, primarily residential jobs around 10-12kW.

## Minnesota Native Landscapes, Otsego

"A lot of people talk about the triple bottom-line philosophy; these guys live it. We've been doing it for over 20 years, healing the earth and providing ecological restoration, and renewable energy is a natural fit for that." – *Tom Karas*, *Business Development* 

Minnesota Native Landscapes (MNL) is an ecological restoration company based in Otsego with a specialization in prairie landscaping for solar installations. Founded in 1998, the company branched into the renewable energy industry in 2013, and it has since become nearly a third of the business. MNL has 100+ employees today, with projects in Minnesota, Nebraska, North Dakota, Illinois, Wisconsin, and Colorado. Staff work on about 200 utility-scale solar arrays each year, in planning, installation, and vegetation management. An established solar prairie ecosystem supports



pollinators, improves carbon sequestration, and improves stormwater management, while reducing erosion and energy maintenance costs. Staff manage a herd of 1000+ sheep to graze 2000 acres of solar projects and provide meat for the local community. MNL also does prescribed burning, dam removal, and stream bank restoration.

#### Ecolibrium3, Duluth



"We're looking to expand solar access, not just for people who can afford it, but for folks who could stand to benefit most." – *Lucas Giese*, *Low-Income Utility Partnership VISTA* 

Ecolibrium3 is a community-focused nonprofit organization working toward energy equity and community resilience throughout Northern Minnesota. They provide energy audits and weatherization services, as well as renewable solar projects, solar development, and policy change. They are constructing a 40kw community solar garden in their neighborhood of Lincoln Park, which will support the Minnesota Assistance Council for Veterans and an emergency energy fund for low-income customers facing utility disconnection.

### RREAL and REAL Solar, Backus

"Giving a family ownership of an energy system is empowering and saves them money on energy bills. We are committed to high-quality top-tier work, to support our clients every step of the way." – *Kyle Tschida*, *Office Manager* 

REAL Solar, SBC is the design-build subsidiary of the Rural Renewable Energy Alliance (RREAL), a nonprofit organization committed to "making solar energy accessible to people of all income levels." As RREAL's preferred contractor, REAL Solar has assisted on projects like Solar for Schools, Skip the Grid, and Habitat for Humanity, among others. REAL started as a solar installation program of the nonprofit in 2000, before becoming a self-standing company in 2014. Since then, the company has designed and constructed over 3.3MW of solar PV in the residential, commercial, off-grid, utility, and government markets. Most arrays range from 5 to 50 kW, with some as large as the recent 808 kW array at the Pine River Backus High School. In 2019, the company of 12 employees completed 27 projects for a total of 937 kW of solar PV.

## Ecos Energy, Minneapolis

"We're motivated by climate change, it's as simple as that. Clean energy is an important tool in the fight against climate change." – *Chris Little*, *Director of Development* 

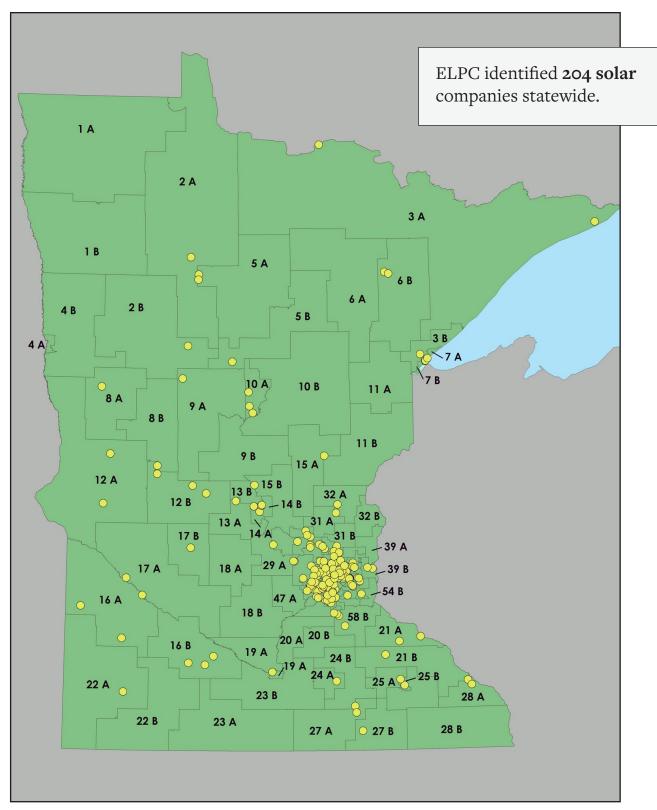
Ecos Energy is a Minnesota-based solar energy developer with a coast-to-coast reach, founded in 2011. The company's first installation was the 2MW Slayton solar farm built in partnership with Xcel, the largest in Minnesota at the time. Since then, the team of seven has also done installations in California, Connecticut, Vermont,



and Massachusetts. Ecos works primarily at the utility-scale distribution level, developing projects as small as 500kw and as large as 4.5MW, providing affordable energy to municipalities. Ecos has maintained safe operations amidst COVID-19.

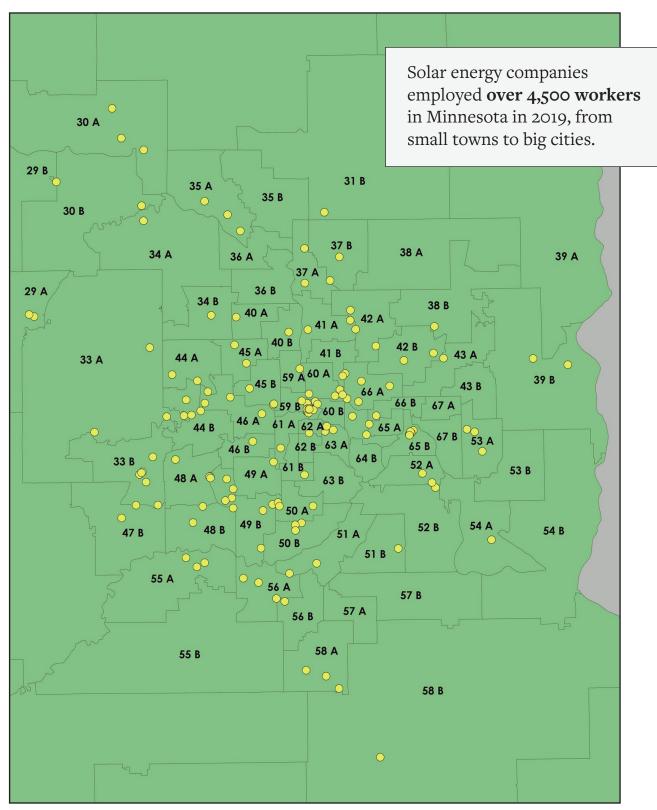
## **Minnesota Solar Energy Companies**

(State House Districts)



## Minneapolis/St. Paul Solar Energy Companies

(State House Districts)





## Clean Energy Sector Spotlights: Wind Energy

The Environmental Law & Policy Center identified 130 businesses engaged in the wind energy industry in Wisconsin, as of August 2020. According to Clean Jobs Midwest, businesses in wind energy employed more than 2,352 workers in Minnesota by the end of 2019. Many renewable energy companies were hit hard by the coronavirus pandemic and resulting economic crisis in 2020. Things are starting to look up again, but supportive state and federal policies would help to prevent this important industry from losing momentum.

These companies span a wide range of activities and functions, serving projects in Minnesota, other states, and abroad. Project developers identify viable site locations and coordinate project design and business structure for utility-scale and smaller wind installations. Engineering firms work on site investigation, design tower installations, and other infrastructure, often helping to plan logistics and oversee construction progress. Manufacturing companies produce everything from turbines and towers to adhesives and mechanical gears, all supporting the growing wind industry.

Wind power supplies about 20% of Minnesota's energy mix today. From small businesses and everyday residents to rural electric cooperatives and the state's largest utilities, wind is recognized as a cost-effective source of energy.



Redwind Renewables, Eden Prairie.

## **Wind Energy Company Profiles**

### RedWind Renewables, Eden Prairie



"Development is like a six-legged stool; we need land, permitting, environmental review, interconnection, offtake, and resource assessment to support a good project." - Daniel Rustowicz, Chief Executive Officer

RedWindRenewables is a renewable energy developer with close to 17 years of experience working on wind, solar, and battery storage projects, based in the Minneapolis area. Since 2017, the company has specialized primarily in utility-scale developments, generally larger than 75 MW. The team also offers advisory and strategic consulting services.

In addition to its home state of Minnesota, RedWind has originated and/or contributed to wind projects in South Dakota and Montana, as well as solar projects stretching from Nevada to West Virginia, and many states in between. Since 2008, RedWind has developed and consulted on over \$2.5 billion of renewable energy projects.

### Juhl Energy, Chanhassen

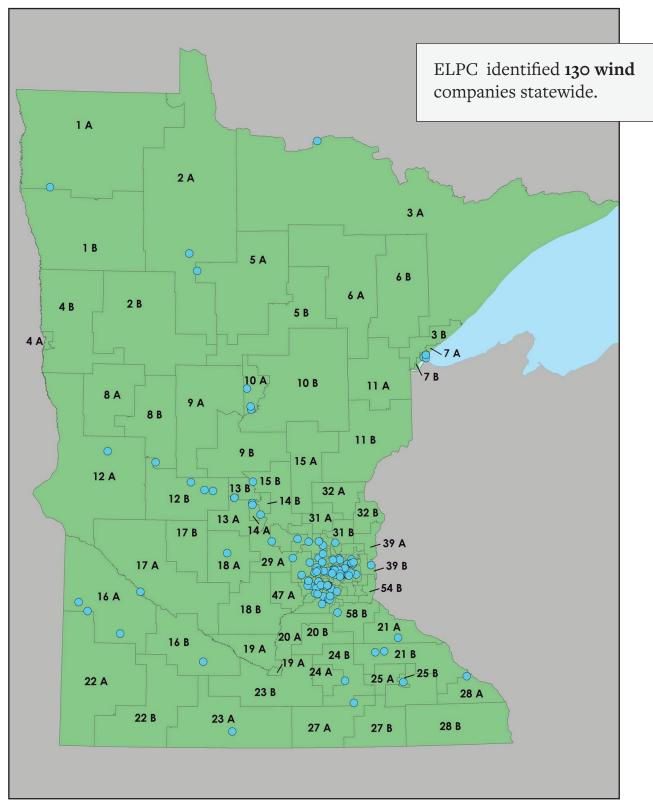
"Distributed Renewables are key to the energy future of the Midwest. The economics are overwhelming... It's jobs, economics, and the environment with no fuel and no waste."- *Dan Juhl, CEO* 

Juhl Energy was founded in 1978 as a family business focused on wind energy. Since then, they have grown into a multifaceted energy company providing wind, solar, biomass, and combined heat power systems for distributed generation. Juhl has innovated multiple times, such as pioneering Community Wind for local ownership. Founder Dan Juhl emphasizes benefits of distributed generation: "no fuel, no emissions, no waste, water use, and no transmission lines." More recently, the company has developed a hybrid wind / solar energy system to cut costs while increasing output and producing power in the day and night. The staff of 25 work on about 4 to 5 projects a year, with offices in Minnesota, Illinois, and Wisconsin.



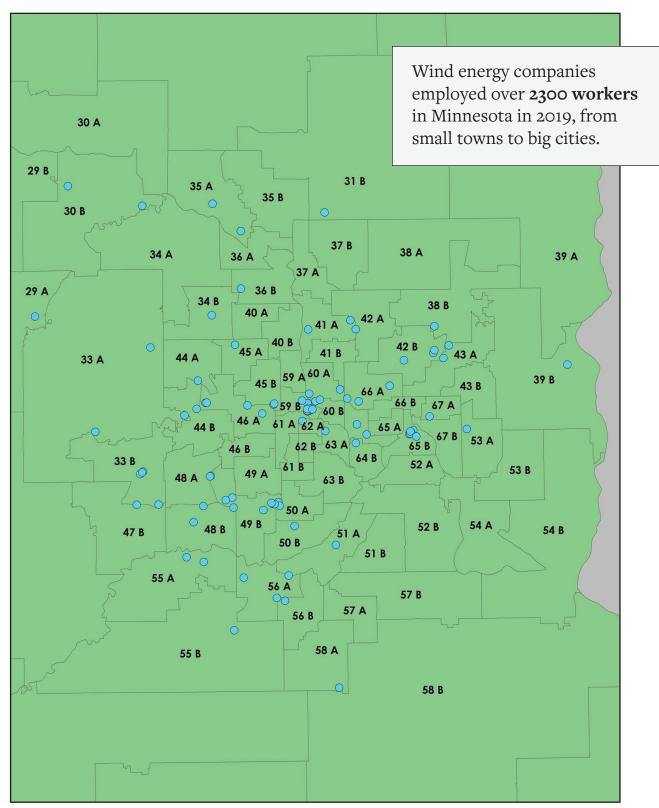
## **Minnesota Wind Energy Companies**

(State House Districts)



## Minneapolis/St. Paul Wind Energy Companies

(State House Districts)



Willinesota Ciea	nnesota Clean Energy Business Directory			COM	TION				
CITY	COMPANY NAME	SOLAR	MIND	MANUFACTURER	CONTRACTOR/	PROFESSIONAL SERVICES/OTHER	US CONGRESSIONAL DISTRICT	MN SENATE DISTRICT	MN HOUSE DISTRICT
Alberta	Amberg Renewable Energy	Х			Х		7	12	12
Alexandria	Runestone Electric Association	Х			Х	Х	7	12	12
Alexandria	Alexandria Industries	Х	Х	Х		Х	7	8	08
Anoka	Apex Efficiency Solutions, SBC	Х	Х		Х	Х	6	35	3!
Anoka	Noble Electric Solutions	Х			Х	Х	6	35	3!
Appleton	SolarAttic	Х			Х	Х	6	30	30
Arden Hills	TruNorth Solar	Х			Х		4	42	42
Austin	Austin Electric, Inc.	Х			Х		1	27	2
Avon	Blattner Energy (and D.H. Blattner and Sons, Inc.)	Х	Х	Х	Х	Х	6	13	13
Avon	Columbia Gear Corporation		Х	X			6	13	13
Backus	Rural Renewable Energy Alliance (RREAL)	Х			Х	Х	8	5	0
Baxter	Stern Companies, Inc.	Х	Х	X			8	10	10
Baxter	Ambor Structures		Х	X			8	10	10
Bemidji	3Suns Research and Development	Х	Х		Х	Х	5	59	59
Bemidji	Beltrami Electric Cooperative, Inc.	Х	Х		Х	Х	7	5	0
Bemidji	Dick's Plumbing & Heating of Bemidji, Inc.	Х			Х		7	5	0
Blaine	Live Wire Electrical Services LLC	Х			Х	Х	6	37	3
Blaine	Power System Engineering, Inc.	X				Х	6	37	3
Blooming Prairie	American Energy, LLC	X			X		1	27	2
Blooming Prairie	Metal Services of Blooming Prairie, Inc.	X	Х	X			1	27	2
Bloomington	Burns & McDonnell	X	Х	X	X	Х	3	49	49
Bloomington	Sensata Technologies	X		X		X	3	49	49
Bloomington	EWT Americas Inc.		Х	X	X		3	49	4
Bloomington	Hunt Electric Corporation	Х			X		3	50	5
Bloomington	Dalsin Industries Inc.	X		X			3	50	50
Bloomington	RDO Integrated Controls	X		X			3	50	5
Brainerd	Crow Wing Power	X			X	X	8	10	10
Brooklyn Park	Würth Industry of North America	A	X	X			3	36	3
Brainerd Lakes area	Dakota Plains Energy	X	X		X	Х	8	10	10
Burnsville	Northern Tool + Equipment	X	X		, , , , , , , , , , , , , , , , , , ,	X	2	56	50
Burnsville	Edge Consulting Engineers, Inc.	Λ	X	X	X	X	2	56	5
Burnsville	Courtney Industrial Battery	X	Λ	X	Λ		2	51	5
Burnsville	LiSEC America, Inc.	X		X			2	51	5:
Cambridge (P.O. Box)	Natural Resource Services	X		^	X	X	8	32	3:
		X	X		X	X	7	16	10
Canby Castle Rock	Duke Energy Renewables Poly-Tex Inc.	X	٨	X	^	X	2	58	58
	Energy Insight, Inc. (Frontier Energy)	X	X	^	v	X	3	47	47
Chanhassen	3, 5 . ( 3,7			V	X	λ	3		+
Chanhassen	Juhl Energy	X	X	X	X		-	33	33
Chaska	Entegris, Inc.	X		X	V		3	47	4
Coon Rapids	Cedar Creek Energy	X			X	V	3	37	37
Cottage Grove	Werner Electric	CLEAN ENE				Х	2	54	54

	n Energy Business Directory	CLEAN ENE	RGY SECTOR	COM	PANY FUNC	TION			_
CITY	COMPANY NAME	SOLAR	MIND	MANUFACTURER	CONTRACTOR/	PROFESSIONAL SERVICES/OTHER	US CONGRESSIONAL DISTRICT	MN SENATE DISTRICT	LOI OIL
Deephaven	Sun Number, LLC	Х				Х	3	33	33
Duluth	Dunham Associates Inc.	Х	Х		Х	Х	8	7	0
Duluth	Minnesota Power (ALLETE)	Х	Х		Х	Х	8	7	0
Duluth	Arrowhead Regional Development Commission (ARDC)	Х	Х			Х	8	7	0
Duluth	Duluth Seaway Port Authority		Х			Х	8	7	0
Duluth	Lake Superior Warehousing Co.		Х			Х	8	7	0
Duluth	Northland Foundation		Х			Х	8	7	0
Duluth	Ecolibrium3	Х				Х	8	7	0
Duluth	Wagner Zaun Architecture.	Х				Х	8	7	0
Duluth	Energy Conservation Products and Services	Х		X	Х		8	7	0
Duluth	Conservation Technologies (Energy Plus)	Х		X			8	3	0
Eagan	SolarPod (previously Mouli Engineering Inc)	Х		X	Х	Х	2	51	5
Eagan	Lovegreen Industrial Services		Х			Х	2	51	5
Eden Prairie	Ameresco	Х	Х		Х	Х	3	48	4
Eden Prairie	Enhanced Home Systems Inc.	Х			Х	Х	3	49	4
Eden Prairie	RedWind Renewables, LLC	Х	Х		Х	Х	3	48	4
Eden Prairie	Boulay	X	Х			Х	3	49	4
Eden Prairie	MTS Systems Corporation	Х	Х			Х	3	48	4
Eden Prairie	EVS, Inc.	X	Х	X	Х		3	49	4
Eden Prairie	TechKnowledge, LLC	Х	Х	X			3	48	4
Elbow Lake	Renewtech, LLC		Х	X		Х	7	12	1
Elbow Lake	Cosmos Enterprises, Inc.	X		X			7	12	1
Elk River	Boe Electrical Contractors, Inc.	X			Х		6	30	3
Elk River	Electrical Solutions & Design Inc.	X			X		6	30	3
Excelsior	Energy Management Solutions, Inc.	X	Х		Х	Х	3	33	3
Excelsior	JJR Power LLC	X	Х		Х	Х	3	33	3
Excelsior	Excelsior Energy Capital	X	Х			Х	3	33	3
Excelsior	Aladdin Solar	X			Х		3	33	3
Fairmont	Bolton & Menk, Inc.		Х			Х	1	23	2
Freeport	Millwood Metalworks, Inc.		Х	X			7	12	1
Golden Valley	Wenck		Х			Х	5	45	4
Goodhue	Knobelsdorff Electric	X	X		Х	Х	2	21	2
Granite Falls	Fagen, Inc.	Х	Х		Х		7	16	1
Ham Lake	Diamond Metal Products, Inc.	X	Х	X			6	31	3
Hovland	Outback Solar Electric	X			Х		8	3	0
International Falls	Create-NRG	X	X			Х	8	3	0
Inver Grove Heights	iSolar	X			X	X	2	52	5
Isanti	Wolf River Electric	X			X		8	32	3
Lake City	Freiers Electric and Alternative Energy	X			X	X	2	21	2
Lakeville	Dragonfly Solar	X			X	,,	2	58	5
Lakeville	Consulting Engineers Group	X	X	X			2	58	5
	-23.000.00 = 1.00.00 0.00 p	CLEAN ENER			IPANY FUNC		<u> </u>		Ľ

miniesota Cle	ean Energy Business Directory	CLEAN ENERGY SECTOR		COMPANY FUNCTION					_
CITY	COMPANY NAME	SOLAR	MIND	MANUFACTURER	CONTRACTOR/	PROFESSIONAL SERVICES/OTHER	US CONGRESSIONAL DISTRICT	MN SENATE DISTRICT	
Lakeville	Despatch Industries	Х		Х			2	58	5
Litchfield	Integrated Power Services		Х			Х	7	18	1
Little Canada	Frattalone Companies, Inc.	Х	Х		Х	Х	4	42	4
Mankato	Schwickert's Tecta America	Х			Х		1	19	1
Maple Grove	Great River Energy (and Wellspring Wind Energy)	Х	Х	X	Х		3	34	3
Maple Lake	MP Nexlevel, LLC.	Х	Х	X			6	29	2
Maplewood	3M Renewable Energy Division	Х	Х	X			4	53	5
Marshall	Hoffman & Brobst, PLLP		Х			Х	7	16	1
Marshall	GreatAmerica Financial Services Corp	Х				Х	7	16	1
Medina	Delve Energy Group, LLC	X	Х		Х	Х	3	33	3
Melrose	Stearns Electric Association	X	X		X	X	7	12	1
Minneapolis	EDF Renewables	X	X		X	X	5	60	1
Minneapolis	Geronimo Energy	X	X		X	X	3	49	1
Minneapolis	Mattson Macdonald Young	X	X		X	X	5	59	- 5
Minneapolis	M.A. Mortenson Company	X	X		X	X	5	45	1
Minneapolis	Olson Energy Corporation	X	X		X	X	5	59	- !
Minneapolis	PEC Solutions (Parsons Electric Company LLC)	X	X		X	X	5	41	+
Minneapolis	Wood	X	X		X	X	5	59	- 1
Minneapolis	Xcel Energy	X	X		X	X	6	29	1
		X	^		X	X	5	45	-
Minneapolis	Apadana Solar Technologies  Ecos Energy LLC	X			X	X	5	59	
Minneapolis								40	2
Minneapolis	Egan Company	X			X	X	3		+
Minneapolis	Forteva Investments	X			X	X	5	49	4
Minneapolis	iDEAL Energies	X			X	X	<u> </u>	61	(
Minneapolis	Powerfully Green	X			X	X	5	60	(
Minneapolis	Premise, Inc.	X			X	X	5	59	
Minneapolis	Ryan Companies US, Inc.	X			X	X	5	59	5
Minneapolis	Terrafore Technologies LLC	X	V		Х	X	5	59	
Minneapolis	Barr Engineering Company	X	X	X		X	3	49	4
Minneapolis	Graco Inc.	X	X	X		X	5	60	1
Minneapolis	IDOM	Х	X	X		X	5	59	
Minneapolis	Donaldson Company, Inc.		Х	X		X	3	50	
Minneapolis	Ziegler CAT	Х		X		Х	3	50	
Minneapolis	Ballard Spahr LLP	X	Х			Х	5	59	- 5
Minneapolis	Bluegreen Alliance Foundation	Х	Х			Х	5	60	- (
Minneapolis	Center for Energy and Environment (CEE)	Х	Х			Х	5	59	
Minneapolis	Clean Energy Economy Minnesota	Х	Х			Х	5	59	
Minneapolis	DROEL, PLLC	Х	Х			Х	3	50	!
Minneapolis	Fredrikson & Byron, P.A.	Х	Х			Х	5	59	
Minneapolis	Midwest Renewable Energy Tracking System (M-RETS)	Х	Х			Х	5	59	!
Minneapolis	Stinson LLP (formerly Stinson Leonard Street)	Х	Χ			Х	5	59	

Milliesula Cle	an Energy Business Directory	CLEAN ENE	RGY SECTOR	COM	PANY FUNC	TION			_
CITY	COMPANY NAME	SOLAR SOLAR	WIND	MANUFACTURER	CONTRACTOR/	PROFESSIONAL Services/Other	US CONGRESSIONAL DISTRICT	MN SENATE DISTRICT	FOR
Minneapolis	Stoel Rives LLP	Х	Х			Х	5	59	59
Minneapolis	The Great Plains Institute for Sustainable Development (GPI)	Х	Х			Х	5	63	63
Minneapolis	Winthrop & Weinstine, P.A.	Х	Х			Х	5	59	59
Minneapolis	WSB	Х	Х			Х	5	46	4
Minneapolis	Jeffrey C. Paulson & Associates		Х			Х	3	49	49
Minneapolis	SRF Consulting Group, Inc.		Х			Х	3	44	44
Minneapolis	Windustry		Х			Х	5	62	62
Minneapolis	Itek Energy	Х				Х	5	63	63
Minneapolis	Meyer Borgman Johnson (MBJ)	Х				Х	5	59	59
Minneapolis	Minnesota Renewable Energy Society (MRES)	Х				Х	5	62	6
Minneapolis	Garlock-French Roofing	X		X	Х		5	63	6
Minneapolis	Project Resources Corporation (PRC Wind)		Х		Х		5	60	6
Minneapolis	Electrical Consulting Solutions (ECS)	Х			Х		5	41	4
Minneapolis	Energy Concepts, Inc.	Х			Х		5	60	6
Minneapolis	Viking Electric	Х			Х		5	60	6
Minneapolis	Zero-Max, Inc.		Х	X			3	46	4
Minneapolis	AlumiPlate Inc.	Х		X			3	37	3
Minneapolis	SolarStone Partners, LLC	Х		X			5	61	6
Minneapolis	TT Electronics (formerly Precision Inc.)	Х		X			5	40	4
Minnesota City	APRS World, LLC	Х	Х	X		Х	1	21	2
Minnetonka	Sambatek, Inc.	Х	X		Х	Х	3	49	4
Minnetonka	Westwood Professional Services	Х	X		X	X	3	49	4
Minnetonka	Blue Horizon Energy	X	^		X	X	3	44	4
Minnetonka	Associated Benefits and Risk Consulting	X				X	3	49	4
Minnetonka	Green Home Doctors, LLC	X				X	3	48	4
Minnetonka	Compar	X		X			3	49	4
Minnetonka	National Renewable Solutions, LLC	X	Х	X	Х		3	33	3
Montevideo	National Microgrid	X			X		7	17	1
Mora	Sun Energy (MN)	X		X	X		8	11	1
Mound	Go Green Energy	X	X		X		3	33	3
Mounds View	Multi-Tech Systems, Inc.	X	^	X	^		4	42	4
Mountain Iron	Heliene	X		X		Х	8	6	0
New Hope	Schneider Electric	X	X			X	5	45	4
New Hope	Straub Design Company	X		X			5	45	4
Otsego	Minnesota Native Landscape	X				Х	6	30	3
Otsego	Bury Companies, Inc.	Α	X	X		Α	6	30	3
Owatonna	Steve's Service Inc.		X	,	X	Х	1	24	2
Owatonna	Steele-Waseca Cooperative Electric	X	A		X	X	1	24	2
Park Rapids	Itasca-Mantrap Cooperative Electrical Association	X			X	X	8	2	
Pelican Rapids	Lake Region Electric Cooperative	X				X	7	8	0
Plymouth	Electro-Mechanical Industries	X	X	X		X	3	46	4
,	Lious modifical industries		RGY SECTOR		IPANY FUNC			+0	

illilesota Cie	ean Energy Business Directory	CLEAN ENER	RGY SECTOR	COMPANY FUNCTION					_
CITY	COMPANY NAME	SOLAR	WIND	MANUFACTURER	CONTRACTOR/	PROFESSIONAL SERVICES/OTHER	US CONGRESSIONAL DISTRICT	MN SENATE DISTRICT	TOIGE DISTRICT
Plymouth	Minnesota Municipal Utilities Association	Х	Х			Х	3	44	44
Plymouth	Borrego Solar	Х			Х		3	46	46
Plymouth	Renewable Solar Resources	Х			Х		3	44	4
Plymouth	ISC Companies	Х		Х			3	46	4
Plymouth	S & K Automation	Х		Х			3	44	4
Porter	SMI & Hydraulics, Inc.		Х	X			7	16	1
Prior Lake	Wind Turbine Industries Corp.		Х	Х			2	55	5
Ramsey	Connexus Energy (SolarWise)	Х			Х	Х	6	35	3
Ramsey	Rotary Systems, Inc.		Х	X			6	35	3
Rice	Simple Solar Designs	Х	Х	X	Х		6	15	1
Rochester	Crenio	Х	X	X			1	25	2
Rochester	Solar Connection	X					1	25	2
Rockford	ERSystems	X		X	X	Х	6	29	2
Rockford	Wright-Hennepin Cooperative Electric Association	X	Х			X	4	65	6
Rogers	Erickson Builders & Co. Inc.	X	^		X	^	3	34	3
Roseville	Solar Farm, LLC	X			X		4	66	6
Saint Anthony	SunShare Community Solar	X			X	Х	5	41	4
Saint Cloud	Bradbury Stamm Construction Inc. (formerly Winkleman Energy Group)	X			X	X	6	14	1
Saint Cloud	St. Cloud Heating and Air Conditioning Inc.	X			X	X	6	14	1
Saint Cloud	ATS Wind Energy Services	^	X		Λ	X	6	14	1
Saint Cloud	Landwehr Construction, Inc.	X	٨		X	^	6	14	1
Saint Cloud Saint Michael	Allied Graphics	X	X	X	^		6	30	3
Saint Michael Saint Paul	· ·	X	X	X	X	X	7	12	+
	Windstrip	^							6
Saint Paul	NextEra Analytics (formerly WindLogics)	V	Х	X	X	X	4	65	+
Saint Paul	Impact Power Solutions (Formerly IPS Solar)	X	V	X	X	X	4	66	6
Saint Paul	45 North Group	X	X		X	X	4	64	6
Saint Paul	Corval Group	X	X		X	X	4	66	6
Saint Paul	KLJ Engineering	X	X		X	X	4	65	6
Saint Paul	All Energy Solar	X			X	X	4	66	6
Saint Paul	Novel Energy Solutions	X	v	.,	Х	X	4	64	6
Saint Paul	Moventas	, ,	X	X		X	4	67	6
Saint Paul	Clean Energy Resource Teams	X	X			X	4	66	6
Saint Paul	GHD	X	X			X	4	41	4
Saint Paul	KFI Engineers	X	Х			Х	4	66	6
Saint Paul	Midwest Renewable Energy Association	Х	Х			Х	4	65	6
Saint Paul	MinnPACE	Х	X			Х	4	65	6
Saint Paul	American Engineering Testing, Inc.		Х			Х	4	64	6
Saint Paul	KidWind Project		Х			Х	4	64	6
Saint Paul	Clean Grid Alliance (Wind On The Wires)	Х				Х	4	65	6
Saint Paul	Ever-Green Energy, LLC	X				Х	4	65	6
Saint Paul	American Resource and Energy (ARE)	Х	Χ	Χ	X		4	65	6

Minnesota Clea	innesota Clean Energy Business Directory		RGY SECTOR	COMPANY FUNCTION					
CITY	COMPANY NAME	SOLAR	MIND	MANUFACTURER	CONTRACTOR/	PROFESSIONAL SERVICES/OTHER	US CONGRESSIONAL DISTRICT	MN SENATE DISTRICT	MN HOUSE DISTRICT
Saint Paul	Amaris Custom Homes, LLC	Х			Х		4	53	53A
Saint Paul	Cortec Corporation	Х	Х	Х			4	38	38B
Saint Paul	Fedtech Inc.	Х	Х	Х			4	42	42A
Saint Paul	H.B. Fuller Company	Х	Х	Х			4	42	42B
Saint Paul	Interplastic Corp		Х	Х			4	42	42B
Saint Paul	Matsurf Technologies Inc.	Х		Х			2	52	52A
Saint Paul	MinnSolar, LLC	Х					2	52	52A
Sauk Centre	Talk Inc.	Х	Х	Х	Х	Х	7	12	12B
Savage	Automated Control Systems	Х	Х	Х			2	56	56A
Savage	Lapp Tannehill	Х	Х	Х			2	56	56A
Savage	Beckhoff Automation LLC	Х		Х			2	56	56A
Sebeka	Zenergy by WCTA	Х			Х	Х	8	9	09A
Shakopee	Choice Electric, Inc.	Х	Х		Х	Х	2	55	55A
Shakopee	Cyber Power Systems (USA), Inc.	Х		Х	Х		2	55	55A
Shakopee	KEB America Inc.		Х	Х			2	55	55A
Shakopee	Haze Battery	Х		Х			2	55	55A
Slayton	Backup Power Source Inc.	Х		Х			7	22	22A
Sleepy Eye	Mathiowetz Construction Co.	Х	Х		Х		1	16	16B
Sleepy Eye	Zinniel Electric Co.	Х			Х		1	16	16B
Spicer	Kandiyohi Power Cooperative	Х			Х	Х	7	17	17B
Springfield	Green Energy Products LLC	Х			Х		1	16	16B
St Louis Park	Sundial Solar	Х			Х	Х	5	46	46B
Stillwater	Minnesota Renewable Energies	Х	Х		Х	Х	4	39	39B
Stillwater	American Polywater Corporation	Х		Х			4	39	39B
Virginia	Hometown Electric	Х			Х		8	6	06B
Waite Park	Johnson Controls, Inc.	Х	Х		Х		6	14	14A
Waite Park	International Precision Machining, Inc.		Х	Х			6	14	14A
Wanamingo	QualTek (acquired Vertical Limit Construction Services)		Х		Х		2	21	21B
Warren	Nordic Fiberglass, Inc.		Х	Х			7	1	01A
Wayzata	Sunrise Energy Ventures	Х			Х	Х	3	33	33A
Wayzata	Global Synergy Powers	Х			Х		3	44	44B
White Bear Lake	Cummins Inc.	Х	Х	Х			4	43	43A
Winona	Winona Renewable Energy, LLC	Х			Х		1	28	28A
Woodbury	Schenk Vision	Х		Х			4	53	53A
Zumbrota	Concast, Inc.	Х	Х	Х			2	21	21B
	1	CLEAN ENE	RGY SECTOR	CON	IPANY FUN	CTION			1

CLEAN ENERGY SECTOR COMPANY FUNCTION









The Environmental Law & Policy Center is the Midwest's leading public interest environmental legal advocacy organization. We develop and lead successful strategic advocacy campaigns to improve environmental quality and protect our natural resources. We are public interest environmental entrepreneurs who engage in creative business deal-making with diverse interests to put into practice our belief that environmental progress and economic development can be achieved together. ELPC's multidisciplinary staff of talented and experienced public interest attorneys, environmental business specialists, public policy advocates and communications specialists brings a strong and effective combination of skills to solve environmental problems.

ELPC's vision embraces both smart, persuasive advocacy and sustainable development principles to win the most important environmental cases and create positive solutions to protect the environment. ELPC's teamwork approach uses legal, economic, scientific and public policy analysis, and communications advocacy tools to produce successes. ELPC's strategic advocacy and business deal-making involves proposing solutions when we oppose threats to the Midwest environment. We say "yes" to better solutions; we don't just say "no."

ELPC was founded in 1993 after a year-long strategic planning process sponsored by seven major foundations. We have achieved a strong track record of successes on both national and regional clean energy development and pollution reduction, transportation and land use reform, and natural resources protection issues. ELPC brings a new form of creative public advocacy effectively linking environmental progress and economic development that improves the quality of life in our Midwest communities.

#### **Headquarters**

35 East Wacker Drive, Suite 1600 Chicago, IL 60601 (312) 673-6500 ELPC.org, elpcinfo@elpc.org Facebook & Twitter: @ELPCenter

#### **Minnesota Office**

60 S. Sixth Street, Suite 2800 Minneapolis, MN 55402 Contact: Scott Strand (612)386-6409

#### **Additional Offices**

Columbus, OH Des Moines, IA Grand Rapids, MI Madison, WI Washington, DC