

Clean Energy Jobs For Minnesota

Winona City Climate Dialogue

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Minnesota Solar Energy Industries Association

Clean Energy Jobs For Minnesota

- **Climate Challenges**
- **Opportunities**
- **Local Actions**
- <https://www.eqb.state.mn.us/sites/default/files/files/Climate%20Change%20OnePagers.pdf>
- http://mn.gov/deed/images/mn_cleanenergy-economy-profile-fullreport.pdf



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- Climate/Jobs – Two Problems, One Solution
- **The Minnesota clean energy economy is a Minnesota jobs engine, climate solution and guide to local action.**



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- The clean energy cluster is comprised of five sectors - **wind power, solar energy, bioenergy, energy efficiency and smart grid** (and their value chains)
Analyzed by MN DEED from 2000 to 2014.



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- **The clean energy market is developing rapidly, reducing the state's dependence on imported energy.** Biofuels production capacity, energy efficiency savings, and solar and wind installations all had triple-digit percentage growth between 2000 and 2012.



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- **Employment in clean energy sectors reached 15,300 in 2014.** Clean energy jobs in Minnesota surged 78 percent between from 2000 to 2014, growing steadily through the recession. The state's total employment grew 11 percent over the last 15 years.



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- **Workers in clean energy earn higher wages compared with the state average.** Average annual wages in clean energy were more than \$71,000 in 2013 – 42% higher than the state average for all jobs (about \$51,000). MN workers in the clean energy economy earned more than \$1 billion in wages in 2013.



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- **The clean energy market is developing rapidly, reducing the state's dependence on imported energy (-16 Billion/yr).** Biofuels production capacity, energy efficiency savings, and solar and wind installations all had triple-digit percentage growth between 2000 and 2012



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- **Grid transformation from centralized to distributed energy generation with clean energy microgrid clusters will accelerate local economics.**



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- **Local Action:** Clean Energy Communities that enable PACE financing for private C&I and GESP for public retrofits and Distributed Generation, Solar enabling planning, and clean energy manufacturing incentives will create and retain more jobs and revenue



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- How does ground mounted solar impact land use?
How has the installation of pollinator habitat with solar effected that discussion?



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Discussion

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Solar Works For Minnesota

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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