

# Going solar? Tips for hiring a qualified installer

Once you have decided to install a solar energy system—after you’ve made your home or business energy efficient and you’ve done your solar homework—you will need to select a solar installer and plan the installation. The Minnesota Department of Commerce highly recommends that consumers take their time and exercise due diligence when hiring a qualified solar installer, because proper installation requires many considerations and attention to detail to ensure a safe, productive, and long-lasting system.

It’s a good idea to meet with and get bids from at least two or three installers before settling on one. The complexities of sizing, siting, purchasing, installing, permitting, and interconnecting a solar electric system are beyond the scope of what most homeowners are able to do.

## Verify installer qualifications

Ultimately, you will decide on an installer who you trust. Even so, you should verify your installer’s qualifications. The installation of racking, placing and securing modules, and the installation of all electrical wiring and electrical equipment, must be performed by a licensed electrical contractor and its licensed or registered employees. Make sure the installer and the licensed electrical contractor are in good standing with the Minnesota Department of Labor and Industry (DLI). To verify the status of licenses, go to the DLI License Lookup tool ([dli.mn.gov](http://dli.mn.gov)) or call DLI at 651-284-5069. Other ways to protect yourself include:

- **Ask about installer credentials.** For example, the North American Board of Certified Energy Practitioners ([nabcep.org](http://nabcep.org)) requires that NABCEP-certified solar PV installers receive training before being certified and that they receive ongoing training to maintain certification.
- **Request references.** Call references and ask about their experience with the installer. Did the installer meet their expectations? If there were issues with permitting and interconnection, did the installer work hard to resolve them with the utility and permit officials?
- **Check the Better Business Bureau** ([bbb.org](http://bbb.org)) to see if there are complaints or actions filed against the installer.
- **Find a current list of installers.** Lists are available from Clean Energy Resource Teams’ (CERTs) Clean Energy Project Builder, Minnesota Solar Energy Industries Association’s Find an Installer, or the Commerce Department’s Minnesota Solar Guide.



## Contract terms and installer expectations

- **Site assessment.** When siting solar, maximize the sunlight striking the panels and minimize shading in order to get the most energy production. Be sure the installer provides a detailed assessment of your site, including a shading analysis, examination of the roof and other structures to determine the feasibility of a solar installation, the estimated annual production of the system, and estimated bill savings. If you are installing solar modules facing multiple directions, request a cost/benefit calculation and separate shade analysis for each.
- **Permits and agreements.** Always confirm that the installer applies for all necessary building permits and interconnection agreements and provides documentation for all incentives and manufacturer/installer warranties. In Minnesota, electrical permits are required statewide for the installation of all solar PV systems. The licensed electrical contractor is required by law to obtain the electrical permit. Solar PV installations

## Consumer Checklist

- Check installer credentials
- Get references
- Review contract terms
  - Site assessment
  - Permits and agreements
  - Manufacturer and installation warranties
  - Costs, payments & completion timelines
  - Down payments
  - Rebates & incentives
  - Inspections

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must also comply with the Minnesota State Building Code. A building permit is required for all solar installations where the building code is enforced by a local municipality.

- **Manufacturer and installation warranties.** Be sure the installer warranty addresses all costs of repair or replacement for a minimum of two years. Most panels have a manufacturer's warranty that guarantees a minimum of 80% output of the name plate capacity for 25 years and the inverters for 10 years.
- **Costs, payments, and completion timeline.** Be sure the installer provides a detailed bid contract describing all the work to be done and who is performing it (including any subcontractors), all equipment and materials to be installed, timeframes for completion, payment terms, and the process for any change orders.
- **Down payment.** When making a down payment, pay with a credit card if possible. Credit card transactions provide more protection to you if you are a victim of fraud than do debit card, cash or check purchases. Never prepay for the entire system. Finally, be wary of high-pressure tactics to get you to put more money down.
- **Rebates and incentives.** Research and review all financial incentives available for your installation, such as the federal Residential Renewable Energy Tax Credit. Make sure the installer provides documentation for all applicable rebates

and incentives and ensures timely filing. Check the Database of State Incentives for Renewables & Efficiency ([dsireusa.org](http://dsireusa.org)) for incentives that may apply to you.

- **Inspections:** Agree that all required project inspections will be arranged by the installer. The licensed electrical contractor is required by law to do this.

## Consider joining a solar co-op

Solar cooperatives are increasingly an option for homeowners who want to simplify the process of going solar. Organizers of this nonprofit model share information, negotiate or organize a bidding process for bulk purchase installation, assist with checking and/or comparing bids, and act as consumer advocates throughout the solar installation process. Participation should be voluntary and non-binding until installer contracts are signed.

## If on-site solar is not an option, look at community solar or green pricing

In some cases, you may find that on-site solar may not be right for your location. If so, there are other options to choose from to support renewable energy, such as community solar gardens (CSG) or a green pricing program. Check with your utility about both options. For more information on CSGs, see the CERTs Community Solar Garden webpages, Commerce's "Tips about Community Solar," and the Minnesota Attorney General's "Community Solar Gardens" two-pager (see sources below).

## Sources to help on your solar journey

- **Clean Energy Project Builder** ([cleanenergyprojectbuilder.org](http://cleanenergyprojectbuilder.org)): Via an online directory, connects people and businesses with companies that can help plan, implement, and manage clean energy projects.
- **Clean Energy Resource Teams** ([cleanenergyresourceteams.org](http://cleanenergyresourceteams.org)): Offers fact sheets to determine if solar is right for homes, businesses, and farms; information about community solar gardens; special solar guidance for rural Minnesotans; and more.
- **Database of State Incentives for Renewables and Efficiency** ([dsireusa.org](http://dsireusa.org)): Provides a list of rebates, incentives, tax credits, and loan programs to support renewable and energy efficiency projects.
- **Minnesota Attorney General's Office** ([ag.state.mn.us](http://ag.state.mn.us)): Offers a range of publications on consumer rights, including a two-pager about "Community Solar Gardens."
- **Minnesota Department of Commerce** ([mn.gov/commerce](http://mn.gov/commerce)): Provides general information about solar energy in Minnesota and includes a solar-help resource ([solar.help@state.mn.us](mailto:solar.help@state.mn.us) and 800-657-3710) to answer solar questions.
- **Minnesota Department of Labor and Industry** ([dli.mn.gov](http://dli.mn.gov)): Licenses electricians, has a License Lookup search tool, and provides contractor consumer protection information.
- **Minnesota Public Utilities Commission, Consumer Affairs Office** ([mn.gov/puc](http://mn.gov/puc)): Helps resolve disputes between solar customers and their utility companies under certain regulations.
- **Minnesota Renewable Energy Society** ([mnrenewables.org](http://mnrenewables.org)): Promotes the use of renewable energy and advocates for the expansion of renewable energy in Minnesota. Provides solar education and training and independent solar site suitability assessments.
- **Minnesota Solar Energy Industries Association** ([mnseia.org](http://mnseia.org)): Represents and serves Minnesota solar energy professionals and consumers.
- **Minnesota Solar Suitability App** ([mn.gov/solarapp](http://mn.gov/solarapp)): A public online tool created by the University of Minnesota that determines solar site suitability for locations throughout Minnesota.
- **North American Board of Certified Energy Practitioners** ([nabcep.org](http://nabcep.org)): A certifying body for solar installers; provides a list of certified solar installers.
- **Solar Energy Industries Association** ([seia.org](http://seia.org)): Offers Residential Consumer Guide to Solar Power, Solar Industry Commitment to Consumer Protection, and information on solar leasing and solar purchasing.