



Commercial Solar Photovoltaic Installation

FAQ and general information

Solar photovoltaic energy- is the conversion of sunlight into electricity

1. Benefits for having your own commercial solar installation:

- Companies and businesses can produce their own clean electricity and displace a certain percentage of reliance on the grid and reduce their carbon footprint.
- Full investment payback of solar installation after a period of time depending on size of system, current state and federal incentives and cost of current electrical usage.
- Tax deductions from accelerated equipment depreciation.
- Fulfillment of corporate green initiatives, LEED points and generation of Renewable Energy Certificates.(REC)

2. Site Analysis:

- a. Ideally solar PV panels should be facing South and have unobstructed sun year round from 10:00 am to 3 pm for the most efficient production of electricity.
- b. In a commercial installation the ideal placement of PV panels is on a relatively flat roof and must allow for HVAC equipment and other roof obstructions for shading.
- c. An analysis for your facility and roof can be generated fairly quickly.
- d. Providing 2-3 months utility bills showing price in cents/kW, peak power cost, and load is necessary to determine how much offset solar can provide for your facility.
- e. Review current City of Evanston zoning code ordinances relating to solar panels. (Evanston Zoning Department 847-866-2930)
- f. If the business is located in an Evanston Historic District or is a listed as historic building, the panel location will need to be reviewed and approved by the Evanston Preservation Committee. Carlos Ruiz in Historic Preservation at 847 866-2928 ext. 2265.

3. Types of Solar Photovoltaic arrays:

- a. Monocrystalline- most efficient and most expensive and 30 yr. warranty
- b. Polycrystalline- Most common type of PV not as expensive 25 yr warranty
- c. Thin Film – Typically less expensive and up to a 15 yr warranty.

4. Contact Bidders –

- a. Large scale installations 50kW and larger-SoCore Energy- Pete Kadens-773-913-4402
- b. Mid size to small 1kW-45kW-Solar Service – Brandon Leavitt 847 677-0950
Earth, Wind and Sun – John Caravette 847 602-8696
Chicago Energy Solutions – Nick Patinkin 847-204-9653
Pure Energy- George Betosis

5. Roof Top

- a. The roof should be in good working condition with at least 20 years plus left on remaining life span. A good flat roof with low pitch is typically preferred.



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6. Estimated Costs and Incentives

- a. A commercial Solar PV installation will include all site surveys, array layout and design, federal and state incentive prep work, permits, structural engineering, PV panels and all necessary equipment, installation labor and any other technical cost.
- b. For a list of current financial incentives, go to <http://www.dsireusa.org/> and click on Illinois. Currently, there is a federal 30% Investment Tax Credit (ITC) and State of Illinois provides a 30% tax rebate.

7. Estimated Payback Period

- a. Request this information be detailed by the commercial solar installer when bids are provided and can vary depending on size of installation.
- b. Generally, the payback period for commercial installations under 50kW in Illinois can be 8 -12 years depending federal and state incentives.

8. Warranty and O&M Service:

- a. Typical 25-year PV module warranty from equipment manufacturer and typically has a minimal annual degradation over life of panels. See specs on PV panels specified by your solar provider.
- b. There are no moving parts in Photo Voltaic panels but need periodic cleaning. See specs from your solar provider.
- c. Certain newer more efficient PV panels can include micro inverters with each panel and they are typically good for up to 15 years.
- d. Amount of CO₂ and other gasses displaced will be determined during estimating / proposal process.

Power from the sun is clean, limitless and free. PV releases no greenhouse gases and does not contribute to global warming.