



Solar for CT Craft Breweries: What You Need to Know

Over the past decade, the number of homes and businesses in Connecticut that are using solar energy has increased significantly. There are programs that help keep the costs manageable, like leasing or renting rather than owning the system, financing opportunities, tax breaks, and energy cost savings. Statewide, citizens and businesses are choosing solar because it's an action they can take to make a positive impact on the environment.



It is a financial business decision that depends on several factors including whether you own the building, how well the location of the project is suited to solar, total load, and the cost. There are a handful of breweries in Connecticut that are already using solar power, for example Nod Hill Brewery and Little House Brewing Company. [Nod Hill Brewery](#) in Ridgefield installed a 287 kW system in 2019 that offsets 100% of their electrical usage. When [Little House Brewing Company](#) in Chester needed to replace their roof, they installed a solar system appropriate for their building with 2 power walls for storage and began operating it in late 2021. It may be a good option for your brewery too. Below are some common questions and steps to get you started.

What are the benefits of solar?

Generating solar power at your facility can reduce your electricity costs. Using clean energy from solar also reduces your use of fossil fuels, greenhouse gas emissions, your environmental footprint and makes energy production more sustainable.

What's the first step you should take if you're thinking about using solar?

Energy efficiency is an important part of any solar project and should be the first step because it can reduce the overall load your solar PV system will need to support. This can reduce the size and cost of the solar PV system. Investigate energy efficiency programs available to your business. [Eversource and UI](#) may have free or low-cost programs to identify efficiency actions, estimate cost savings and provide financial incentives for implementing projects. Let them know you are interested in having your facility evaluated for energy efficiency and solar. If you are served by a [municipal energy utility](#), check with them.

Should I start with the utility company, a contractor, or the CT Green Bank?

You can reach out to any of these parties but typically it starts with finding a contractor.

How do I choose a contractor?

The CT Green Bank has a list of [contractors](#) that are knowledgeable and experienced in both energy efficiency and solar projects. Contact multiple contractors to do a feasibility assessment of your building and site for both solar and energy efficiency. Based on this information you can compare value, panel quality and pricing to choose the contractor that's best for your project. You should request a number of references from the contractor to hear from their solar and energy efficiency customers.

In developing your project the contractor will provide the capacity of the system in kW, expected energy production and cost savings, system layout and design, and total installed cost and

financing options, including tax credits if applicable. Discuss the condition of the roof, it should have an expected life of at least 15 – 20 more years and be able to accept added load if the panels will be installed there. Find out if any servicing or maintenance will be required and if this is part of what they provide.

Other options include installing canopy panels and panels in/over parking areas. Such installations would require approval by the local building inspector and likely the planning and zoning commission in your municipality. Ask your contractor to provide information about decommissioning of the panels when they reach the end of life. Solar installations of this scale do not require any State level approvals.

C-Pace also has a third-party technical advisor that can help evaluate the project to ensure the quality of the proposal. Your contractor should also handle any local ordinances or permits if needed.

What types of financing are available for solar?

There are several options building owners can use to finance solar, including:

- Self-finance the system with cash or bank loan so that you own it.
- Finance through the installer/contractor if offered. They may have their own offers/terms.
- Use [CT Green Bank C-PACE programs](#) that provide loans for clean energy and efficiency upgrades that are paid back through assessments on property tax bills. It's designed so the energy savings cover the cost of the loan. You must use an installer certified by the CT Green Bank. C-PACE program offer 100% up-front financing with no money down.
- Use a solar power purchase agreement (PPA) where the system is owned by a third-party. [The CT Green Bank PPA](#) pre-screens installers, and owns, maintains and insures the system for the full 20 years. There are no upfront installation costs. You pay a variable amount each month based on the amount of electricity the installed system produces.
- Lease the system from a third-party (solar developer / installer) and make regular lease payment each month.

Are there any tax credits or rebates?

Yes, there are currently two federal tax credits available for businesses.

- the investment tax credit (ITC) is a tax credit that reduces the federal income tax liability for a percentage of the cost of a solar system that is installed during the tax year.
- the production tax credit (PTC) is a per kilowatt-hour (kWh) tax credit for electricity generated by solar and other qualifying technologies for the first 10 years of a system's operation. It reduces the federal income tax liability and is adjusted annually for inflation.

This webpage has more information about federal tax credits: [Federal Solar Tax Credits for Businesses | Department of Energy](#)

[DSIRE](#) is a source of information on incentives and policies that support renewable energy in the US. Enter your zip code to be directed to a list of financial incentives and regulatory policies that apply to CT.

What type of pay back can I expect from a solar project and how do I know it is accurate?

You can use the following questions to guide your inquiry about the payback from a solar project. The CT Green Bank may also be able to assist in the evaluation of your options. If you are using a third party consultant these are questions they can answer. You can also get references from the contractor and ask their solar customers about these topics.

- How should a customer think about projected future energy costs in relation to investing in

solar?

- What characteristics of a solar proposal are most important for determining if it is feasible and a good fit for a customer's facility?
- What happens if actual energy savings are more or less than projected? Who benefits or pays in such situations?

Is there a mechanism for Eversource and UI to purchase renewable energy produced by my solar system?

Yes, this was known as the ZREC (Renewable Energy Certificates) program and provided compensation from the utility company for exported power, but this program will change beginning in 2022. The new program, now called Non-Residential Renewable Energy Solutions, is an incentive program that can help you offset the cost of the electricity you buy from Eversource and UI with the energy you generate from your solar system. Projects must meet eligibility requirements depending on the size of the project. For more information, see [UI's Renewable Solutions webpage](#) and [Eversource's Non-Residential Renewable Energy Solutions site](#). You may also want to consult with an experienced solar contractor or the CT Green Bank.

What's the process to interconnect a solar system from a facility to the electric grid? Any fees? Your facility becomes a generator of electricity once you have a solar installation. In order to connect your system to the grid, the solar contractor will administer what's called an interconnection agreement between your facility and the utility company that will include any paperwork and fees associated with it.

Additional Resources:

- Basic information on solar - [Solar 101](#)
- Assess your property using [NREL.gov PVWatt calculator](#), it allows homeowners, small building owners, installers and manufacturers to develop estimates of the performance of potential PV installations.
- Basic information on finance options - [Solar Financing: How Do You Pay For Solar Panels? | EnergySage](#)

*Prepared by CT DEEP, Office of Pollution Prevention, February 2022 and updated December 2023.
Funding for this project was provided by a Pollution Prevention grant from US EPA.*