

Solarize Frequently Asked Questions ^(a)

Solarize Old Lyme, www.solarizect.com/OldLyme

Solarize Lyme, www.solarizect.com/Lyme

Q. What is Solarize Connecticut?

A. Solarize Connecticut is a town-state sponsored online community solar marketplace providing multiple quotes from local installers so residents can compare prices and find the best solar solution for their homes. Solarize Old Lyme is the town-specific program for Old Lyme.

The State is working with *EnergySage* to provide bids using pricing information relevant to your community.

- You can get an Instant Estimate of your projected savings from solar, with no sales calls by registering on www.SolarizeCT.com/OldLyme or www.SolarizeCT.com/Lyme.
- When you are ready and want more precise information, you can go back online at www.SolarizeCT.com/OldLyme or www.SolarizeCT.com/Lyme, create a property profile (including current energy bill) on the *EnergySage Marketplace* and request more precise bids from local installers.
- You can expect about 2 to 4 installers to bid on your project. Some may request a site visit before providing a more precise quote.

Q. How are participating installers selected?

A. EnergySage pre-screens and qualifies all participating installers so you can be assured you are working with reputable and trusted companies.

Q. How do I know if my home is suitable for solar?

A. The most suitable location for a roof-mounted solar photovoltaic (PV) system is a south-facing roof with little to no shading from nearby trees, chimneys or other obstructions. Any shading on the system can reduce the energy output, so it is important to assess the locations of current trees and buildings around your home as well as that of other obstructions that may exist around your home in the future. Overall, energy generated is related to hours of direct exposure. Advances in panel and inverter technologies can allow homes with east or west-facing roofs and moderate shading to benefit from solar PV as well.

Q. Will a second home qualify for a solar PV system in this program?

A. Anyone who owns a home in CT (CL&P or UI territories) can apply for incentives even if it's a second or third home. They may even have solar on more than one of their homes. The only restriction is if they use the second home as a rental unit - then they would not be eligible for our incentives (for the home being rented).

(a) Note: These frequently asked questions were prepared by the Solarize Old Lyme Committee based on a list of Frequently Asked Questions and answers prepared and edited by the Connecticut Green Bank [formerly Clean Energy Finance and Investment Authority(CEFIA) and Smart Power].

Q. Do I need a new roof?

A. The panels are designed to last 20 years and your roof needs to have a similar projected life. A new layer of shingles may be needed. The panels are light so that no reinforcement is normally required.

Q. Will the system produce electricity on cloudy days?

A. Yes, just not as much. Under an overcast sky, panels will produce less electricity than they produce on a clear, sunny day.

Q. How does a solar PV system work throughout the year?

A. The graph in Exhibit A, page 6 of this document simulates how an operating solar PV system in Clinton, CT works throughout the year.

Q. Will my system produce power if there is a blackout?

A. Without battery backup, grid-tied solar PV systems will not operate when the power grid is down. This safety requirement, called "anti-islanding" allows utility linemen to safely repair power lines during a power outage. You may choose to add a battery backup to your solar system to keep the lights during a blackout, though they cost between \$5,000 and \$15,000. The system can also be configured with an auxiliary power generator.

Q. How long will the installation process take?

A. From the day you sign a contract with an installer, it can take between a few weeks and a few months before your solar PV will be turned on. The physical installation of the solar system typically takes anywhere from two to three days, but the time it takes to order and receive equipment, secure permits or schedule your installation can vary. Once installed, systems typically will need to be inspected by the town, utility and the Connecticut Green Bank.

Q. What sort of maintenance is required?

A. Solar PV systems require very little maintenance. Rain showers will generally take care of pollen and dust that fall on your solar panels. If your system is shaded by trees, you may have to trim and maintain branches to protect your system from falling limbs and to minimize shading and maximize production. In extremely snowy winters, you may have to clear snow from your roof to protect your solar panels and maximize winter production. It is important to note that snow will melt off of a tilted system except when there is an extremely heavy snow or prolonged freezing temperatures.

Q. What size system should I install?

A. Every home is different. As such, your system size will be determined by your electricity needs, roof space, orientation and shading. The average residential solar system in Connecticut is approximately 7 kilowatts (kW) and produces approximately 8,400 kWh per year, but this could be too big or small for your home. If you use certain technologies that are highly dependent on electricity, such as an electric car or geothermal heating and cooling, you should be able to benefit from installing a larger system. Your installer will work with you to design a system with characteristics that will meet your specific needs.

Q. How will solar affect my home's value?

A. Typically, solar systems add to a property's value just as a new more efficient home is more valuable than an older home which cost more to heat. This is due to the fact that unlike electricity rates, solar rates will never go up. A solar PV system insulates you from rising electricity rates. Once the system has paid for itself, the electricity it generates is absolutely free!

Q. Will installing a solar system increase my tax base?

A. No. Despite the fact that your property value will increase, state law exempts residential clean energy systems from property taxes. Exemption claims must be filed with the assessor or board of assessors in the town in which the property is placed in service on or before November 1st in the applicable year. Applications are not required each year as long as no major alterations are made to the renewable energy system. Make sure to contact your local tax assessor's office for more information. Additionally, any passive or active solar water or space heating system or geothermal energy resource is exempt from property taxes, regardless of the type of facility the system serves.

Q. How much will I save by installing a solar system?

A. Your savings depend on your annual electrical usage, the size of the system you choose, electricity rates, and any financing option that you choose from your Solarize installer. To start, ask your solar installer how much electricity your new system is expected to produce on an annual basis and then compare that number to how much electricity your household uses to get an idea of how much you could save. You will likely be given a choice of the percentage of energy you need to produce, which tells you your annual power savings. Additionally, a homeowner's savings are affected by the financing package chosen, as is discussed below in the "Purchase" and "Lease" sections. Installers can also help you determine how much money you could save if electricity prices escalate over time.

Q. I am confused about my electricity charges; can you explain my service rates?

A. Almost all electric charges are proportional to energy used. So the saving in generation, delivery, fees and taxes can be integrated into one cost per kilowatt hour. Every kWh you generate is a kWh you don't pay or is put in the bank for future use. At the same time with a solar PV system the utilities charge a fixed connection fee of \$19.50/month whenever your net energy production for the year exceeds your needs. If you need more energy than you produced or banked, such as in December, you pay the same rates for your net needs.

For further reference, please go to your utilities website and search for "average bill" in the "Rates" section.

Q. Will I still receive a monthly electric bill after installing a solar system?

A. Yes. You will receive a monthly bill from your utility company as you always have, but the amount owed will differ depending on your monthly electrical usage. Depending on how your system is sized, you may accrue credits in the more productive months, which through "net metering" can be carried over and used in the less productive winter months. Even if your system entirely offsets your electrical usage, there is still a flat monthly fee assessed, in order to be connected to the grid.

Q. Does homeowners insurance cover my system?

A. If you prefer to own your system directly and either purchase it outright or finance it via a loan, you should check with your insurance agent to find out whether your system will be covered

under your existing policy. However, if you go solar using the CT Solar Lease, your system's third-party owner will provide all necessary insurance.

Q. Are state incentives available for my system?

A. The Connecticut Green Bank [formerly called the Clean Energy Finance and Investment Authority (CEFIA)] provides incentives to help Connecticut homeowners go solar. The Connecticut Green Bank representative will discuss the specific amount of the incentive at the January 26th Workshop, 6:00 PM to 7:30 PM (before the Old Lyme Annual Town Meeting, Lyme-Old Lyme Middle School Auditorium, 53 Lyme Street, Old Lyme, CT.

Q. Are federal incentives available for my system?

A. The federal government provides an investment tax credit equal to 30% of the homeowner's investment, that is 30% of the total cost less the state incentive grant. This can be claimed on your federal tax return. However, this current tax credit is set to expire in 2016.

Q. What financing options are available to help me purchase a solar system?

A. Connecticut Green Bank offers the Smart-E loan to help homeowners go solar. The Smart-E Loan features both 10- and 12-year options (at interest rates of 5.99% and 6.99%, respectively) for homeowners looking to go solar. This is a no-money-down financing option offer by participating community banks and credit unions across the state.

We plan to have lenders on hand at the January 26th event. The installer may have additional tools available as well.

Lease:

Q. Why would I lease a system?

A. Some people prefer to own their solar system directly and capture the full lifetime value of the system, while others prefer the peace of mind that comes with knowing that solar experts will be responsible for any maintenance work the system requires over its entire useful life. Under the CT Solar Lease, Connecticut Green Bank provides a no-money-down option with one-call resolution for any issues you may experience with your system for the entire 20-year lease period. Customers who cannot take advantage of the federal tax credit may find this option appealing.

Q. What happens if I move mid-lease?

A. For the CT Solar Lease, if a homeowner sells his or her property mid-lease, the solar system can be passed onto the new owners in two ways: (1) the lease can be transferred to the new owners as long as they meet the credit criteria for the CT Solar Lease or (2) the departing homeowner can buy out the remaining fair market value of the lease, and then include the value of the system outright in the asking price. Check with you installer if they are offering a separate leasing option.

Q. Can I take the system to my new home?

A. Under the CT Solar Lease, if you choose to lease a solar system, you will not own the system, and therefore you will not be able to take it with you. Check with your installer if they are offering a separate leasing option. (Note that a customer who receives funding from Connecticut Green Bank may not relocate his or her system to a new home outside of Connecticut).

Q. What if the purchaser doesn't want the system?

A. For the CT Solar Lease program, if a potential purchaser does not want to be responsible for making lease payments (and would rather revert to paying full electricity bills to the utility company), the departing homeowner would have to buy out the lease at its fair market value. Check with your installer if they are offering a separate leasing option.

Q. What happens at the end of the lease?

A. After the CT Solar Lease is up after 20 years, you have two options: you can purchase your system at its fair market value and continue enjoying its production until the end of its lifetime (25-30 years), or you can have the system's third-party owners remove it, at their expense. Check with your installer to see if they are offering a separate leasing option.

Q. When does the lease actually start (that is, when does the first payment occur)?

A. With the CT Solar Lease, systems that are completed from the 1st day of the month through the 15th day of the month, the first payment is due the FIRST day of the FOLLOWING month. For systems that are completed from the 16th day of the month through the end of the month, the first payment is due the FIFTEENTH day of the FOLLOWING month. Check with your installer to see if they are offering a separate leasing option.

Additional Comments:

Q. Why haven't more solar systems been installed? Why aren't more people doing this?

People are doing this! Connecticut homeowners have commissioned over 25 MW of residential solar systems in the last decade, that's over 3,500 systems! Although this represents the cumulative result of over a decade of dedicated work, nearly half of the total has come in the last two years alone.

Across the state, 15 communities have seen at least 20 residential solar PV installations within their borders, while 52 communities have seen at least 10 installations, and 110 have seen at least five installations. With the growth of Solarize, the "peer effect" of accelerated adoption should continue to drive new deployment at the local level.

Old Lyme already has 37 installations and installations on order. The Solarize Old Lyme program's objective is to double the number of installations.

Q. What is the cost of the program to the town?

A. Town money is not used for the Solarize program. SmartPower is paying for the marketing materials. Other grassroots efforts as well as local program management in Old Lyme are handled by volunteers led by the Solarize Old Lyme Committee.

Useful Links :

Please visit www.SolarizeCT.com/OldLyme to learn more about Solarize in Old Lyme, or contact kdonnelly@smartpower.org. If you live in Lyme, visit SolarizeCT.com/Lyme to learn more about Solarize in Lyme.

Please join us at the January 26th Workshop, 6:00 PM to 7:30 PM (before the Old Lyme Annual Town Meeting, Lyme-Old Lyme Middle School Auditorium, 53 Lyme Street, Old Lyme CT).

Exhibit A. Simulated KWH Generated, Used or Banked Cape House in Clinton, CT

Exhibit A shows how excess power is generated and banked for credit with the utility through July. In August the air conditioning increases the power needs with solar and some banked kilowatt-hours (KWH) meeting the demand. Use of banked power credits continues into December when additional power must be purchased. Therefore, this home only pays the connection fee for 9 months and buys **some** power for 3 months.

