

Q & A from the Energize East Hampton Solarize Webinar

The questions and answers below were compiled from the Town of East Hampton's Solarize webinar on March 18, 2021.

A video recording of the webinar and slide presentation are available [here](#).

Questions answered during the webinar:

1. Are there programs to reimburse the full cost of installation?

There are state and federal tax credits and the Solarize campaign discount to help offset the cost of solar. However, the customer is responsible for the net cost of the system, which can be paid in cash, through a New York State subsidized low-interest loan or other solar financing. There are "no money out of pocket" solutions, but there is no full reimbursement for the full cost of the system and installation.

2. Are there options for the size, i.e. panels, shingles etc.?

Over the past 15 years, the formats of solar panels have changed. Manufacturers have both clarified the glass and increased the size of the cells and the size of the overall panel by 30% to increase the amount of energy that panels could produce. Currently there are two options, a 360w panel and a 400w panel. It is the solar installer's job is to figure out which one fits best on each individual roof depending on the roof layout and obstructions, to create the maximum amount of power on the roof.

3. How much does it cost to install?

Each installation varies based on the number of panels needed. The number of panels needed is based on the pitch and orientation of the roof, any potential shade and the panel wattage. All this information is entered into a solar production calculator that can determine how productive a system can be. We then balance the production with the need to offset the home's consumption. However, a home's roof can only fit a certain number of panels based on the size and any obstructions. Sometimes the system can provide for 100% of a home's energy consumption, but that may not be possible in every case. In sum, the cost to install is based on the number of panels needed, which is dependent on how well your roof will produce solar energy.

4. What kind of discount is offered through the Solarize program?

The discount provided through the Solarize East Hampton program is varied based on the scope of the installation that is being done, but usually discounted 15-20% of what a typical solar installation on the east end would cost.

5. What is the maintenance and what are the costs I should expect?

Solar panels require little to no maintenance at all. Home owners should check that there are not any branches that have fallen on the panels, or any leaves that have gotten trapped underneath. Other than that, the rain takes care of washing any pollen or dirt off of the panels. Regarding snow and ice, the sun will heat up the panel and melt away any snow. There is no need for the homeowner to brush snow off of the panels.

6. If we generate more energy than we use can we sell it back?

"Selling" excess energy back is a misnomer. You are charged by the utility per kWh, (kilowatt hour). If you create excess energy, it runs through the meter and actually runs the meter backwards, which means that it is "clicking" back in kWhs. When you need excess energy to use in your home, you take in those kWhs at a unit-for-unit exchange, so there is no monetary charge for those kWhs that you use. If you have excess energy at the end of the year, there is 20 years of net metering with rollover. Excess energy will rollover for the next 20 years if it is ever needed.

7. How does solar impact my property values? What happens if I sell my house?

Property value is increased because the cost of solar panels today is the cheapest it will ever be. Property value is also increased because you are offsetting your electrical costs with solar, so the cost of electricity to the house is less, which makes the house worth more. When you sell your home, if you have a lease on the solar panels, the buyer needs to either buy-out the lease, or qualify with the leasing company. If the panels are purchased, and there is still a balance on the loan at the time the house is sold, the balance will be paid off with the funds from selling the house. The idea that the home is "Green" also makes it more valuable to buyers.

8. If you cannot put solar on your home, how can you gain the benefits of solar on your electric bill through a community solar farm?

For those that cannot install, or do not want to install solar on their property, but still would like to take advantage of the economic benefits of solar and support renewable energy, community solar, or community distributed generation (CDG) may be a good option. Community solar works through a developer building a solar array in a suitable location and residential and commercial PSEG customers can receive energy credits from the solar energy that the array produces without having to have panels installed on their properties. While the community solar array is not literally connected to your home, you subscribe to receive a portion of the credits generated from the energy that the array injects into the grid, to lower your energy costs. Some months the array will generate enough power and credits to exceed your energy consumption, and some months it may not, but overall community solar subscribers see a minimum 5% savings on their energy costs, but in many cases, more. Subscribers to community solar projects are also

supporting local renewable energy development by investing in future solar generation projects. If you are interested in more information about subscribing to a community solar project, you can find a list of community solar developers on PSEG's [webpage](#). Please contact the developers directly via their webpages to learn more about projects open for subscriptions, and about pricing.

9. What if the roof only has east/west exposure and limited southern exposure because of trees?

A roof with east/west exposure can work for solar as well. In the winter months when the sun is lower in the sky, the panels will not produce as much energy. If the east/west pitch is shallow, the panels will produce more, if the pitch is steep, the panels will not produce as much. If, for example, trees are blocking your roof's southern exposure, a system can still be installed with east/west exposure.

10. When I get a proposal from GreenLogic through EnergizeEH's Solarize, can I still get proposals from competitors and select one of them?

Yes. Any home or business owner can select any solar installation company that they want to provide a proposal and/or install their system. GreenLogic utilizes superior SunPower technology and is locally based in Southampton, which has its benefits.

11. What if my roof cannot fit enough solar to meet my home's total energy needs?

This can be a common situation, especially when you are talking about a two-story home versus a ranch. A 1,500 sq. ft. ranch has a lot more roof space than a 1,500 sq. ft. colonial home. Solar is a balancing act between the amount of roof space facing in the right direction and the home's consumption. No matter what percentage of the home's consumption solar is offsetting, it is fixing your cost for the next 30 years for that percentage of your home's consumption. Anything above that, you will have to buy from the grid. A battery will not allow you to offset that extra percentage of energy because the battery will still need to be charged by the grid as you have already taken advantage of 100% of the solar energy produced using Net Metering. The solar energy, because of net metering, is 100% benefit to you, no matter when it is produced or if you are in your home or not. Even if you are only at your home on the weekends or in the summer, 365 days of consumption is looked at, in addition to how much solar can be produced in 365 days to offset that consumption.

12. How much extra solar would I need to be able to charge an electric car in the future?

It depends on how much you drive and how often you need to charge. A rule of thumb is that driving 12,000 miles a year will use about 2,500-3,000 kWh depending on how you drive.

13. What is the impact on my electric bill? Where will I see the credits I get from solar?

When the solar installer applies to PSEG for system interconnection, PSEG makes an alteration to your electric bill. On the top, left-hand corner of the second page of your PSEG bill, they will create a section called the "energy bank." When (through net-metering) you put more energy on the grid than you consumed for that billing period, the credits will appear in that "energy bank" section. If solar can cover 100% of consumption, you will only be charged by PSEG for being connected to the grid, a fee of approximately \$12.00/month.

14. Do solar panels produce energy in the winter or if they have snow on them?

Solar will absolutely produce energy in the winter. Even in winter when the sun is lower in the sky as it moves from east to west, we still have bright, sunny days and your panels will produce energy. If your panels are covered with snow, the UV energy from the sun will heat up the panels and melt away the snow more quickly than it melts from surrounding surfaces.

15. Do you have any information about solar roof tiles, solar roof tile installers and demonstrations of installations?

There are several companies that make solar roof tiles or shingles. There are some issues with this technology worth mentioning. First, you need to replace your entire roof with these solar tiles/shingles, meaning that you will have some sections of the roof that produce solar energy, and some that will not, but you still need to pay for solar tiles/shingles all over the entire roof. The other issue is the density. Solar panels collect 22% of the sun's energy. Solar tiles/shingles, like Tesla for example, do not collect that much energy. The modular solar panel is the tried and true method that saves you the most. It may not be the most aesthetically pleasing, yet it is the panel that will not let you down, it will produce the power that you need, and it will be warrantied. I know of two people that also had houses in California that also worked with Tesla and had the solar shingles installed, and their roofs were breaching the \$100,000 mark when they had them replaced.

16. The roof on my home is about 15 years old. Should repairs be needed or replacement become necessary, how and who will handle the removal and re-installation of solar panels? Am I encumbered with a contract that extends beyond the ownership of my home?

When considering installing solar on a roof, you first must consider roof age and quality. It is best to install solar on a roof that is under 10 years old. Because the panels are warrantied for 25 years and can last up to 30-40 years, installers want

to make sure that the roof has the capacity to last for at least the 25 years that the panels are under warranty. After 25 years, if the roof needs to be replaced the panels will be taken down. There will be new technology available then, so new panels will be put back up on the roof. But by then, the panels will have paid for themselves many times over. In addition to the age of the roof, depending on where the house is situated, some roofs get beat up a little bit more than others, so we are always concerned with roof quality, and it is one of the main things we talk about when discussing solar with customers. A roof replacement can be done as part of a solar installation project, and the customer can benefit from the tax credits available for that.

17. What rebates are available?

There currently are no rebates available for solar on Long Island. Tax credits however are available and provide a dollar-for-dollar reduction of your tax liability. Current Federal tax credits are 26% of the gross cost of the solar project. The State tax credit of 25% (max. \$5,000) is available for solar installation on primary residences. **Please consult with your tax professional for guidance or more information.**

18. Can you put solar on a flat roof?

Yes. Solar panels can be mounted on flat roofs via either an attached method or a ballast-mounted method, where the array is weighted down in order to meet the 130 mile per hour wind code.

Questions submitted with registration or during the webinar, answered after the webinar:

19. With solar pricing coming down over time, should I wait until prices have dropped?

Over time solar panel prices have come down, however so have the incentives. We currently have a 26% federal tax credit and a \$5,000 tax credit from New York State. The Federal tax credit is scheduled to expire in two years. If that happens then you would be paying far more if you wait than buying it now, not to mention every day that you are paying for some of the most expensive electricity in the country.

20. Are there any free, independent resources for helping a homeowner make the best green energy choices for their property? I'm building a house and need advice and guidance but don't want to spend a crazy fortune on a consultant or on my energy system.

I often have full, wide ranging conversations about overall energy efficiency of the home because almost all of it has to do with electrical consumption. Therefore, it directly relates to how much solar is needed. PSEG-LI's [webpage](#) has resources available to connect customers with energy and money saving green home improvements. [Energize East Hampton](#) also offers information about available

energy efficiency rebates, free home energy assessments, and discount solar installations.

21. Can you include some information on electric heating options? Is that feasible in EH?

Electric heat is possible in 3 ways, [Geothermal](#), [Air Source Heat Pumps](#) or electric baseboard. You absolutely do not want electric baseboard, which is resistance heat and very inefficient. Geothermal is the most efficient followed by Air Source Heat Pumps. Both systems are more efficient than propane or oil. However, they use electric so you need a good amount of roof space to offset the additional consumption.

22. What's involved with replacing an old array? Are there options to recycle?

It is becoming more common to replace a 10+ year old solar array with a more efficient one. These old systems have already paid for themselves multiple times and we can easily create far more energy on the same roof surface using the more efficient Sunpower panels. Please note that the roof must be replaced unless it is a standing seam metal roof that was not penetrated. There are options for recycling solar panels. Contact the installer to find out what options and processes are available for recycling and disposal.

23. What is involved in adding a battery to an existing solar system?

Batteries can easily be added to an existing solar array and the rules have recently changed that now allow for you to get the NYSERDA battery rebate when installing a battery in conjunction with an existing system, not just new solar/battery installs.

24. Any suggestions for businesses with battery installations?

Due to the heavy loads a business usually has the commercial battery market is a bit behind the residential battery availability. This should be changing soon.

25. Are there programs that don't require any upfront costs? Do they include a battery as well?

Yes, solar systems and batteries can be fully financed.

26. Can a homeowner generate enough solar energy to run mid-sized house AND provide backup energy in the event of a power outage of multiple days?

Yes, when you have solar and a battery, the solar can run the essential loads of the home during the day in addition to recharging the battery, which runs the essential loads at night. Essential loads include heat (not AC), refrigeration, wifi, security and basic lighting, but not dryers or ovens.

27. Does the town expedite site plan applications if solar is included?

Permits for the installation of solar on residential and commercial properties that meet the provisions of East Hampton Town Code [§102-30](#) are "fast tracked" to be issued within 14 days of submitting a completed permit application.

28. None of our roof faces south, and much is fairly flat. Will solar still work for us?

A shallow pitched east or west roof works fine. We install on many flat roofs which work as well. North facing roof surfaces are not preferred unless very shallow pitched.

29. What is the per kWh rate PSEG pays a commercial entity when the meter spins backward?

When Net Metering, the meter spins backwards and you get a credit for the units that are sent back onto the grid. There is no money exchanged, it is volumetric, not financial. Therefore, the financial benefit of net metering is the same rate that the company pays for its energy. For example, if the commercial rate is \$0.13, then the net metering "benefit" is \$0.13 when the power is pulled back into the meter.

30. What is the life span of the panels and the installation? Has this been accounted for in the 30-year cost scenario?

Sunpower is a 34 year old publicly traded entity that has over 700 patents in the industry. They offer a wraparound warranty on the panel, the factory installed micro-inverter and the racking the panels mount on for 25 years. The panels are also warrantied to be 92% efficient at 25 years. As long as the roof is in good condition when GreenLogic installs the panels, they should last between 30-40 years.

31. Like some others in East Hampton, we are only in residence from April through October. What does this imply in terms of excess solar credits and net metering?

We look at 365 days of the home's consumption vs. 365 days of solar production. Because of net metering, it does not matter when you consume the energy because the energy the solar produces will be there as credits on your electric bill for you to consume at any point. A great example is daytime production vs. the consumption that same day and night. Net metering allows for the excess energy produced during the day to be consumed that evening. Excess energy creates the credit in your energy bank.

32. What are the structural requirements of the roof to handle the load of the solar panels?

We engineer all installations to meet the 130 mile per hour wind code. Therefore, if the roof is not structurally sound it will fail engineering and must be shored up, or additional supports added for it to meet the wind code.

33. Does Green Logic provide battery backup add-on systems for backup power in the event of grid outage?

Yes. Smart batteries like the Sonnen and Tesla allow for the solar array to operate when there is a grid outage. The solar powers the home during the day and the battery at night. Batteries can be installed without solar but there is no rebate available and they would be like a flashlight in a drawer where the power will continuously dwindle until the battery runs out of power.

34. Can a Solar Shade analysis be performed for a building that is being proposed and is not yet built based on a 3D Building Information Model Solar Study?

No. There is no technology to estimate the shade analysis based on a rendering because in order to measure the tree shade, the building must exist so the Suneye can be placed on the actual surface. With that said, we have done hundreds of new construction and major renovation projects, we can make educated guesses at how an array will perform based on a site plan and a site review of the existing trees.

35. Are the tax credits (State & Federal) useable over multiple years if taxes are less than credit in year 1?

Yes, the NYS tax credit can be taken over 5 years and the federal tax credit rolls over indefinitely until it is completely used.

36. Does Green Logic install solar tiles (i.e., a roof tile that has solar built into the tile itself)?

No, GreenLogic does not install solar roof tiles, only solar modules.

37. Are commercial buildings entitled to pass back credit?

Commercial installations can pass along excess energy to another commercial building as long as the meters are in the same name. This is called Remote Net Metering. This is only available commercially, not residentially.

38. I manage 4 properties for the East Hampton Housing Authority and we have potential for significant solar energy collection. The individual residential units are separately metered so my dilemma is this: how do we install on a multi-family (commercial) property and benefit the residents?

This can only be done in the form of a Community Solar project.

39. How much does a battery add to the overall cost with a purchase and are the batteries ultimately located outside or in a basement?

Batteries can be installed in basements (requiring a battery locker be built), in garages (protective bollards are required), or mounted outside the home. The

cost varies based on the type of installation but there is a 26% federal tax credit and a NYSERDA rebate to offset some of the cost of the battery and the installation.

40. What battery solutions have you installed (e.g., Tesla) with your solar solution?

Tesla Powerwalls, Sonnen Eco and soon the Sunpower Sunvault.

41. Does green logic installation handle permits and any other administrivia?

GreenLogic offers a turn-key price, that covers design, engineering, utility application and interconnection, permits, inspections, materials, labor and monitoring. You only need to approve the project, supply the necessary documents and provide access to the property and payment.

42. A study noting potential solar sites in East Hampton and their possible solar productivity was issued this week. How accurate or valid was this effort?

The [Long Island Solar Roadmap](#) was an effort lead by The Nature Conservancy and Defenders of Wildlife, in collaboration with a consortium of stakeholders representing multiple Long Island municipalities, the solar industry, electric utilities and numerous environmental groups and non-profit organizations. The Long Island Solar Roadmap aims to advance deployment of mid- to large-scale solar power on Long Island in a way that minimizes environmental impacts, maximizes benefits to the region, and expands access to solar energy. The roadmap report, as well as an interactive map of potential solar locations across Nassau and Suffolk County (including East Hampton) that meet the project criteria, can be accessed using the link above.