

## Questions and Answers About Using Solar for Energy in My Home (Flint Energies as July 1, 2020)

Q-What is rooftop solar and how does it work?

A-Solar photovoltaic panels are installed to face the sun and convert the sun's energy to electricity. That energy can supplement energy usage in your home.

Q-What if I want to install solar panels on my existing roof?

A-Since your solar panels will claim a 20- to 30-year life, it will be important that your roof has another 20 to 30 years of life before your panels are installed. Otherwise, you should consider the costs of panel removal and resetting when your roof needs replacement.

Q-What federal subsidies can help me pay for my solar power generation?

A-Check [www.irs.gov](http://www.irs.gov) for the latest energy incentives available.

Q-Does Flint Energies offer rebates for solar installations?

Q-No, Flint does not offer rebates with the idea that rebates earned by a few members would be paid for by many other members of the cooperative.

Q-What are the components of a residential solar (photovoltaic or PV) system?

A- A residential PV system typically consists of a roof-mounted array and one or more inverters to convert the DC output of the panels to AC power which can be used in your home. Systems may include energy storage (batteries) for times when the sun isn't shining.

Q-What are the safety issues with solar generation?

A-All inverters must meet strict UL-1741 and IEEE 1547 standards to prevent your system from generating power onto Flint Energies power lines which could injure a line worker.

Q-Does the solar generation system provide all of my power?

A-Not usually. Solar energy will not be generated at night or on cloudy days.

Q-Where will I get electric power at night and on cloudy days?

A-Most consumers expect to buy power from their utility at those times.

Q-Can I store the solar energy which is generated during the day and use it at night?

A-Some systems offer battery storage which add to the expense of the system's installation.

Q-Can I use solar power and not have any connection to Flint Energies?

A-Yes, you can. We know of a few off-the-grid locations which do not have power from Flint in our service territory. There are a few hunting cabins and mobile homes without power connections where consumers may be using combustion engines to generate power.

Q-What is net energy metering (NEM)?

A-Net Energy Metering is a billing mechanism that allows solar energy consumers to not only offset electric energy purchases from Flint at full price, but also to receive bill credits for any excess power generated at Flint's avoided cost of power.

Q-What is Flint's avoided cost of power?

A-Currently, \$0.02637 per kWh is the amount Flint will pay you if there is any excess over and above what you used for your own home.

Q-Why is avoided cost of power used as the price which Flint pays for my excess power generation?

A-That number is equivalent to the rate Flint would pay in the wholesale market to buy our “next” kilowatt hour of energy for resale. It’s currently 2.6 cents/kilowatt-hour.

Q-How much is solar used for energy in the United States?

A-Although solar generating capacity accounts for only about 2% of total U.S. electric generation, the growth rate has been dramatic, especially since 2005.

Q-How can I be sure that I have chosen a reputable dealer/installer to build my solar generation?

A-Solar companies should always be licensed contractors able to perform the work.

Q-How are most solar generation units sized?

A-Most of the marketplace has solar units arrayed to provide 3-10 kilowatts (3000 to 10000 watts)

Q-Will a solar generation unit work in Georgia? And on the Flint Energies system?

A-Yes. There are already Flint Energies members who have installed their own solar power systems.

Q-How many kilowatt-hours will solar panels generate?

A-Generally, one kilowatt (1000 watts) of solar generation will produce roughly 1,500 kilowatt-hour per year. Flint Energies average member uses about 1300 kilowatt-hours per month or 15,600 kilowatt-hours per year.

Q-How long will the solar power generation last?

A-Most vendors claim that solar systems have a lifetime of 20-30 years.

Q-How much will solar cost at my home?

A-This is largely based upon the size of system you install. A 10-kW system might cost \$25,000 to \$35,000. Smaller systems would be less.

Q-How much roof or ground space will I need to install my solar generation?

A-1000 watts of solar panels takes about 75 square feet of space. You will also need indoor space for the interconnection and the inverters.

Q-What if I have trees or other shading over my solar panels?

A-Output of the solar panels is proportional to the area and efficiency of the cells on the panel. Shading a single cell will throttle the output of the entire panel.

Q-How much can I save using solar power generation?

A-This is dependent upon how much solar generation that you install.

Q-What kind of maintenance might be necessary for a solar power generation and panels?

A-You might see inverter repair and replacement, washing of the panels, panel degradation, wiring, and lightning issues.

Q-What if I sell my home with the solar system installed on it?

A-You certainly can move or sell your home. The solar system may be seen as an increased value to your home unless the system is not working as designed. If your solar system has been leased, the new homeowner will need to be informed.

Q-Should solar power generation be my first option?

A-Remember that creating energy efficiency in your home will be cheaper than solar power generation. It is easy to get excited at the thought of generating your own electricity with a rooftop solar electric array. But it’s important to remember that spending tens of thousands of dollars to generate electricity to power inefficient

lights and appliances may not make financial sense. You should always start with an energy audit from Flint Energies and make those improvements first.

Q-Is Flint Energies investing in solar power generation?

A-Yes. We are part of Green Power EMC which has placed solar panels at Huntington and Thomson Middle Schools and at Clean Control Corporation in Warner Robins and Marion County Middle High School in Buena Vista. In addition, we receive solar output from a large Southern Power facility in Taylor County.

Q-Will I still get a bill from Flint Energies if I install rooftop solar panels?

A-Probably. With batteries installed, your system will still probably need for Flint to “stand-by” to provide electric service after several rainy/cloudy days or at night.

Q-Is my home a candidate for a solar installation?

A-Perhaps. Please refer to Flint Energies’ checklist for rooftop solar.

Q-Can I install my own home solar system?

A-Yes, many do-it-yourself homeowners have installed their system, though you must adhere to local, state and national codes including codes, and homeowner association covenants.

Q-Can I store solar power for use at night?

A-With batteries, yes, you can.

Q-If a solar system is of interest to me, what would my next step be?

A-Seek a reputable contractor, evaluate the energy efficiency of your home, study the size, angle and orientation of your rooftop, confirm the age of your roof, and evaluate tree cover over the roof.

Q-Besides solar, what alternatives are available to help save home energy use?

A-Energy efficiency measures can also save some homeowners on their monthly bills.

Q-What will Flint Energies need to know if I move forward with solar on my rooftop?

A-Apply to Flint online at <https://www.flintenergies.com/distributed-generation/>