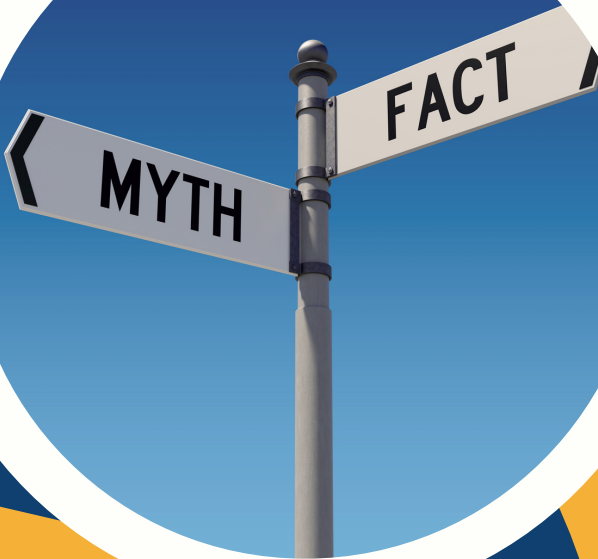




SOLAR IN CT

SOLAR MYTHS

What's the real story?



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MYTH 1: SOLAR IS EXPENSIVE

Sometimes people believe solar to be expensive but quite the opposite is true.

Leasing a solar PV system has no upfront cost and will save you money on your electricity costs. There are also no upfront costs to participate in SCEF, CT's version of community solar. Instead, you save a couple cents on every kWh of electricity that you use.

Purchasing panels does come with an upfront cost but this amount can be financed through a low-interest loan and is eligible for a 30% federal tax credit. Over the life of the panel, chances are you will earn more income from your array than from a lease agreement.

MYTH 2: SOLAR DOES NOT WORK WELL IN CT

There is a misconception that it must be sunny and warm for solar to function. Though temperature increases and decreases can affect efficiency, the main factor is the amount of sunlight hitting the solar cells. Over 50,000 Connecticut homes have solar!

Your panel receives more sunlight in the summer and so your array is most productive then. However, even on cloudy winter days some sunshine makes its way through the clouds. In winter, the days are shorter, the sun is lower in the sky, and there are more inclement days so production is lower.

Even with seasonal fluctuations, homeowners find that they save thousands of dollars on energy costs over the life of the panels.

MYTH 3: SOLAR IS DANGEROUS

Sensationalized stories abound about the dangers of solar for fire fighters. However, while solar arrays may present some challenges, fire fighters receive training to reduce risks.

They learn how to shut down the system quickly using the rapid shutdown mechanism required on solar arrays by US electric code. They also train to assess roof stability, divert water streams from active systems, and take other appropriate precautions.

Interesting to note, many firehouses in Connecticut have solar installations on their rooftops.

MYTH 4: SOLAR IS NOT ECO-FRIENDLY

Like any consumer good, solar panels must be manufactured from raw or recycled materials. The frame is made of aluminum, glass, and plastic while the solar cells, in most cases, are made of silicon. This is the same stuff computer chips are made from and that form your silicon baking sheets.

Silicon is not found alone in nature but rather in oxidized form along with other elements. To produce the stock needed, quartz or another material is heated in electric furnaces and the silicon is separated out and molded into the purified ingot. This is an energy intensive process which results in some greenhouse gas emissions.

However, according to the National Renewable Energy Lab, when considering the complete material life cycles, coal and oil have over twenty times the emissions per kWh and natural gas (which is mostly methane) has eleven times the emissions.

MYTH 5: SOLAR IS UNFAIRLY SUBSIDIZED

Subsidies, used properly, spur innovation and help establish the world we want to see. If we want a clean, healthy planet then that's where we should focus our money. It's only since 2010 that we started to see any significant money flow into renewable energy.

Yet we have been subsidizing the fossil fuel industry for decades in the form of tax breaks, grants, and so on. If the cost of externalities is included (health and environmental issues resulting from fossil fuel production and combustion), the International Monetary Fund estimated that we subsidized fossil fuels to the tune of \$5.9 trillion worldwide in 2020 alone. Closer to home in CT, utility customers have been forced to subsidize gas pipeline construction. Only recently has PURA called for an end to the gas expansion program.

MYTH 6: SOLAR PANELS CAN'T BE RECYCLED

Solar panels last a long time, typically 30 to 35 years. But at the end of this time, they need to be properly managed. 96% of the materials (aluminum, glass, plastic, silicon, and small amounts of other metals) can be recycled. Europe is farther ahead on this, with most PV manufacturers taking part in a recycling network.

The US is just getting started. Because the cost to recycle the panels is fairly high, many panels are ending up in landfills. Research is currently being done to find better and more cost-effective ways to recycle panels. Creating recycling plants would boost local economies and further reduce the relatively low greenhouse gas emissions associated with solar energy. It is expected that robust recycling programs will be in place as the first panels installed decades ago reach the end of their useful life.

MYTH 7: SOLAR DAMAGES YOUR ROOF

Properly installed panels don't damage your roof but rather protect it by shielding it from the elements.

The type of roof you have will determine how the solar array is installed. Most homeowners in Connecticut have asphalt shingles over plywood. Usually mounting hardware is secured through the plywood into the wood beams below with lag bolts. The solar panels connect to the mounts.

The most important step is to ensure that your roof will last as long as your solar panels (two decades or more). Ask your installer.

MYTH 8: THE GRID CAN'T SUPPORT SOLAR

A recent analysis by ISO NE, the New England grid operator, showed that PV installation has helped to **reduce energy demand from the grid**. The evidence also indicates that solar serving a local energy load helps to **reduce strain** on the grid.

Solar electricity used on premises never travels to the grid and this results in a decrease in traffic on the grid and can even lessen the need for added grid infrastructure in some cases.

Solar also helps with resiliency. Solar production peaks during summer days at the same time everyone wants to run their air conditioners. By providing a large amount of local generation, it reduces the likelihood of summer blackouts and the need for supplemental fossil fuel plants.

MYTH 9: SOLAR WILL REDUCE HOME VALUE

Sometimes homeowners are concerned that adding solar panels on their home will reduce their home's value. However, research data shows that this is not the case.

Zillow reported that nationwide, for the period March 1, 2018 through February 28, 2019, homes with solar panels sold on average for 4.1% more than homes without.

Everyone prefers lower energy bills and this makes solar very attractive for many people.

MYTH 10: SOLAR POSES A HEALTH RISK

Now that the fossil fuel industry has lost its war on climate science. They've turned their attention to spreading misinformation about clean energy.

One untruth that is both troubling and ironic is the idea that solar energy is bad for your health. There is no evidence to suggest that solar installations cause any health problems.

In fact, solar generation offsets the pollution from fossil fuels. Unlike solar electricity production, fossil fuel combustion does have health impacts. A Harvard study found that 350,000 premature deaths in the US could be linked to pollution from fossil fuels.

BECOME A MYTH BUSTER

Becoming a "solar myth buster" involves dispelling misconceptions and educating others about solar energy. Here are 5 actions you can take to become an effective solar myth buster:

1.Educate Yourself: Start by thoroughly understanding how solar energy works, its benefits, and its limitations. This will give you a solid foundation to counter common myths with accurate information.

2.Research Myths: Identify common misconceptions and myths about solar energy. These could relate to cost, efficiency, environmental impact, and more.

3.Stay Updated: Keep up-to-date with the latest advancements and trends in solar technology and energy policy. This will help you counter new myths that may emerge.

4.Help Educate Others: Share information with friends, neighbors, legislators and others through discussions, social media, editorials, and other communications. Calmly and respectfully correct misinformation whenever you encounter it.

5.Fact-Check and Reference: Always back up your claims with reliable sources and data. Referencing reputable studies, organizations, and experts in the field adds credibility to your debunking efforts.

Remember that patience and understanding are essential when addressing myths. People may be resistant to change their beliefs, so approach the conversation with empathy and a willingness to provide well-researched information. Over time, your efforts can help clear up misconceptions about solar energy.

For more information, visit PACEcleanenergy.org

