

# **A Sustainable Environment: Our Obligation to Protect God's Gift**

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## **Solar Energy is the Way to Go – And NOW!**

The Intergovernmental Panel on Climate Change (IPCC) stated in its 2018 report that preventing an increase of 1.5° Centigrade (C) is imperative. The report highlights a number of climate change impacts that could be avoided by limiting the increase in temperature to 1.5° C as opposed to 2.0° C or more. As an example, the sea level rise by year 2100 would probably be four inches lower with global warming of 1.5°C rather than an increase of 2.0°C. Also, the report indicates that the coral reefs will decline by 70-90% with the 1.5°C rise rather than 99+% loss with a 2.0°C rise. Despite all the efforts to reduce carbon emissions, in 2018 they increased by 3.4% globally and we now have the highest concentration of greenhouse gases since preindustrial time.

There are many routes and technologies to reduce carbon emissions, but the one that has gained great interest is solar energy. Since 2010 the price of solar panels has decreased by over 65% and will, no doubt, continue to decrease albeit at a slower rate. The other benefit for installing solar energy is the investment tax credit (ITC) being offered by the federal government. It has been at 30% since its inception in 2005 but 2019 will be the last year at this rate. Beginning in 2020, the ITC will drop to 26% followed by another reduction to 22% in 2021. After that the rate will go to 10% in 2022 and down to zero from 2023 and on except for commercial solar. It is for this reason that anyone interested in solar energy should take advantage of the highest ITC of 30% for this year only.

To determine whether your property is a good candidate for solar energy, a simple assessment is to use the Google Earth app. Find your property on this app, and if you can see it, the sun can see it. Then you can use Google Earth's sun tool to determine how much sun will shine on your property during the day as a function of the time of the year. Another option for determining whether the property is a good candidate is to use a solar calculator which can be found on most websites of energy providers. The solar calculator will estimate the capital investment, electrical generation, and net cost based on the solar panel efficiency, amount of sunlight, and rebates. In addition to the ITC, solar power generators can also obtain Renewable Energy Credits from most states.

For most commercial facilities, the investment in solar energy can have an excellent return of five to seven years while having a positive benefit on the environment – reducing carbon emissions. Residential installations can have a similar return but obviously with a smaller investment. Even for private homes, the ITC and RECs will greatly help the return on the investment. In either case, if the initial capital is not available, the installation of solar panels can still be done with a Power Purchase Agreement (PPA). Through a PPA, the solar installation company will make the initial investment for the property owner, and the owner will be required

to make payments to the developer from the electrical power savings. After the initial investment is paid back to the developer, the solar panel system will be turned over to the property owner.

If the property owner is a not-for-profit like a house of worship, the ITC is of no benefit since the organization does not pay state or federal taxes. In such a situation, the PPA is of greater benefit since the solar developer does pay taxes and can obtain the 30% rebate. Another option for a house of worship is to find a group of parishioners who form a limited liability corporations (LLC) by investing the money necessary to pay for the solar installation. Then this LLC will receive the ITC and thus reduce the required capital investment. Again, the house of worship will pay the LLC from the electrical savings until the system is paid off. The LLC can then donate the solar panel system with possible additional savings.

Another option for a house of worship is to install a solar energy system as described above via an LLC. However, instead of the house of worship benefiting from the energy generated by the system, the benefit could go to some of the parishioners who have subscribed to the system. This would benefit any parishioner that wants solar energy but lives in a condo or apartment building, for example, where their own solar generation is not possible. This type of system is called community solar and provides opportunities for those that can't do it on their own.

Whether you are a commercial, private, or not-for-profit property, this is the year to install solar energy on your property. Take advantage of the declining solar panel prices as well as the 30% investment tax credit available through the end of 2019.