

Solar Energy Reduces Our Carbon Footprint

Mosques can do their part in preserving the environment — and economically too

BY ISNA GREEN INITIATIVE TEAM

AS PRESIDENT BIDEN SAID AT THE COP26, “CLIMATE CHANGE IS AN existential threat to our planet.” We are witnessing the damage and destruction from back-to-back unprecedented and powerful hurricanes, floods and vast fires on the West coast.

According to the National Oceanic and Atmospheric Administration, the average temperature of 2021’s meteorological summer — June, July and August — was 2.6°F (1.45°C) above the 20th century’s average, a troubling sign as global temperatures continue to increase faster than previously thought (<https://www.ncdc.noaa.gov/sotc/national/202108>). The last seven years have been the warmest years on record. Nineteen of the 20 warmest years have occurred since 2000.

More than 18% of the contiguous U.S. experienced record heat this summer. California, Nevada, Utah, Oregon and several other states had their hottest temperatures on record; no state reported below-average temperatures. This record heat coincided with extreme weather nationwide, including extreme heat, wildfires, drought and flooding.

Scientific studies continuously draw our attention to the perils of global warming. One example is the rapid global decline in forests, pastures, cropland and fisheries, which means that these renewable resources are becoming ever harder to replenish. Human progress and growth are inevitable; however, the resulting potential harm can be minimized if protecting the environment is kept in sight. The fast pace of climate change and the uncontrolled consumption of diminishing nonrenewable resources demands that we be proactive and take care of our planet.

UN Secretary General António Guterres told the COP26 Conference on November 1, 2021, “We are fast approaching tipping points that will trigger escalating feedback loops of global heating. But investing in the net zero, climate resilient economy will create feedback loops of its own — virtuous circles of sustainable growth, jobs and opportunity.”

Although wealthy nations made optimistic announcements and pledges about providing financial support to mitigate such impacts, there is genuine skepticism about whether they will ever be fulfilled. As former President Obama said at COP26, most countries have not honored their past pledges.

The adverse effects of using fossil fuels — excess carbon dioxide, increasing temperatures, rising sea levels and others — are global in nature. In addition, the ensuing production of unwanted byproducts create air and water pollution and release huge amounts of greenhouse gases into the atmosphere.

These catastrophic effects can only be controlled by joint governmental efforts,



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especially those undertaken by the most-polluting countries as well as wealthy countries investing in reducing fossil fuel usage and carbon emissions. Promoting and adapting solar and wind energy is a critical component of all such efforts. However, our communities must also demand that all of our elected representatives recognize and eliminate the harm climate change does to vulnerable communities.

We must strive to ensure a brighter future for the



coming generations, as God has made us Earth's caretakers and protectors. The ISNA Green Initiative team's mission is to get all Muslims, mosques and so on to adopt environmentally friendly practices both because they are needed and a religious obligation. Even small steps can conserve energy, lower our energy bill and reduce our carbon footprint. Improving insulation, as well as using LED bulbs, lights with sensors, energy efficient heating/cooling systems and appliances, and smart thermostats also help conserve energy.

Above all, Muslims can install solar panels, which absorb sunlight with photovoltaic cells, generate direct current (DC) and then convert it to usable alternating current (AC) via inverter technology. These panels, which create no waste or emissions, produce clean, renewable energy from a source that requires no locating, excavation, transportation or combustion: "And He subjected for you the Sun and the Moon, continuous in orbit, and subjected for you the night and day" (14:33).

The Sun, a mercy from God, is critical for all life on this planet. Imagine if it didn't move in its prescribed orbit. Its energy is utilized in numerous ways and doesn't cost a cent, for it's the divine gift of life. Solar panels are also cost efficient, now that their cost has dropped significantly. With a moderate upfront investment, solar energy can reduce one's electric bill significantly and, in many cases, generate a profit, protect against rising energy costs and reduce carbon emissions. Normally, they last for 25 years and require hardly any maintenance. Best estimates are that the cost of installation is recovered within 15 years and with considerable savings for future operating costs.

As most mosques/Islamic centers operate on a limited budget, funds for solar panels might have to be raised. However, once installed, the savings on

energy bills can be used to benefit the community. Many states offer renewable energy grants to help nonprofits partially cover the costs; such information is readily available. In 2008, the Mosque Foundation in Bridgeview, Ill., became the nation's first solar mosque, thanks to a grant provided from the nonprofit organization Faith in Place.

Each community needs to develop its own fund-raising approach. For example, the Islamic Center in Evansville, Ind., requested each family to make a one-year pledge of \$1,000 with the option of forming a group of families to do so. Realizing the project's environmental good, the community enthusiastically donated more money than required.

Other ways are to pledge the cost of one or more panels; engage in crowdfunding; form a for-profit company, purchase the solar assets and sell the electricity to the congregation for a profit; solar lease financing (the installation company pays for the installation and maintenance, and the congregation pays a fixed monthly price over the course of the lease); and power purchase agreements (the solar power company installs and maintains the panels, and the congregation agrees to buy the electricity at an agreed-upon monthly rate).

Before installing solar panels, however, evaluate the process thoroughly. The best place to install the panels is the building's south or southwest roof, without any trees blocking the sunlight. The other alternative is to install them at the ground level facing south or southwest. The number needed can be determined by knowing the monthly electric bill for a year and using a solar installation calculator available on Google or other search engines.

One must carefully compare the quotations given by different vendors. Most vendors offer various types of inverters with their solar panels. Therefore, the prices might be a comparison between oranges and apples. Moreover, as there is a considerable price variation in the vendors' quotations even for the same type of inverters, get at least two or three quotations. Normally, the panels' warranty is for 25 years, and 10-15 years for inverters and service. It would be prudent to negotiate a 25-year warranty for the whole system.

Over time, solar panels will reduce fossil fuel consumption and one's carbon footprint, as well as help the environment and free up money for other useful projects. But most importantly, doing so helps us partially fulfill our religious obligation. If you decide to install solar panels, the ISNA Green Initiative Team (isnagreenmasjid@gmail.com) will appreciate it and be glad to help out.

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