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## Advancing Environmental Goals through Solar Energy Adoption

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## DESCRIPTION

The switch to renewable energy has become essential to reaching global sustainability targets as environmental issues throughout the world worsen. In this shift, solar energy is one of the most important renewable energy sources. Solar energy provides a clean, sustainable, and scalable way to satisfy the future's expanding energy needs by harnessing the sun's power, which is a plentiful and limitless resource. The United Nations' Sustainable Development Goals (SDGs) and other global sustainability goals stand to benefit greatly from solar energy's capacity to lower greenhouse gas emissions, increase energy access, and spur economic growth.

Adoption of solar energy is primarily motivated by its promise to slow down global warming. The main cause of greenhouse gas emissions worldwide is the burning of fossil fuels for transportation, heating, and electricity production. However, when solar energy is generated, no emissions are produced. Countries can drastically lower their carbon footprints by switching to solar energy from fossil fuels. Actually, one of the best weapons in the fight against global warming is solar energy. Making the switch to solar energy can assist achieve the Paris Agreement's global goals of keeping the rise in global temperatures well below 2°C and decarbonize the electrical industry, which is one of the biggest emitters in the world.

Solar energy not only lowers carbon emissions but also advances the objective of expanding access to energy, especially in remote and underserved areas. Nearly 800 million people globally, mostly in rural areas, do not have access to power, according to the International Energy Agency (IEA). It is frequently costly and challenging to expand traditional grid-based electrical infrastructure to these areas. In contrast, solar energy can be distributed in a decentralized fashion. Remote populations can benefit from electricity provided by small-scale solar panels and off-grid solar systems, which will increase access to basic utilities like clean water, healthcare, and illumination. In order to achieve energy security and lessen reliance on imported fuels, solar energy is also necessary. To meet their energy needs, many nations, particularly those in emerging nations, mostly rely on imported coal, natural gas, or oil. Because of this dependence, they are susceptible to changes in energy prices and interruptions in supply. Because solar energy is produced locally, it can encourage energy independence and lessen reliance on these outside energy sources. Additionally, the economic viability of mass solar adoption increases as solar technologies continue to become more affordable, giving nations a reliable and consistent energy supply.

In terms of the economy, solar energy offers chances for economic expansion and employment development. With millions of people working in the production, installation, and maintenance of solar systems, the worldwide solar business has grown rapidly in recent years. The solar business is often regarded as a major force behind economic growth, especially in rural areas where job prospects are frequently few. Due to the significant drop in solar panel prices, solar energy is now more affordable for both consumers and companies. As a result, solar energy now has access to new markets, opening doors for innovation and entrepreneurship. Governments can combat climate change and promote a green economy that generates sustainable jobs by investing in solar energy. Apart from these immediate advantages, solar energy also supports other sustainability objectives like advancing clean water, health, and education. By using solar water pumping and purification technologies, solar-powered systems can supply clean water, lowering the demand for fuel-powered generators and enhancing public health. Additionally, educational facilities can be powered by solar energy, giving students the tools they need to flourish and enabling schools in remote places to stay open after dark.

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