

## Renewable Resources: A Brighter and Better Future

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Should solar energy be implemented in smaller communities as a way to save money?

Solar energy is a great solution for less fortunate countries and villages to provide power for cooking, cleaning, and for everyday necessities at a lower price. There are a lot of solar-powered products and new ways to use the sun's energy, no matter if it's residential or for commercial use. One of the biggest ways to decrease the cost of using electricity to heat potable water is by using solar hot water. Solar energy will not only help isolated and poor countries gain electricity, but help keep our planet cleaner. The U.S could also use solar energy to help the economy get back on track. "Solar HVAC systems, battery-backed off-grid systems, solar farms and more are at the forefront of the solar power world innovations, with more to come" (<http://www.solarenergy.com>).

Solar energy is more than just solar panels that are placed on people's houses to provide electricity; that is just a small part of the of a bigger picture. The second part to the big picture is thermal energy; this is when using the sun's energy comes to play. If we can get the proper funding to install these panels in less fortunate countries and communities, we will be able to save thousands of lives. In some countries, they have small villages or towns that are isolated and cannot receive electricity. Solar energy will provide them with the power that they need during the day and reserves for night-time use. Using solar energy does not cost anything because you are using the sun's natural heat rays to generate electricity. The only cost of using solar energy is the installation of the solar panels to capture the sun's heat rays, and this will also help the community save money for other things that they may need (<http://www.solarenergy.com/>).

The village of Ruphai is a small community located in Bihar. This is a small, isolated village that cannot connect to a traditional electric grid, so solar energy will be a perfect solution for them. In order for this village to have power, they have to use firewood for lighting and heat, and they also use diesel-powered generators. These things left their houses smoky and an unsafe environment to live in. Over 60% of the population struggles with these issues and truly need help. The country Bihar spends almost a billion dollars each year on power, particularly on fuel and other substitutions that are hazardous to the environment and themselves (Godrej, 2011).

Solar hot water heaters are a great way to heat water using the sun's energy. The village of Ruphai could really use such a device to heat their water. The solar hot water heaters are connected to a solar collector panel that captures the sun's heat rays and converts into energy that can be used to heat water. The solar collector panels are also weather resistant so that there is no worry about any type of weather damaging them. The solar hot water heater will also use a direct passive water heating and pressurizing system that doesn't use pumps for the water. The passive direct system relies on cold water to sink and for warm water to rise that is heated by the solar panels. The solar heater also stores hot water and solar energy to continue heating in the afterhours when the sun is not out (<http://www.solarenergy.com/>). Solar products like these will make a big difference in today's economy around the world.

Solar lamps will also be a very helpful solution for the village of Ruphai and for today's economy. Solar lamps generate their own energy and store it throughout the day by using direct sunlight. Products like these would be great for this village because it can provide light for them at night in their fields and in the yards of their homes. Solar lamps are expensive to

buy, but the amount of money that you could be saved from using electricity is limitless. (Brian, 2012) The power of the sun can be used in many ways that will reduce the amount of money spent on energy and fuel for generators.

Using solar products in a village like Ruphai would open up the opportunities for green business. These will create jobs and bring more money into places where a lot of money is not being made. "Companies surveyed for the report that supply clean energy products and services to the rural poor have seen annual gross revenue grow by an average of 36% since 2004" (Godrej, 2011). Using solar energy helps in more ways than one.

Today, people are very dependent on electricity that uses oil and coal, which is said to contribute to greenhouse gas build-up. Although solar energy is being used around the world and country, it's still not enough to protect the environment. The amount of sun that shines down on the United States is more than 2,500 times more than the energy we use, so solar energy may very well be the answer to for the economy. Many of the cities in the United States are already taking advantage of using solar energy to reduce power cost and to protect the environment. Solar energy helps to protect the environment by decreasing the amount of fossil fuels that we use on a daily base. This will decrease the amount of air pollution and greenhouse gases that seem to be breaking down our ozone layer. If more companies were to invest in this technology, we could truly make a difference for our environment (Chandler, 2012).

Solar energy may very well be a game-changer for the world and the way that we use our energy. Using solar hot water heaters, solar lamps, and solar panels for our everyday electricity use will not only help our environment, but put more money in our pockets. Solar energy will benefit isolated villages and less fortunate countries by providing them with free

energy only at the cost of installation of the product. Using solar energy will help us save our fossil fuels so that we can use them when we really need them. When all of the oil is used up, we will not have any other choice but to turn to the alternative energies, such as solar energy, so why not start using it now? Solar energy is one piece to the complex answer to a longer, healthier life and wealthier countries.

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