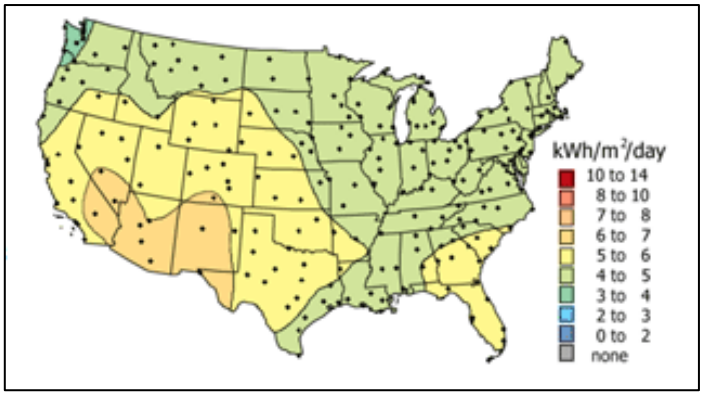
Solar Power: Powering the Future

Alternative Energy Sources

Today's society is facing a serious crisis regarding energy demand and finding resources for our increasing energy demands. As climate change and global warming continue to accelerate, the demand for these green technologies is at an all-time high. Solar panel technology has become exceedingly popular among modern application of green technology. This particular method is a great way to help power the world and cut dependence on conventional, environmentally hazardous energy sources. Wind energy, hybrid cars, biofuels, and hydroelectric power are a few examples of the renewable sources that are applied today. However, many countries are already transitioning into more Earth-friendly energy sources. The following report will explain key aspects of solar technology, including what it is, the different types, how it's useful, and potential drawbacks.

Figure 1: Annual average daily solar radiation per month



What is Solar Technology?

Solar technology uses the sun's energy to help transfer power to our homes, businesses, or even modes of transportation. Photovoltaic (PV) cells are used on solar panels to collect sunlight. Every hour, the sun produces enough energy to power our planet for an entire year (Article).

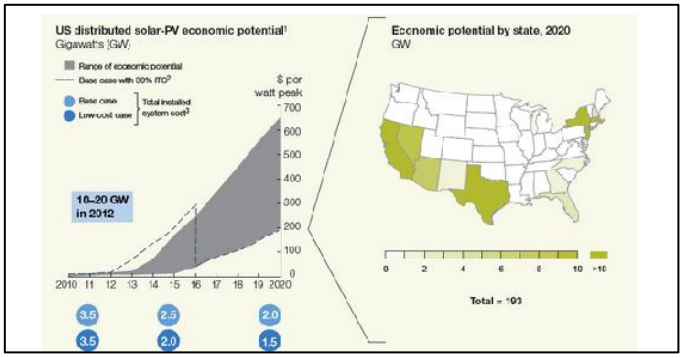
Types of Solar Technology

There are multiple types of solar collectors to meet different energy needs. Some buildings use a passive solar method, which captures the sun's heat to supply space heating and light. Parabolic troughs, a method of concentrating solar power, use mirrors to focus sunlight and produce high-intensity heat sourcing. This creates mechanical power for generators, producing electricity. Flat-plate collectors absorb heat from the sun directly into water or another fluid to provide hot water for space heating (Solar Energy).

Figure 2: Parabolic troughs

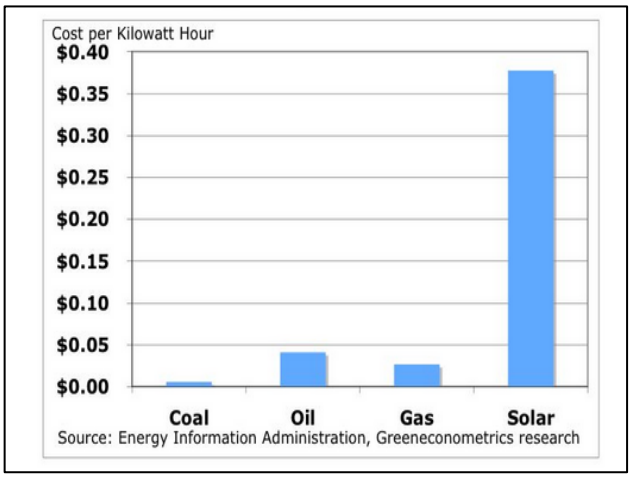
Advantages

Figure 3: Economic Potential



There are many advantages to using the sun to meet our energy demands. The most noticeable benefit is that the sun is almost always available, allowing consumers to harness the energy continuously on a cloudless day. Another way that solar is beneficial is that it is an inexhaustible fuel source, which means it doesn't pollute the earth. Energy is taken into the system, but no pollutant is expelled into the atmosphere (Solar Energy). Additionally, since the solar industry competes with retail rates, there is economic potential to gain in high-resource areas (Three Charts).

Figure 4: Energy cost per kilowatt hour



Disadvantages

Despite the many benefits solar technology has to offer, there are a few setbacks. The main disadvantage is cost; however, fossil fuels are still much less costly to use as an energy source than solar (Disadvantages). Currently, the national average cost per watt ranges from $6 to $8 (Solar Energy Cost). A second drawback is *when* the solar panels can operate; solar energy can only be absorbed when there's daylight. Conversely, natural gas and coal plants can run constantly (Article).

Conclusion and Future Implications

On the topic of future energy sources, green technology is a major factor. This report explored a few aspects of solar panel technology, including what it is, how it's used, the advantages, and the disadvantages. The future of solar is on the rise and is looking very promising. Solar energy provides a useful strategy for keeping up with increased energy demand while providing a renewable, Earth-friendly energy source. One step you can take to help the future of solar is writing to your local congressperson. Ask them to vote in favor of advancing research and funding of solar technology. For more information on the use of solar energy, please visit www.solarenergy.com.

Works Cited

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