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Solar Power in the U.S

As technology continues to advance, and the demand for greater energy increases, new sources of energy are discovered and developed. As of now, coal, natural gas, and petroleum provide majority of the energy used to generate electricity. However, these sources are often hard to pinpoint and the effects on the environment are astronomical in comparison to renewable sources of energy. In the recent years, carbon dioxide emissions have been evident due to increases in energy production worldwide. The result of these increased emissions can be observed over time, however there are side effects that can be noticed now. Drastic changes in climate and rainfall patterns have been linked to these emissions. Carbon dioxide is not the sole contributor but it can be easily noted as a large factor.

As species continue to die off, and ecosystems become less diverse, the shift from non-renewable to renewable is a necessity. As can be seen specifically in the Mediterranean Sea, these processes are taking place worldwide. “Data recovered from its shores and depths have shown that sea temperatures are steadily increasing, extreme climatic events and related disease outbreaks are becoming more frequent, faunas are shifting, and invasive species are spreading” (Lejeusne, 2009).

Solar power has been increasingly attractive for future planning. As the southwest United States receives roughly 4500 quads of BTU in terms of solar radiation

per year, this is an energy source that has been relatively untapped. As noted in the article, converting only 2-3% of this into usable electricity would be enough to provide for the entire country's energy use for one year. Photovoltaic solar cells can be built uniformly to draw radiation from the sun. These panels have a film that captures and stores the energy in a cell. Using pressurized air caverns to hold the energy, electricity can be generated through the night hours when there is no sun. These caverns can be created by converting existing infrastructure that is no longer in use such as mine shafts and other underground facilities. The pressure causes a turbine to spin and generate the electricity. In order to effectively transport this electricity, a direct current line would be build from the photovoltaic plants to the caverns located across the country.

The Blythe Solar Power Project has potential to generate electricity for over 800,000 homes when it is fully operational. The California Bureau of Land Management has land that is suitable for this project. The southwestern portion of the United States is a prime location for these types of power plants. The land is not being used currently, and as technology continues to improve, the amount needed will continue to decrease.

In this process, government subsidies will play an important role in determining the outcome. As carbon dioxide emissions would decrease, the capital saved could be used to improve the already enticing industry. With a projected 400 billion dollars in subsidies over the next 50 years, the solar projects could be completed. Also, perhaps a tax on all carbon producing entities based on the amount they produce on a monthly basis could be enacted. This will sway some of them, if not all to at least begin to think critically about the processes involved from A to Z.

Overall, the shift from oil and coal to solar power will drastically reduce the United States' dependency on foreign oil. This will have an impact on foreign affairs as well as the military presence needed in other countries. As the budget for these existing entities decreases, the improvement in the renewable resources field can begin. In the years to come, action needs to be taken based on rational thinking rather than economic gains. If our children will not have air that is suitable to breath, what is the point of continuing the current practices of the world?

References:

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