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Analyzing The Potential of Solar Power Within Developing Nations

Introduction: Due to various environmental and socioeconomic factors, there is a lack of accessible energy sources in developing countries. This has resulted in an energy crisis. Energy insecurities are devastating developing countries' national healthcare systems, native ecosystems, and overall energy independence. Solar energy is an alternative for clean, affordable, and geographically applicable electricity production. These aspects of solar energy systems have driven scientific research to consider the potential of solar power systems within developing nations.

Methods: I used a dry-lab approach. I utilized multiple databases to compile my data. Results were then assessed based upon variables such as solar usage and the average income of the user. Quantitative research methods were applied to calculate the exact cost of photovoltaic systems within the environments that I chose. Further I analyzed and cross compared case studies surrounding financial systems within developing countries.

Results: My research findings indicate that when solar power is utilized in developing countries, there is increased resistance to climate change and an increase in environmental stability. Further, the research reflects that when photovoltaic systems and solar panels are utilized they have proven to be reliable power sources that successfully promote economic opportunity and access to quality healthcare. Throughout my research it became evident that the initial investment of solar energy is a substantial financial barrier. Continued research reflects that there are multiple global organizations actively employing forms of microfinance to begin eliminating this barrier altogether.

Conclusion: The lack of reliable energy in developing countries is affecting the quality of life and creating a cycle of difficulties. My research reflects that despite the initial cost barrier, solar energy could be a viable solution for the problems that arise from energy inequality in developing countries.

Relevance: Renewable energy is a field that will only expand with time. Research providing insight on various applications in renewables could reduce financial barriers therefore contributing to higher accessibility. In order for renewable energy to hit its maximum potential it is imperative that different socioeconomic groups and environments be considered.