

Customer Satisfaction towards the Use of Solar Energy

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Abstract:

One of the most fundamental requirements for both human and economic progress is energy. The demand for electricity and other sources of energy has expanded dramatically as a result of India's growing industrialization and urbanization. Conventional energy sources, such coal, oil, and natural gas, are scarce and seriously pollute the environment. A sustainable substitute for traditional energy sources is renewable energy, particularly solar energy. Solar energy is clean, environmentally benign, long-term economical, and appropriate for both rural and urban settings.

This study looks at customer satisfaction with solar energy use and is solely based on secondary data. The study focuses on consumer satisfaction, variables influencing purchase decisions, awareness levels, and difficulties encountered by solar energy product users.

The study is descriptive in nature and makes use of secondary material gathered from books, research articles, government publications, journals, and internet sources. The results show that consumers are becoming more interested in solar products as a result of growing electricity prices and environmental consciousness, although high starting costs and ignorance continue to be significant obstacles.

Keywords: solar energy, customer satisfaction, renewable energy, secondary data, sustainable development.

Introduction:

India's economy is one of the fastest-growing in the world, and energy is essential to its expansion. The nation is mostly reliant on conventional energy sources, which are both environmentally hazardous and finite. Policymakers and consumers have been compelled to switch to renewable energy sources due to rising carbon emissions, climate change, and energy shortages.

One of the most significant types of renewable energy is solar energy. Using solar panels and solar thermal systems, it is extracted from sunlight and transformed into heat or power. India's location, which receives plenty of sunlight for the majority of the year, gives it enormous solar potential.

To encourage the use of solar energy, the Indian government has introduced a number of programs, including the Rooftop Solar Program, PM-KUSUM Scheme, and National Solar Mission. Residential, commercial, and agricultural uses of solar solutions are growing.

Solar water heaters, rooftop solar panels, solar pumps, and solar lighting systems are becoming more and

more popular among consumers. However, a number of variables, including product quality, installation costs, maintenance, government subsidies, awareness, and service support, affect customer satisfaction. This study attempts to examine customer satisfaction toward solar energy using secondary data.

Statement of the Problem:

Electricity is now a basic requirement for homes, businesses, industries, and agriculture worldwide. Issues including power shortages, growing electricity costs, and environmental pollution have been brought on by a persistent reliance on conventional energy sources.

A workable and long-term answer to these issues is provided by solar energy. Due to high installation costs, a lack of technical understanding, and uncertainty about long-term advantages, many customers are still reluctant to use solar energy products despite government backing and increased awareness.

Studying client satisfaction levels and determining the key elements influencing their acceptance of solar energy goods becomes crucial.

Therefore, the purpose of this study is to evaluate consumer satisfaction with solar energy.

Objectives of the Study:

1. To study the level of customer satisfaction toward solar energy products.
2. To identify the factors influencing customers to purchase solar energy products.
3. To examine the awareness level of consumers regarding solar energy usage.
4. To identify the major barriers in adopting solar energy products.
5. To provide suitable suggestions for improving solar energy utilization.

Literature Review:

Gowrishanker (2019) noted that the factors influencing customer preferences for solar energy products can be categorized into four key dimensions: satisfaction with price, superior benefits, ease of use, and availability. Consumers are more inclined to adopt solar products if they outperform current alternatives in these areas.

Adelakun (2019) pointed out that solar energy has emerged as one of the most significant sources of renewable energy worldwide. The research underlined the importance of a reliable electricity supply for socioeconomic growth, indicating that solar energy can play a crucial role in alleviating electricity shortages.

Roy (2018) found that a majority of customers are drawn to solar products due to their long-term savings and robustness. While the upfront costs may be considerable, solar energy proves to be economically advantageous over time.

Herz (2016) conducted a review of various solar energy systems and concluded that solar energy has the potential to significantly contribute to fulfilling future global energy requirements. The research also highlighted the critical role of solar collectors in both electricity generation and heating systems.

Rajendra Prasad and Rajesh Kumar (2017) discovered that customer satisfaction regarding solar energy is greatly affected by factors such as awareness, affordability, and government subsidies. Furthermore, the study indicated that younger consumers exhibit a greater interest in embracing solar products.

Research Methodology:

Research methodology refers to the systematic procedure used for collecting and analysing information related to the study.

Research Design:

The present study is descriptive in nature as it aims to describe customer satisfaction toward solar energy products using available secondary data.

Source of Data:

This study is based on secondary data.

The data have been collected from:

- Research journals
- Government reports
- Maharashtra Energy Development Agency (MEDA)
- Books
- Published articles
- Newspapers
- Websites
- Previous research studies

Findings:

1. Utmost consumers show positive interest in solar energy products.
2. Solar panels are the most favoured solar product among guests.
3. Rising electricity costs and environmental mindfulness are the main reasons for espousing solar energy.
4. High installation cost is the biggest challenge in solar product relinquishment.
6. Government subvention mindfulness is moderate but needs further enhancement.
7. Guests who use solar products are generally satisfied with long- term cost savings.
8. Pastoral consumers bear further mindfulness regarding solar technology and available government schemes.

Suggestions:

- a. Government should increase mindfulness juggernauts regarding solar subvention schemes.
- b. Fiscal institutions should give easy loan installations for solar product installation.
- c. Solar companies should ameliorate after- deals service and conservation support.
- d. Mindfulness programs should be conducted in pastoral areas through original authorities and social media.
- e. Seminars, sodalities, and original associations should promote renewable energy education.
- f. Installation costs should be reduced through bettered subvention perpetration.
- g. Demonstration systems should be developed to increase trust among consumers.

Conclusion:

Solar energy has come one of the most promising renewable energy sources for sustainable development.

With adding electricity demand and environmental enterprises, solar power offers an effective and long-term result.

The study reveals that guests have a positive station toward solar energy products and are generally satisfied with their benefits. Still, high original cost, lack of mindfulness, and conservation enterprises continue to affect relinquishment.

Government programs, mindfulness juggernauts, and bettered service support can significantly increase the use of solar energy. In the coming times, solar energy will play a major part in transubstantiating India's energy sector and icing environmental sustainability.

Therefore, promoting client satisfaction and trust in solar energy products is essential for the successful expansion of renewable energy.

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