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A Study on Perception Towards Solar Energy on VLR Supporters, Coimbatore

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Abstract:

VLR Solar energy Supporters offers a promising solution to address climate change and promote sustainable energy practices. However, widespread adoption is hindered by public perceptions. This study investigates the current state of public perception towards solar energy within a specific target population (e.g., existing customer of VLR Supporters). the study utilizes a quantitative survey to assess general awareness, knowledge levels, attitudes, and demographics related to solar energy adaption.

Keywords: Solar energy, domestic consumption, environment, government policies

I.INTRODUCTION

1.1 Introduction

The ever-increasing demand for energy, coupled with concerns about environmental degradation, has propelled the search for sustainable energy solutions. Solar energy, with its abundant and clean nature, has emerged as a frontrunner in this pursuit. However, despite its undeniable potential, widespread adoption of solar energy technology hasn't reached its full potential. This gap can be attributed, in part, to public perception.

Understanding public perceptions towards solar energy is crucial for developing effective strategies to promote its wider use. This study delves into the current state of public perception within a specific target population (e.g., homeowners in a particular region/city/demographic). By exploring awareness, knowledge levels, attitudes, and decision-making processes, this research aims to shed light on the factors that influence public acceptance of solar energy technology.

1.2 Statement of the Problem

A lack of knowledge about solar technology, its benefits and limitations, can create uncertainty and hesitation towards adoption. Misconceptions or negative perceptions about cost, efficiency, or aesthetics of solar panels can act as barriers to adoption. Public perception towards solar energy might vary based on demographics, location, and access to information. This research will explore how these factors influence perception across different segments of the population.

This research aims to address the following aspects of the problem related to public perception of solar energy:

- **Limited Knowledge and Awareness:** Many people may lack a basic understanding of how solar energy works, its potential benefits, and its limitations. This lack of knowledge can create uncertainty and hesitation towards adopting solar energy solutions.
- **Complex Decision-Making:** The decision to adapt solar energy involves a complex interplay of factors. Individuals weigh environmental concerns against financial considerations, social influences, and perceived technical challenges.
- **Potential Biases and Misconceptions:** Negative perceptions about cost, efficiency, aesthetics, or maintenance needs of solar panels can act as significant barriers to adoption. These biases might be rooted in misinformation or a lack of exposure to accurate information.
- **Variations in Perception:** Public Perception towards solar energy might vary based on demographics, location, and access to information. Certain groups may face unique barriers or have specific concerns that need to be addressed.

1.3 Objectives of the study

- A study on perception towards solar energy.
- To Understand Awareness and Knowledge about solar energy.
- To know about the Post-Adoption Satisfaction and User Experience.
- To identify the impact of solar energy adoption on household energy.
- To Identify areas where policy changes could incentivize or facilitate wider solar energy adoption.

1.4 Scope of the study

The study will explore various aspects of public perception towards solar energy, including:

- **Awareness and Knowledge:** Level of understanding of solar technology, its benefits, and limitations.
- **Attitudes and Beliefs:** Perceptions regarding the environmental impact, cost-effectiveness, reliability, and aesthetics of solar energy.
- **Motivations and Concerns:** Factors influencing the decision to adopt solar energy, including environmental consciousness, financial considerations, and potential drawbacks.
- **Decision-Making Process:** How individuals evaluate and weigh different factors when considering solar energy adoption.

II.RESEARCH METHODOLOGY

2.1 Research Design:

The research design is the conceptual structure within which research is conducted. It is the blueprint for the collection, measurement and analysis of data. It is the "arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure"

Research Technique:

For this study **Descriptive method design is adopted.**

descriptive research design to understand\and describe the current state of public perception towards solar energy. Here's a breakdown of the key characteristics of this design in the context of your study:

- **Focus on Description:** This design aims to depict the "what" of public perception, rather than establishing cause-and-effect relationships.
- **Data Collection Methods:** You'll utilize a mixed methods appoarch, gathering both quantitative and qualitative data;
- **Non-Manipulative:** This design is observational. You won't manipulate any variables or introduce interventions. You'll simply observe and collect data on existing perceptions towards solar energy.
- **Cross-Sectional Approach:** This design captures data at a single point in time. Your study will assess public perception towards solar energy at a specific moment, providing a snapshot of current attitudes and knowledge.

2.2 Sampling Design:

This **non-probability technique** will be used to select interview/focus group participants with specific characteristics relevant to the research question (e.g., homeowners considering solar energy, those who have already adopted it, or those with concerns about it).
Sampling unit is the object for which the data is gather. In this study sample unit will be gather from both users and nonusers of solar energy applications.

2.3 Data collection method:

Both Primary and secondary data was collected for the study.
The study is capture both qualitative and quantitative data. The data collection involved collection of both primary and secondary data. The primary data will be collect from stakeholders of "VRL supporters" through interviews, discussions, questionnaires and conduct surveys
The secondary data has been collected through the published government policies (both central and state), research papers, conference proceedings, journals, newspaper clippings, magazines, workshops, seminars, conferences, the research publications of industrial associations, websites of Solar Energy Corporation of India (SECI), Ministry of Power, Ministry of New and Renewable Energy (MNRE) and others.

2.4 Limitation of the Study:

The scope will clearly define any limitations of this study, such as:

Geographic Limitations: Focusing on a specific region (e.g., a state or city).

Demographic Limitations: Targeting a specific homeowner segment (e.g., by income or age).

Limitations of Research Methods: Surveys may not capture all nuances of perception, while interviews require careful recruitment to ensure a representative sample.

Availability: Most of the time people are not available to response for this study.

2.5 Methods of Collection:

Both Primary and Secondary data was collected for this study.

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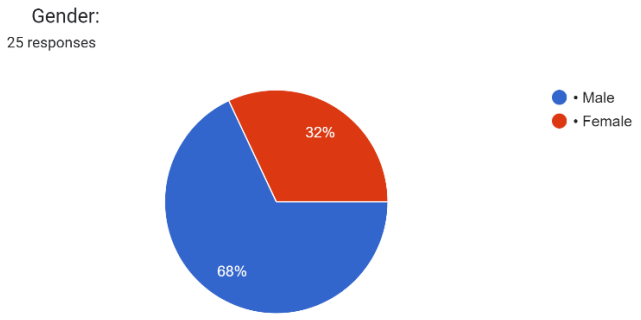
III. LITERATURE REVIEW

Overview:

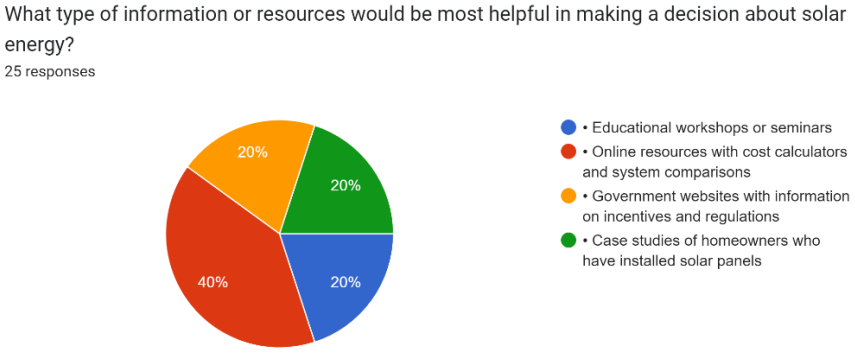
The review of the literature helps in the formulation of the problem thus, leading to the setting of relevant objectives of the research. A number of researches have been conducted on solar energy and government policies. A review of the relevant past researches done is mentioned in this chapter. This part of the study gives a review and synthesis of the literature directly or indirectly related to the present study. Review of literature has been divided into four major parts. The first part deals in solar power, the second part elaborates solar residential rooftop systems (SRRSs), the third part discusses the literature pertaining to Indian and international scenario (SRRSs) and the last section deals with government policies and initiatives for solar power (SRRSs).

IV. ANALYSIS & FINDINGS OF STUDY

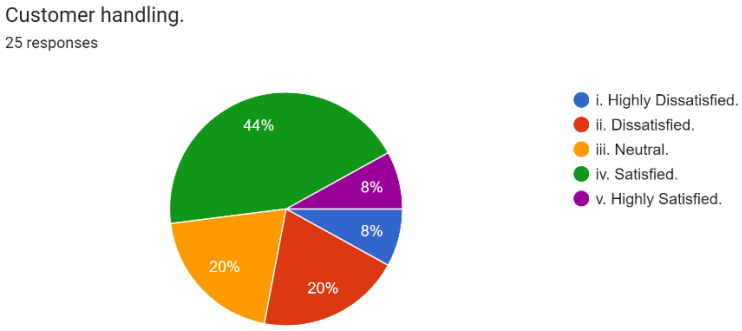


 GenderCollected data shows that most of the Male are participated in this research.

 Governance: State and Central gives the lot of subsides for solar energy products and people does not have a knowledge about that, even well educated people also does not have a much knowledge about the incentives of solar energy government gives.

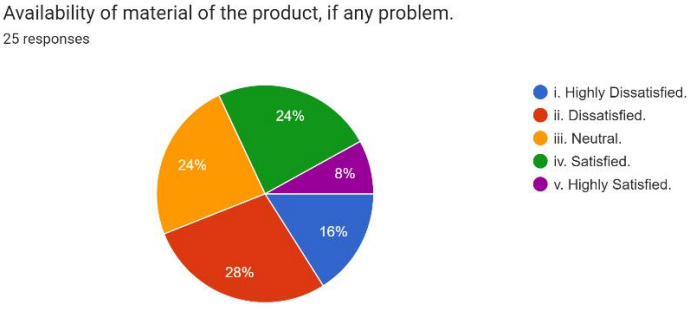


 Acknowledgement: Majority of the customers known the solar energy in the way of online resources like social media.



 Customer Handling: In the collecting of data on VLR Customers about the handling the customers, Majority of the customer are satisfied with the customer handling of VLR Supporters.

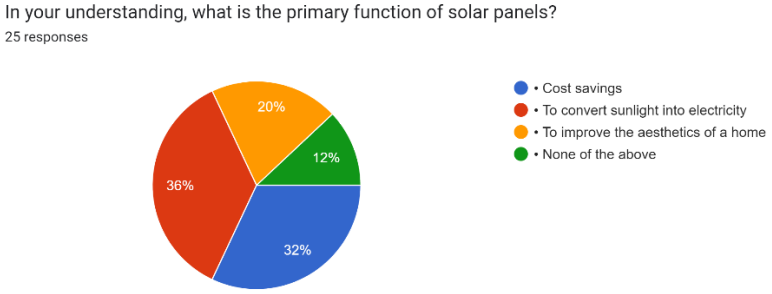
 Awareness and Knowledge: While collecting the data of exist customers of VLR Supporters and public general awareness of solar energy is present, a knowledge gap exists regarding its technical aspects and potential benefits.



 Availability: Both Neutral & Satisfied with the availability of the product like replacing the repairing items of solar products.

 Attitudes and Beliefs: Public perception leans positive, recognizing the environmental value of solar energy. However, cost concerns remain a significant hurdle.

 Motivations and Concerns: Environmental responsibility and long-term savings are key drivers for adoption, while upfront costs and technical uncertainties act as deterrents.



- **Decision-Making Process:** Financial considerations heavily influence the decision to adopt solar energy, alongside environmental concerns and trust in the technology.
- **Variations in Perception:** Income level appears to influence willingness to adopt solar energy, with higher-income individuals expressing greater interest.

V. SUGGESTIONS

The survey's findings indicate that consumers have a high level of desire to adopt
When choosing a solar product, consumers' environmental responsibility is a key factor in their decision-making process. Solar Products are have a lower maintainance cost, durability. On the same way, payback period, product characteristics, and technology knowledge are not well-known among users. The Solar Company can advertise the varieties of solar products, features, and benefits of solar energy products by organizing exhibitions, trade fairs, and other events to raise public awareness of solar products. To increase awareness on solar energy products, Central and State Governments, private businesses, government agencies, and others must work together

What should the government do to promote solar energy use for domestic purposes?

The responses to this question provide valuable insights into public expectations and suggestions for government actions to facilitate the widespread adoption of solar energy in households.

Financial incentives and Subsidies: A recurring theme in the responses was the call for the government to provide financial incentives and subsidies to make solar installations more affordable. Many respondents suggested that tax credits, grants, or rebates could significantly reduce the initial cost barrier associated with solar panel installation. This aligns with the notion that economic incentives are a powerful driver for renewable energy adoption.

Education and Awareness Campaigns: A substantial number of participants emphasized the importance of educational initiatives and awareness campaigns. They proposed that the government should invest in public education programs to inform citizens about the benefits of solar energy, the savings it can yield, and the environmental advantages. Improved awareness, they believe, could lead to a more informed and enthusiastic adoption of solar technology.

VI. CONCLUSION

The investigation into people's perceptions about the domestic uses of solar energy has revealed a multifaced landscape of attitudes, beliefs, and opinions. Through the survey conducted to capture these insights, we have gained valuable perspectives on the current state of public emotion towards solar energy as a sustainable and renewable source of power for households. The findings of this study indicate a significant level of awareness and positive regard for solar energy among the surveyed participants. A substantial majority of respondents expressed a favourable perception of solar technology, acknowledging its environmental benefits, including reduced carbon emissions and decreased dependence on fossil fuels. This demonstrates a growing consciousness of the need for cleaner and more sustainable energy sources on the face pf climate changes and environmental concerns.

As the world grapples with the urgent need to transition to cleaner and more sustainable energy sources, understanding public perceptions and addressing the factors that influence decision-making becomes increasingly important. This research contributes to the ongoing discourse surrounding renewable energy adoption by shedding light on the perspectives of individuals, and it highlights the critical role of education, policy support, and affordability in promoting the domestic use of solar energy. Ultimately, a collective effort is required from governments, industry stakeholders, and communities to realize the entire potential of solar energy as a sustainable and viable option for meeting domestic energy needs.

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VII. REFRENCE

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