



TO STUDY OF LEVEL OF AGREEING WITH THE REASONS FOR BUYING SOLAR PANEL PLANT IN WESTERN VIDARBHA REGION

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ABSTRACT

This research article presents the interpretation of data collected from users of solar energy equipment. For the purpose of the study, 500 local consumers and 110 institutions from the Western Vidarbha region were selected. The collected data were analyzed using suitable statistical tools, including descriptive statistics such as frequency and percentage. The analyzed data was arranged in tables and were described appropriately. The results were presented at the end after description of each table.



KEYWORDS : solar energy equipment , analyzed data , environmental degradation.

INTRODUCTION

The world has been characterized by high levels of environmental degradation, excessive exploitation of the traditional sources of energy, and an alarming increase in issues related to climatic changes over the past decades. The overdependence on fossil fuels, besides leading to energy insecurity, has also contributed a large percentage of global warming and ecological imbalance. In that aspect, the use of renewable energy sources, more so solar energy, has been incorporated as an alternative that will meet the rising energy demands of the people in a sustainable manner.

The geographical location of India is in the tropical region, and, hence, India has plenty of solar radiation throughout the year, and, consequently, it is highly favorable in terms of solar energy. The Indian government has also initiated several policies and programs, such as the National Solar Mission, to make use of solar energy easier. Even though the policy has some good terms and the equipment of solar energy is common at the producer level, there has been little uptake of the solar energy equipment at the consumer level. This gap explains why there is a need to understand the forces that influence the consumer behavior in utilizing solar energy.

The significance of the current research is that it has attempted to examine the degree of consumer awareness and the various forces that affect the uptake of solar power plants in the Western Vidarbha region. It is an agricultural region with a semi-urban population with varying levels of socio-economic development, which forms a distinct environment to research the application of renewable energy. Others such as inadequate power supply, dependency on traditional sources of energy, and

economic constraints are also among the problems in the region that also support the appropriateness of this study.

Consumer awareness knowledge is significant because awareness is the first phase in the decision-making process. The consumers stand a lesser possibility of embracing such technologies in the absence of required information on the benefits, cost-effectiveness, and long-term benefits of solar energy. Furthermore, the income level, education, the channels of financial support, cultural orientation, and accessibility of solar equipment are other variables that are critical in the decisions of whether to adopt solar power or not. The research provides us with a summative view of the barriers and the opportunities of using solar energy through such aspects of study.

Level of agreeing with the reasons for buying

Table 1: Level of agreeing with the reasons for buying solar panel plant

Level of agreeing with the reasons for buying	Highly Disagree		Somewhat Disagree		Moderate		Somewhat Agree		Agree		Total	
	N	Per	N	Per	N	Per	N	Per	N	Per	N	Per
Government schemes such as loans, subsidies and rebate on tax	72	14.3	69	13.8	81	16.3	112	22.3	166	33.2	500	100.0
My relative/friend is using it	56	11.2	65	13.0	83	16.5	155	31.0	141	28.3	500	100.0
Shorter pay back (3-4 yrs)	68	13.7	65	13.0	83	16.5	161	32.3	123	24.5	500	100.0
It is Affordable	59	11.8	68	13.7	95	19	149	29.7	129	25.8	500	100.0
My Architect suggested me	64	12.7	73	14.5	66	13.2	151	30.2	147	29.5	500	100.0

Above Table 1 reveals information regarding opinion of the customers of Western Vidarbha Region with respect to level of agreeing with the reasons for buying solar panel plant.

- **Government schemes such as loans, subsidies and rebate on tax:** It is apparent that 14.3% and 13.8% Defendants indicated high disagreement and somewhat level of disagreement about buying solar panel due to government schemes such as loans, subsidies and rebate on tax while 16.3% Defendants moderately agreed to it. Furthermore 22.3% and 33.2% Defendants indicated somewhat level of agreement and agreement about buying solar panel due to government schemes such as loans, subsidies and rebate on tax.
- **My relative/friend is using it:** It is apparent that 11.2% and 13.0% Defendants indicated high disagreement and somewhat level of disagreement about buying solar panel because relative/friend is using it while 16.5% Defendants moderately agreed to it. Furthermore 31.0% and 28.3% Defendants indicated somewhat level of agreement and agreement about buying solar panel because relative/friend is using it.
- **Shorter pay back (3-4 yrs.):** It is apparent that 13.7% and 13.0% Defendants indicated high disagreement and somewhat level of disagreement about buying solar panel because of shorter pay back while 16.5% Defendants moderately agreed to it. Furthermore 32.3% and 24.5% Defendants indicated somewhat level of agreement and agreement about buying solar panel because of shorter payback.
- **It is Affordable:** It is apparent that 11.8% and 13.7% Defendants indicated high disagreement and somewhat level of disagreement about buying solar panel because it is affordable while 19% Defendants moderately agreed to it. Furthermore 29.7% and 25.8% Defendants indicated somewhat level of agreement and agreement about buying solar panel because of its affordability.
- **My Architect suggested me:** It is apparent that 12.7% and 14.5% Defendants indicated high disagreement and somewhat level of disagreement about buying solar panel on architects' suggestion while 13.2% Defendants moderately agreed to it. Furthermore 30.2% and 29.5%

Defendants indicated somewhat level of agreement and agreement about buying solar panel on architects' suggestion

CONCLUSION

There is different reason for buying solar panel plant by Local customers in Western Vidarbha Region which includes government schemes such as loans, subsidies and rebate on tax; use by relative/friend; shorter pay back (3-4 yrs.); affordability and suggestions by architect. Most of the customers experienced the products functioning before buying. Information provided by manufacturer served useful to significant number of Local customers in Western Vidarbha Region.

Local customers of solar equipment are satisfied with various finance schemes for solar equipment, schemes regarding subsidies for solar equipment, tax benefits available for users, price of the product, whereas they are somewhat satisfied with performance of the product, after sale support by the company, ease of utilization of product and maintenance cost of product. However, they are dissatisfied features of the product, cost of installation, space required for installation, operating life and appeal of the product.

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