



**KEYWORDS :** Slow paced breathing, Behavioral response and Active phase of labour

## A Study on Consumers' Satisfaction Towards Solar Energy Products in Coimbatore District

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### ABSTRACT

*The emerging trend is now to make use of solar energy in many appliances. Awareness among the people develops fastly to buy solar products. A marketers of SEP also takes steps to promote these products through their target market and understand consumers needs and try best to satisfy existing and new consumers. This helps to improve their sales. This study focuses on Reasons for Installations, Opinion about Prices of SEP, Opinion of Maintenance Expenses, Satisfaction After Sales Service, Space Requirement for SES installation, Satisfaction level with their Expectations and Performance of SES in different Seasons*

### Introduction

Solar energy is ultra clean, natural and a sustainable source of energy. It can be utilised to make solar electricity use in solar heating appliances, solar cooling appliances and solar lighting appliances. People now-a-days prefer to use solar products in their home. Marketers also understand this emerging market for these products. As many consumers started to buy SEP in Coimbatore, now it is appropriate to study the consumer satisfaction of these products in this area.

### Statement of Problem

In spite of the problems involved in harnessing SP on a smaller scale, rooftop solar projects here a real opportunity for power security for India's enormous populace. For increasing the installation of solar energy systems the state and central governments are providing monetary and non-monetary benefits to the SEP consumers. Even though the installation of SES in Tamil Nadu was very slow for various reasons.

### Objective of the Study

To analyse the satisfaction level of SES consumers in Coimbatore District

### Scope for the Study

The present study analyses the satisfaction of SEP consumers in Coimbatore District. It includes satisfaction of consumers about after sales services, space for installation, government subsidy, cost saving, environment protection and maintenance services.

### Sources of Data

This study is based on both primary and secondary data. The primary data were collected from the SEP consumers in Coimbatore District. The secondary data were collected from the news papers, magazines and various government & private websites.

### Sampling Design

Sample size was restricted to 75 respondents of domestic and non-domestic solar energy product consumers. The total sample consists of 54 domestic and 21 non-domestic consumers from Coimbatore district. The sample size was selected on the basis of judgement sampling method. Out of 54 domestic consumers 24 were solar PV users and 30 were SWH users. In non-domestic consumers 15 were SWH users and 6 were solar PV users.

### Years of Experience with SEP and Reasons for Installation

The researcher studied the years of using the solar appliances and reasons for installing SES in their premises. Through this analysis this paper brings out the satisfaction level of consumers. The collected informations were presented in Table 1.

**TABLE 1**

Experience of Using SES products			
Sl.No	Years	No of Consumers	Percentage
1	Less than 6 months	19	25.33
2	6 months to 1 years	29	38.67
3	1 to 1 ½ years	15	20.00
4	1 ½ to 2 years	08	10.67
5	More than 2 years	04	05.33
	Total	75	100.00
Sl.No	Reasons for Installations	No of Consumers	Percentage
1	Save cost	47	62.67
2	Save environment	35	46.67
3	Add value to my property	11	14.67
4	Utilize Govt subsidy	39	52.00
5	For Social Status	16	21.33

Source: Primary Data

### Experience of Using SES products

As per the Table 1, out of 75 respondents 25.33 per cent of them were using the SES for less than 6 months, 38.67 per cent of the consumers were using the SES for a period ranging from 6 month to 1 year, the SES was used by 20 per cent of the respondents for a period from 1 to 1½ years, 10.67 per cent of them were installed and used for a period between 1½ and 2 years and another 5.33 per cent of the respondents used SES for more than 2 years.

### Reasons for Installations

It was inferred from the Table1 that, 62.67 per cent of respondents were installed SES to save cost, saving environment was another reason for installing SES in their premises as per 46.67 per cent of the consumers, 14.67 per cent of the respondents were stated that they purchased to add value to their properties. Out of 75 respondents 52 per cent of the respondents were stated that their main aim was to utilize the government subsidy, 21.33 per cent of them were purchasing the SES for social status.

TABLE 2

SI.No	Opinion about Prices	No of Consumers	Percentage
1	Very High	16	21.33
2	High	37	49.33
3	Moderate	12	16.33
4	Low	07	09.34
5	Very Low	03	04.00
	Total	75	100.00
SI.No	Opinion of Maintenance Expenses	No of Consumers	Percentage
1	Very High	Nil	Nil
2	High	06	08.00
3	Moderate	15	20.00
4	Low	40	53.33
5	Very Low	14	18.67
	Total	75	100.00
SI.No	Satisfaction After Sales Service	No of Consumers	Percentage
1	Very High	14	18.67
2	High	29	36.66
3	Moderate	18	24.00
4	Low	09	12.00
5	Very Low	05	06.67
	Total	75	100.00
SI.No	Satisfaction level with their Expectations	No of Consumers	Percentage
1	Highly Satisfied	11	14.67
2	Satisfied	19	25.33
3	No Opinion	11	14.67
4	Dissatisfied	27	36.00
5	Highly dissatisfied	07	09.33
	Total	75	100.00
SI.No	Space Requirement for SES installation	No of Consumers	Percentage
1	Strongly Agree	17	22.67
2	Agree	24	32.00
3	No Opinion	20	26.67
4	Disagree	08	10.66
5	Strongly Disagree	06	08.00
	Total	75	100.00

Source: Primary Data

It is inferred from the Table 2 that out of 75 respondents, 21.33 per cent of the consumers were stated that the price of SES was very high, 49.33 per cent of them were opined that it was high, 16 per cent of the consumers were stated it as moderate, 9.34 per cent of the consumers were stated as low and the cost of installation for SES was very low as stated by 4 per cent of the consumers.

#### Maintenance Expenses

It is observed from the Table 2 that, even a single customer was not given the opinion that maintenance cost was very high, 8 per cent of them were stated it as high, 20 per cent of them were stated as moderate, 53.33 per cent of the respondents were opined it as low and 18.67 per cent of the SES consumers were stated the incurred maintenance cost was very low.

#### After Sales Service

It was inferred from the Table 2 that out of 75 respondents, 18.67 per cent of the consumers were stated they had a very high satisfaction regarding after sales service, 36.66 per cent of them were highly satisfied, 24 per cent of them were stated it as moderate, 12 per cent of them were having low level satisfaction and 6.67 per cent of them having very low satisfaction about after sales service.

#### Expectation and Satisfaction of SES

It was observed from the Table 2 that, out of 75 respondents 14.67 per cent of the consumers were stated that their satisfaction was very high when compare to the expectations, 25.33 per cent of the consumers were satisfied, 14.67 per cent of the consumers were stated moderate, 36 per cent of them were stated low and 9.33 per cent of them were mentioned very low satisfaction when compare with their the expectations.

#### Sufficient Space for Installation

As per the Table 2 out of 75 respondents 22.67 per cent of the consumers were stated that they were highly satisfied with requirement of space to install the SES, 32 per cent of them were satisfied, 26.67 per cent of them were neither satisfied nor dissatisfied, 10.67 per cent of the consumers were dissatisfied and 8 per cent of them were highly dissatisfied.

#### Performance of SES in Various Seasons

The opinion about the SES performance during various seasons was collected from the consumers and it was presented in Table 3.

TABLE 3

#### Performance of SES in different Seasons

SI.No	Opinions	Summer		Winder		Rainy	
		No	%	No	%	No	%
1	Very High	32	42.67	06	08.00	07	09.33
2	High	21	28.00	14	18.67	11	14.67
3	Moderate	13	17.33	19	25.33	16	21.33
4	Low	09	12.00	26	34.67	19	25.33
5	Very Low	Nil	Nil	10	13.33	22	29.33
	Total	75	100.00	75	100.00	75	100.00

Source: Primary Data

#### Summer Season

It was observed from the Table 3 that out of 75 respondents 42.67 per cent of the consumers were stated the performance of SEP during the summer season was very high, the performance was high as stated by 28.00 per cent of the respondents, 17.33 per cent of them were stated the performance was moderate, 12.00 per cent of them were stated the performance was low and none of them was stated as very low.

#### Winder Season

As per the Table 3, that 8 per cent of them were stated the performance in winder was very high, 18.67 per cent of them were stated that it was high, the performance was moderate as per 25.33 per cent of the respondents, 34.67 per cent of the respondents were stated that performance was low and 13.33 per cent of them were stated that performance was very low.

#### Rainy Season

From the Table 3 out of 75 respondents 9.33 per cent of them felt that the performance was very high in rainy season, 14.67 per cent of the consumers were stated high performance in this season, 21.33 per cent of the consumers were stated it was moderate, 25.33 per cent of them were stated low and 29.33 per cent of the consumers were stated very low during the rainy season.

**Findings**

In Coimbatore district most of the consumers (38.67 %) use SEP for a period ranging from 6 months to 1 year, As per 62.67 per cent consumers installed SEP for saving electric charges. The prices for solar products were high as per opinion given by 49.33 per cent consumers.

Many consumers (53.33 %) mentioned that maintenance expenses were low. Consumers mostly satisfied with after sales services extended by sellers. They were also satisfied with the space requirement for SEP installation.

Most of the consumers stated that the output energy was high during summer, low in winter and very low at the time of rainy seasons.

**Conclusion**

In the future solar energy possesses tremendous potential in bridging energy demand-supply gap in Tamilnadu's and particularly in Coimbatore. As in today's competitive environment service marketers put great efforts on developing consumer satisfaction in order to maintain competitive edge research which can be under taken for outlining of what needs to be done to improve the service of SEP in Coimbatore. When compare to the population the installation of solar products was very slow in Coimbatore. Through this study it is clear that most of the consumers were satisfied with most of the aspects like space requirements and maintenance expenses. As SEP has huge market in the near future because of importance given by both state and central government, improvement of services and new technology are the need of the hour to improve the consumers satisfaction towards the solar products.

**REFERENCE**

1. Cotal, H.et.al (2009), "III-V Multijunction Solar Cells for Concentrating Photovoltaics," Energy & Environmental Science, Vol 2, 174-192. | 2. Shamsun Nahar Momotaz and Asif Mahbub Karim (2012), Customer Satisfaction of the Solar Home System Service in Bangladesh, World Journal of Social Sciences, Vol. 2. No. 7. November Issue. Pp. 193 – 210 | 3. M. Meenakshi Saratha, Linda Mary Simon (2015), A study on customer satisfaction level on green products with special reference to Coimbatore district, International Journal of Multidisciplinary Research and Development, 292-295 | 4. Karnika Bahuguna (2015), India likely to be among top solar markets in 3 years., The Economic Times, 9 Jun. |