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# A Study on Consumer Perception Towards the Usage of Solar Power Products with Reference to Coimbatore City.

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## ABSTRACT

Humanity faces an exclusive and extensive challenge in energy/heat. It has played a pioneering role, but there is a narrowing gap between demand and supply of energy. At present we depended the non-renewable source of energy. These are all having the so many carbon by-products and pollute the environment. So, the man has evolving to and out the alternatives source of clean energy. In such way one of the alternative renewable energies is solar energy. Five objectives are framed for this study. Through this study customers perception towards solar power products have been analyzed and provide the suitable conclusion to improve the solar energy utilization in households as well as in all the sectors which uses electricity as the medium of power to run and this study will verify the problems faced by the users of the solar power products and know their level of satisfaction

Keywords: Alternative source, Non -Renewable, Solar energy, Utilization.

## 1. Introduction of the study

Energy is basic need for economic growth of the country. Every subdivision like agriculture, industry, transportation, commercial, and domestic – wants energy in numerous procedures. With fast growths taking place, ingesting of energy in all forms has continued progressively raising all ended the country. This growing ingesting of energy has also caused in the country becoming progressively reliant on fossil fuels such as coal, oil, and gas. The frameworks of all these are reducing rapidly and prices of oil and gas are increasing. With the introduction of electricity, it has become the versatile form of energy which can be transformed to other forms easily.

But it is becoming expensive with each passing day. Its price will increase heavily as the fossil fuel reserve is decreasing. Dependence on fossil fuel for energy is the main reason for environmental pollution. Along with this, Power cuts and dependence on DG sets is making people going for more and better sources. Renewable energy resources are suitable for this context as most of them are environment friendly. Indian sub-continent is blessed with an ample of renewable energy sources, the main ones being Biomass, Biogas, The Solar Energy and Small hydro control. Municipal and manufacturing wastes can also be valuable sources of energy.

## 2. Statement of the problem

This study focuses on the consumer perception towards solar energy products. In the market, a customer will buy the products when that product fulfills their wants. In todays' world, usage of electricity is high and its price is also very high, customers are going for the solar products as the substitute for the electronic products. Solar energy products will fulfil the place of the electronic products. But consumers are expecting more from the solar energy product companies. Present survey is conducted to find out the level of consumer satisfaction on solar energy products and the reasons for poor response by the consumers to solar energy equipment's and to know the buying behavior pattern of the consumers and also their buying motives will be analyzed in this study.

## 3. Objectives of the study

- To study the awareness of the customers towards the solar energy devices available in the market.
- To study about the customer ideas, preference, attitude towards Solar energy Products.
- To list out the problems which consumer face during the use of solar energy appliances.
- To study the factors influencing the consumers to buy the solar energy products.

• To measure the overall satisfaction towards solar energy products in Coimbatore city.

## 4. Scope of the study

- To see whether the installation of solar power products is optional by the government in all possible ways.
- To inform that the cost of solar power products is reasonably low and very easy for fixing as it is manufactured by private group link DTH and other material ease of access and available in all places.
- This study incorporates more extensive degree for solar power as it initiated from the current vitality utilization and repeating nature consumption towards their vitality use.

## 5. Research Methodology

The study is intended to analyze consumer's presumption on solar power products by various customers in Coimbatore city.

### 5.1 Area of Research

The area of the study is confined to Coimbatore City.

#### 5.2 Nature of Data

Primary and secondary data is collected in order to obtain relevant information to conduct the research.

Primary data: Data was collected from current users of solar products of Coimbatore city using a questionnaire in order to obtain relevant information.

Secondary data: Data was collected by browsing magazines, newspapers, article and papers related to solar products brand in India.

#### 5.3 Sources of Data

Data are facts, figures and other relevant materials, past and present, serving as basic study and analysis. The data serves as the bases for analysis. Without an analysis of actual data on specific inferences can be drawn on the question under study. Inferences based on imagination or guess work cannot provide correct answers to research questions. The relevance, adequacy and reliability of data determine of quality of findings of a study. For the purpose of present study data from two sources have been gathered namely primary and secondary data.

• Primary data

Primary data are original data collected for the purpose of a particular study. In the present study primary data have been collected by personal interview method with the help of questionnaire.

Secondary data

These are the sources containing data, which have already been collected and compiled for other purpose by other researchers. The secondary sources consist of readily available materials and already compiled statistical statements and reports whose data may be used by researcher for his / her studies. Secondary data for the present research collected the major sources of secondary data are given below.

- Newspaper & Articles
- Business line
- · Various websites
- · Different marketing journals

#### 5.4 Sample Size

Information has been collected from 160 respondents of Coimbatore city comprising both male and female.

#### 5.5 Tools for Analysis

Questionnaires were created in order to receive the necessary response required from the sample to achieve the study objective. Therefore, sampling method is used in order to collect data. The main statistical tools used for analysing primary data :

Weighted Average Score Analysis

Chi-Square Test Analysis

## 6. Limitations of the study

- The research study on solar energy products is limited to Coimbatore city only.
- This study is limited to 160 respondents.
- The customers may uncertain to provide necessary information.

## 7. Review of Literature

- Ms. Lakshmi Priya N (2018) Stated that most green consumers have shown positive approach on using solar energy product in India. The objective is to study the demographic and socio-economic status of the users. Know the gap between perception and satisfaction towards solar energy products. The data are collected with the help of technologies like Data analysis and Drawing inferences. The findings are 6763-megawatt power has been produced in solar in 2016 and solar power tariff was reduced to 2.44 in 2017. The future buying intention of the responds are average of 72.75%.<sup>1</sup>
- Mrs. Nirmala v (2018) Stated a major constraint in utilization of solar energy system is their high initial cost. The costs of solar or other renewable energy sources are considerably higher than that of utilizing conventional energy sources. The objective is to study the detailed demographic profile of the selected consumers of Tirupur District who uses solar energy and consumers awareness towards solar energy and their willingness to switch over to renewable energies. The findings are 40% of the respondents resided in urban area followed by 38% from semi urban area and only 22% of the respondents belongs to rural area. 40% of the respondents are having moderate awareness about solar energy whereas 36% opined that they have high awareness on solar energy products.<sup>2</sup>
- Mr. Abinash roy (2018) The study was conducted to identify the various internal and external factors influencing the consumers buying behavior and changes can be suggested in the marketing approach of New and Renewable energy products. The objectives are to identify and assess the factors influencing the customers' buying decision and to evaluate and analyze the factors constraining the marketing of new and renewable energy products. Tools used are company book records, documents and company website, and external data through facts and figures such as structured questions. Sample size is 78 consumers and the findings are 79% of the respondents were male.<sup>3</sup>
- Mr. Vikas Kumar (2018) statement aims to understand the customer attitude toward solar energy products in the Indian context. The data of 510 respondents have been collected from rural areas of Punjab (India) through a structured research schedule using convenient sampling. Various factors have been identified that collectively impact the customer attitude towards solar energy products. Multiple regression analysis was used to measure the magnitude of the impact of the identified dimensions on the customer attitude. The results of regression analysis validated that customer attitude towards solar products is significantly determined by green purchase behavior and government initiatives. However, dimensions such as environmental knowledge, promotion and advertisement, environmental concern, and peers influence were not found significant to the customer attitude towards solar energy products.<sup>4</sup>

## 7.1 Research gap

A research gap is a question or a problem that has not been answered by any of the existing studies or research within the field. The previous research made in the field are positive approach of green consumers, less usage due to high initial cost and measured the level of consumer perception. In the current study analysis is done to prove the objectives of the study. The analysis is made to understand the buying behaviour and the problems faced by the consumers in buying the product based on various sources of media and awareness on subsidies/loans provided by the government and reasons behind not availing of such subsidies/loans which is not done in previous research.

<sup>4</sup> Factors affecting customers' attitude towards solar energy Products...by V Kumar · 2020 · Cited by 12 — Various factors have been identified that collectively impact the *customer attitude towards solar energy products*. Multiple regression *analysis* was used.

<sup>&</sup>lt;sup>1</sup> Researcher: Lakshmi Priya N Shodhganga : a reservoir of Indian theses @ INFLIBNET Title: 2018 Consumers Perception and Satisfaction towards Solar Energy Products Study with special References to Coimbatore City.

<sup>&</sup>lt;sup>2</sup>Ms. Nirmala Consumer <u>Awareness of Solar Energy Products</u> Hence, the present *study* examines about the *customers* attitude, *preferences* and their awareness about the usage *of. Solar energy Products* in Tirupur .in 2018

<sup>&</sup>lt;sup>3</sup> <u>A Study on Consumer Perception Towards Solar Power Products.</u>, by A Roy · 2018 — Belagavi. Project report on "A Study on Consumer Perception Towards. Solar Power Products at *Guwahati*, *Assam*" is prepared by him.

## 8. Analysis and Interpretation of Data

Analysis of data is a process of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusion, and supporting decision-making. Data analysis is a process for obtaining raw data and converting it into information useful for decision-making by users. Data are collected and analysed to answer question, test hypotheses or disprove theories.

Statistician John Tukey defined data analysis in 1961 as: "Procedures for analysing data, techniques for interpreting the results of such procedures, ways of planning the gathering of data to make its analysis easier, more precise or more accurate, and all the machinery and results of (mathematical) statistics which apply to analysing data."

Data interpretation refers to the process of using diverse analytical methods to review data and arrive at relevant conclusions. The interpretation of data helps researchers to categorize, manipulate, and summarize the information in order to answer critical questions.

The importance of data interpretation is evident and this is why it needs to be done properly. Data is very likely to arrive from multiple sources and tends to enter the analysis process with haphazard ordering. Data analysis tends to be extremely subjective. That is to say, the nature and goal of interpretation will vary from business to business, likely correlating to the type of data being analysed. While there are several types of processes that are implemented based on individual data nature, the two broadest and most common categories are "quantitative and qualitative analysis."

The following tools were used:

- Weighted Average Score Method
- Chi-square Analysis

#### 8.1 Weighted Average Score Method

A Weighted average is an average in which each observation in the data set is assigned or multiplied by a weight before summing to a single average value. In this process, each quantity to be averaged is assigned a weight that determine the relative importance of each quantity, to be averaged is assigned a weight that determine the relative importance of each quantity. Weighting is the equivalent of having that many like items with the same value involved in the average.

A weighted average score takes different scores, or grades, with assigned weights, or percentages. To calculate a weighted average with percentage, each category value must first be multiplied by its percentage. Then all these new values must be added together.

#### Table no 1

Table showing the reason for not availing government subsidy/ loan

Reason	Strongly Agree (5)	Agree (4)	Neutral (3)	Dis Agree (2)	Strongly Disagree (1)	Total	Weighted Average score	Rank
Needs lot of time	78	59	20	1	2	690	4.31	1
Needs lot of documentation	33	96	27	4	-	638	3.99	2
Lack of documents	31	70	51	6	2	602	3.76	4
No reason / do not know	36	80	35	3	6	617	3.86	3

#### Interpretation:

The respondents feels that there is a lot of time involved in availing Government subsidies/loans followed by tedious process of documentation or lack of knowledge on Government subsidy/loan followed by shortage of required documents.

#### Table no 2

Table showing the buying behavior for solar power products at various seasons

Products	Winter	Spring	Summer	Autumn	Total	Weighted Average	Rank
	(4)	(3)	(2)	(1)		score	
Solar Cooker	65	40	49	6	484	3.03	1
Solar Home Lighting Systems	26	50	78	6	416	2.6	3
Solar Water Heater	45	37	74	4	443	2.77	2

Solar Power Add-On to charge	24	43	84	9	402	2.51	4
Inverter Battery							
Solar Power Panels	29	28	92	11	395	2.47	5

Interpretation:

The above table depicts that the buying behaviour for solar power products at various seasons is given for Solar cooker with the weightage of (3.03) followed by Solar Water Heater, Solar Home Lighting Systems, Solar Power Add-On to charge Inverter Battery and Solar Power Panels.

## 8.2 Chi Square Analysis

The Chi square analysis is commonly used for testing Differences between categorical variables. The null hypothesis of the Chi-Square test is that no Difference exists on the categorical variables in the population; they are independent. There are several important considerations when using the Chi-Square analysis to evaluate a crosstabulation. Because of how the Chi-Square value is calculated, it is extremely sensitive to sample size. This can be addressed by always using categorical variables with a limited number of categories.

Formula:

(OBSERVED VALUE – EXPECTED VALUE)<sup>2</sup>

CHI - SQUARE VALUE  $(\Sigma) =$ 

EXPECTED VALUE

ROW TOTAL x COLUMN TOTAL

GRAND TOTAL

EXPECTED VALUE

DEGREE OF FREEDOM

=

=

(ROW – 1) x (COLUMN – 1)

Table No: 3

Table Showing the Association between monthly income and price range of respondents.

		PRICE RANGE					
MONTHLY	7000 –	25000 - 30000	35000 - 50000	Ab0ve 50000	TOTAL		
INCOME	15000						
Below Rs.20000	30	20	3	3	56		
Rs. 20000 - 40000	10	17	12	4	43		
Rs. 40000 - 60000	5	22	9	1	37		
Above Rs. 60000	4	11	7	2	24		
TOTAL	49	70	31	10	160		

CALCULATION OF X<sup>2</sup>

0	Е	( <b>O</b> – <b>E</b> )	$(O - E)^2$
30	17.15	12.85	165.12
10	13.16	-3.16	9.98
5	11.33	-6.33	40.06
4	7.35	-3.35	11.22
20	24.5	-4.5	20.25
17	18.81	-1.81	3.27
22	16.18	5.82	33.87
11	10.5	0.5	0.25
3	10.85	-7.85	61.62
12	8.33	3.67	13.46
9	7.16	1.84	3.38
7	4.65	2.35	5.52
3	3.5	-0.5	0.25

4	2.68	1.32	1.74
1	2.31	-1.31	1.71
2	1.5	0.5	0.25
160	159.96	0.04	371.95

CHI - SQUARE VALUE ( $\sum$ ) = (OBSERVED VALUE – EXPECTED VALUE)<sup>2</sup>

EXPECTED VALUE

= 371.95/159.96

= 2.32

#### DEGREE OF FREEDOM = (ROW - 1) \* (COLUMN - 1)

= (4-1) \* (4-1)

= 9

## CALCULATED VALUE X<sup>2</sup> = 2.32

TABLE VALUE =16.91

## HYPOTHESIS

 $H_0$ : There is no significant relationship between monthly income and monthly purchase of the respondents

 $\mathbf{H}_{i}$ : There is a significant relationship between monthly income and monthly purchase of the respondents

Level of significance	= 5% or 0.05	
Degree of freedom	= 9 Chi-square value X $^2$	= 2.32
Table value	= 16.91	

Interpretation

In the above analysis, the calculated value {2.32} is less than the value {16.91} at the level of 5% significance. Hence, null hypothesis is accepted, thus, there is no significant relationship between monthly income and purchase range of respondents.

Table no : 4

Table showing the Association between educational qualification and awareness level of respondents

EDUCATION	DUCATION AWARENESS LEVEL			
QUALIFICATION	Highly Aware	Somewhat aware	A little Aware	TOTAL
Schooling	5	2	1	8
Diploma	2	4	2	8
UG	50	73	10	133
PG	5	5	1	11
TOTAL	62	84	14	160

CALCULATION OF X2

0	Е	( <b>O</b> – <b>E</b> )	$(O - E)^2$
5	3.1	1.9	3.61
2	3.1	-1.1	1.21
50	51.53	-1.53	2.34
5	4.26	0.74	0.54
2	4.2	-2.2	4.84
4	4.2	-0.2	0.04
73	69.82	3.18	10.11
5	5.77	-0.77	0.59
1	0.7	0.3	0.09
2	0.7	1.3	1.63

160	159.97	0.03	27.65
1	0.96	0.04	0
10	11.63	-1.63	2.65

CHI - SQUARE VALUE  $(\Sigma) = (OBSERVED VALUE - EXPECTED VALUE)^2$ 

#### EXPECTED VALUE

= 27.65/159.97

= 0.17

## **DEGREE OF FREEDOM** = (ROW - 1) \* (COLUMN - 1)

= (3-1) \* (4-1)

= 6

#### CALCULATED VALUE X<sup>2</sup> = 0.17

#### TABLE VALUE =12.29

#### HYPOTHESIS

Ho: There is no significant relationship between monthly income and monthly purchase of the respondents

H<sub>1</sub>: There is a significant relationship between monthly income and monthly purchase of the respondents

Level of significance	= 5% or 0.05
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Chi-square value X<sup>2</sup> = 0.17

Table value = 12.59

#### Interpretation

In the above analysis, the calculated value {0.17} is less than the value {12.59} at the level of 5% significance. Hence, null hypothesis is accepted, thus, there is no significant relationship between Education qualification and Awareness level of respondents.

## Association between family size and Satisfaction level of the respondents

Hypothesis

Null hypothesis H<sub>0</sub>: There is no significant difference between age group and satisfaction level towards purchase experience.

Alternate hypothesis H<sub>1</sub>: There is a significant difference between age group and satisfaction level towards purchase experience.

Table no :5

Table showing the association between age group and satisfaction level towards purchase experience

	Family size				
Satisfaction level	2	3	4	Above	TOTAL
Highly satisfied	3	12	19	6	40
Somewhat satisfied	1	17	21	12	51
Neutrally satisfied	1	10	34	13	58
Dissatisfied	-	4	1	4	9
Highly Dissatisfied	-	-	1	1	2
TOTAL	5	43	76	36	160

#### CALCULATION OF X<sup>2</sup>

0	Ε	( <b>O</b> – <b>E</b> )	$(O - E)^2$
3	1.25	1.75	3.06
1	1.59	-0.59	0.34
1	1.81	-0.81	0.65
12	10.75	1.25	1.56
17	13.70	3.3	10.89
10	15.58	-5.58	31.13

4	2.41	1.59	2.52
19	19	0	0
21	24.22	-3.22	10.36
34	27.55	6.45	41.60
1	4.27	-3.27	10.69
1	0.95	0.05	0
6	9	-3	9
12	11.47	0.53	0.28
13	13.05	-0.05	0
4	2.02	1.98	3.92
1	0.45	0.55	0.30
160	159.07	0.93	126.3

CHI - SQUARE VALUE ( $\Sigma$ ) = (OBSERVED VALUE – EXPECTED VALUE)<sup>2</sup>

EXPECTED VALUE

= 126.3/159.07

= 0.79

DEGREE OF FREEDOM = (ROW - 1) \* (COLUMN - 1)

= (4-1) \* (5-1)

= 12

#### TABLE VALUE =21.02

#### HYPOTHESIS

Ho: There is no significant relationship between monthly income and monthly purchase of the respondents

H1: There is a significant relationship between monthly income and monthly purchase of the respondents

Level of significance = 5% or 0.05 Degree of freedom = 12Chi-square value X<sup>2</sup> = 0.79Table value = 21.02Interpretation

CALCULATED VALUE X<sup>2</sup> = 0.79

In the above analysis, the calculated value {0.79} is less than the value {21.02} at the level of 5% significance. Hence, null hypothesis is accepted, thus, there is no significant relationship between Family size and Satisfaction level of the respondents.

#### 9. Findings and Suggestions

The objectives of these research is to study the awareness of the customers towards the solar energy devices available in the market and to study about the customer ideas, preference, attitude towards Solar energy Products to list out the problems which consumer face during the use of solar energy appliances.to study the factors influencing the consumers to buy the solar energy products to measure the overall satisfaction towards solar energy products in Coimbatore city.to provide the valuable suggestion to companies based on customer feedback.

#### 9.1 Weighted Average Score Analysis

- The respondents feels that there is a lot of time involved in availing Government subsidies/loans followed by tedious process of documentation or lack of knowledge on Government subsidy/loan followed by shortage of required documents.
- The above table depicts that the buying behaviour for solar power products at various seasons is given for Solar cooker with the weightage of (3.03) followed by Solar Water Heater, Solar Home Lighting Systems, Solar Power Add-On to charge Inverter Battery and Solar Power Panels.

#### 9.2 Chi-Square Analysis

> There is no significant Difference between monthly income and price range of respondents.

- > There is no significant Difference between educational qualification and awareness level of respondents
- > There is no significant Difference between age group and satisfaction level of respondents

#### Suggestions

- > There is a high Concessions in the price, replacements, discounts sales, offers, etc., which becomes a common practice.
- Consumers prefer high quality solar power products from well-established brands. The marketers and manufacturers of the solar products must try to convert the product satisfaction into brand loyalty.
- The Look, Size of the solar power products and the availability of the same in all the areas where it is necessary should be considered by the sellers or manufacturers in order to increase the sales and profitability.
- The Government as well as the manufacturers should take necessary steps to create awareness regarding the importance of using solar power products among people both in rural and urban areas.
- The technology used in solar power products must be altered according to the requirements and affordability of the consumers.

## Conclusion

The solar power products are familiar to the public now a days and the market for these products are increasing. Due to the massive growth of these products, there was an increase in competition and price level. The Manufacturers and Marketers may try to increase awareness among the consumer through various medias and the Government must take initiative to provide solar power products at lower price by availing subsidies and loans. The marketers must understand the behaviour of the consumers to satisfy the expectation for earning higher profits.

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## Annexure

- 1.Name
  2. Gender
- a) Male b) Female
- 3. Age group
- a) Below 18 b) 18-30 c) 30-40 d)40 above
- 4. Marital status

a) Married b) Unmarried 5. Family structure Nuclear b) Joint family a) 6. Residential status a) Urban b) Rural c) Semi urban 7.Occupation a) Student b) Employee c) Business 8. Monthly Income (in Rupees) a) Below 20000 b) 20000-40000 c) 40000-60000 d) Above 60000 9. Education qualification a) Schooling b) Diploma c) UG d) PG 10. Family size b) 3 a) 2 c) 4 d) Above 11. Do you face the problem of daily power cuts in your area? Yes b) No a) 12. How frequently do you face power cuts in your area? a) 1 - 2 times in a week b) 3 - 6 times in a week d) 4 - 8 times in a month c)1 - 3 times in a month e) Rarely 13. Do you have power backup system in your house? Yes b) No a) 14. Which of the following power backup system(s), do you use during power cuts Inverter- Battery system b) Society Power backup Connection C) Generator a) d) Emergency Light e) Nothing f) Others 16. Do you use any Solar Power product(s) at home/ willing to use. b) No a) Yes 17.Select the type of Solar Power Products(s) you use'/ willing to use. a) Solar Cooker b) Solar Home Lighting Systems c) Solar Water Heater d) Solar Power Inverter Battery e) Solar Power Panel f) Others, please specify 18. How did you come to know about these Products? c) Friends/Relatives a) Television b) Newspaper d)Social Media e) Road Shows f) Exhibitions g) Roadside Hoardings/Billboards h) Others, please specify 19. Are you aware of Solar Power Products? a) Completely Aware b) Somewhat Aware c) Totally Unaware 20. Please mention the level of satisfaction you acquired by using the Solar Power Products. a) Highly satisfied b) Somewhat satisfied c) Neutrally satisfied d)Dissatisfied e) Highly Dissatisfied 21. Which type of Solar Power Product(s) is most useful in your daily routine.

5 - very useful, 4- useful, 3- somewhat useful,2- neither useful nor useless, 1- useless.

Product	5	4	3	2	1
Solar Lanterns					
Solar Home Lighting Systems					
Solar Water Heater					
Solar Power Add-On to charge Inverter Battery					
Solar Power Plant					
Solar Cooker					

#### 22 Which of the following brands are you aware of?

(5-1) denotes the points or stars given to the brands.

Brands	5	4	3	2	1
Hi-Tech Solar					
Luminous Solar					
Solar World					
Sun Energy Systems					
TATA Power Solar					
V. Ayushman Solar Enterprises					
Best Solar					

23. In what price range you buy the product?

a) Rs.7000 - Rs.15000 b) Rs.25000 - Rs.30000 c) Rs.35000 - Rs.50000 d) Above Rs.50000 b) Rs.25000 - Rs.50000 b) Rs.25000 b) Rs.2500 b) Rs.25000 b) Rs.25000 b) Rs.25000 b) Rs.25000 b) Rs.25000 b) R

24. How much you are satisfied with the price level of solar energy product(s)?

a) Highly satisfied b) Somewhat satisfied c) Neutrally satisfied

d)Dissatisfied e) Highly Dissatisfied

25. Which factor(s) attracts you towards adopting Solar Power Product(s)?

(5-1) denotes the following: 5- Excellent, 4- Best, 3- Better, 2- Good, 1- Bad.

Consideration	5	4	3	2	1
Based on Latest Technology					
Durable, Economical					
Environment Friendly					
High Returns on Investment					
Requires Low Maintenance					
Renewable					

26. How was the response of the dealer / Installer when contacted?

a) Prompt and informative b) Delayed and uninformative

27. Is the informative material from the marketing executive is sufficient?

a) Highly Sufficient b) Somewhat Sufficient c) Neither sufficient nor insufficient

d)Somewhat insufficient e) Highly Insufficient

28. Do you face any problems while using solar power product(s)?

a) Regularly b) Sometimes c) Rarely

29. please select the problem you face during the usage of solar power product(s)

(5-1) denotes the points or stars given to the following Problems.

Problem	5	4	3	2	1
High initial price					
No space for installations					
Spoils the looks of house					
No scope for alterations					
Not suitable for my life style					

30. Are you aware about the various financial assistance provided by the government?

a) Yes, I am aware b) No, I am Unaware

31. If given chance to avail government subsidy and loan will you buy any solar equipment?

a) Yes, I will b) No, I do not

32. What is the major reason for not availing government subsidy and loan if buying any solar equipment?

Reason	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Needs lot of time					
Needs lot of documentation					
Don't have required documents					
No reason / don't know					

## 33. In what season you prefer to buy Solar power product(s)?

Products	Winter	Spring	Summer	Autumn
Solar Cooker				
Solar Home Lighting Systems				
Solar Water Heater				
Solar Power Add-On to charge Inverter Battery				
Solar Power Panels				

34. What attracts you buy solar power product(s)?

(5-1) denotes the points or stars given for the following factors.

Factors	5	4	3	2	1
Warranty					
Guarantee					
Replacement					
Exchange					
offer					

35. Suggestion if any for the development of Solar power product(s).