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A study on promotional strategy of solar energy Management Company with special references in Salem and Dharmapuri districts

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Abstract

Solar Energy a clean renewable resource with zero emission has got tremendous potential of energy which can be harnessed using a variety of devices. With recent developments, solar energy systems are easily available for industrial and domestic use with the added advantage of minimum maintenance. Solar energy could be made financially viable with government tax incentives and rebates. Most of the developed countries are switching over to solar energy as one of the prime renewable energy source. The current architectural designs make provision for photovoltaic cells and necessary circuitry while making building plans. The National Solar Mission is a major initiative of the Government of India and State Government of Tamil Nadu to promote ecologically sustainable growth while addressing India's energy security challenge. It will also constitute a major contribution by India to the global effort to meet the challenges of climate change. The main aim of the study is promotional strategy of solar energy Management Company with special references in Salem district and to analyze the factors influencing, impact and problems of solar energy Management Company, to determine the customer awareness regarding the solar energy alternative and solar equipments through effective promotional tools.

Keywords: Photovoltaic Cells, promotional strategy, Biomass Energy, Solar India

1. Introduction

Human well-being and global warming, both are closely linked with energy. Energy is a needed for power generation, to fulfill basic living standards, for transportation and of course for economic development. Besides that, electricity production out of conventional energy sources such as hydrocarbons leads to grave resources cutbacks and pollutant emissions. One solution lies in the use of alternative energies which are renewable and do not harm the environment and furthermore help to be independent of oil prices.

There is a high potential for solar energy in the Indian region and its utilization could reduce the high dependency on fossil fuels and help develop many states. Despite the big potential, hindrances so far have been high prices for technologies, high costs for implementation, lack of knowledge and acceptance, missing financial incentives, volunteers, rules and regulations which are not easy to overcome. Nevertheless, some states in India already successfully integrated solar energies in their energy mix and started first implementations. But in most states this potential is still untapped and waiting to be discovered. The key is to jump from theoretical knowledge to development and technical boots on the ground.

This research study to analyze the potential of solar energy promotional strategy in the Indian states particularly Salem district in Tamilnadu, considering the present situation, progresses and obstacles, possible improvements and how to adapt solar technologies to support Indian states on their way to a diversification and security, ensure a sustainable development, health and well-being as well as economic growth.

2. Objectives of the Study

2.1 Primary Objective

The main aim of the study is promotional strategy of solar

energy Management Company with special references in Salem and Dharmapuri district.

2.2 Secondary Objective

- To study and analyze the sales and marketing of solar power products and solar equipment's innovative technology in Salem and Dharmapuri.
- To analyze the customer awareness regarding the solar energy alternative and solar equipments through effective promotional tools.
- To analyze the factors influencing, impact and problems of solar energy management company in Salem and Dharmapuri Districts.
- To prevent from time consuming and over Costs of electricity expenses and pollutions to the Salem and Dharmapuri Districts people.
- To find general information of solar energy management company in Salem and Dharmapuri Districts.

Solar Radiation in Tamilnadu

There is an ever increasing demand for energy in spite of the rising prices of oil & other fossil fuel depletion of fossil fuels. Energy demand, in particular electricity production has resulted in creation of fossil fuel based power plants that let out substantial greenhouse gas/carbon emission into the atmosphere causing climate change and global warming. The Government of Tamil Nadu is committed to mitigate the climate change effects by bringing out policies conducive to promote renewable energy generation in the State. The Government intends to make renewable energy a people's movement just like rain water harvesting.

The state is blessed with various forms of renewable energy sources viz., Wind, Solar, Biomass, Biogas, Small Hydro, etc. Municipal and Industrial wastes could also be useful sources

of energy while ensuring safe disposal. Renewable Energy (RE) sources provide a viable option for on/off grid electrification & wide industrial applications.

3. Solar Irradiation in Salem district

3.1 About Salem district

Salem district has a population of 3,480,008, roughly equal to the nation of Panama or the US state of Connecticut. This gives it a ranking of 89th in India (out of a total of 640). The district has a population density of 663 inhabitants per square kilometer (1,720 /sq mi). Its population growth rate over the decade 2001-2011 was 15.37%. Salem has a sex ratio of 954 females for every 1000 males, and a literacy rate of 73.23%. It is 46.09% urbanized.

Salem district is divided into 4 Divisions and9 Taluks for the purpose of revenue administration. Tahsildhar is the head of Taluk level administration. Development administration in this district is coordinated by the Panchayat Union (also called as Block). Salem district comprises 4 revenue Divisions namely, Salem, Attur, Mettur, Sangagiri.

3.2 Salem district taluks



It has four revenue divisions viz., Salem, Attur, Mettur and Sankagiri and it is divided into nine taluks viz., Attur, Mettur, Omalur, Sankagiri, Salem, Yercaud, Gangavalli, Idappadi and Valapady. The district comprises of three Municipalities viz.,

Idappadi, Attur and Mettur and one Corporation i.e Salem and 385 Village Panchayats with 646 Revenue villages. The district is also having 34 Town panchayats and 20 Panchayat Unions.

3.3 Solar energy companies in Salem

S. No.	Solar Energy Equipment Dealers in Salem	Manufacture of Solar Water Heaters & Solar Lighting Companies in Salem	
1	Solar technics	Mercurys Solar	
2	Sun power and solar water heater	Sunshine company	
3	Solar energy system	Surya Powers	
4	Royal power system	Solar technics	
5	Kcpsixvell power system	Eternal energy	
6	Sakthi electrifiers	Solar wiz Asia Pvt.	
7	Kcp solar industry	Tem associates	
8	Sumsen marketing	Solar power appliance	
9	Win power system	win power systems	
10	Andhi industries	Sunshine company	
11	Solar utilities	Solar Technics	
12	Smart tech power solution		
13	Environmental Heating Solutions LLC		
14	Accelerate Solar LLC		
15	Chem Tech Roofing And Insulation Systems		
16	Honey Electric Solar Inc		
17	Johns Plumbing Heating & Air Conditioning Inc		
18	Webb Heating & Air Conditioning Co Inc		
19	Chemtech Roof & Insulation Systems Inc		
20	Mathis Home Improvements Inc		

4. Marketing Strategies for Solar Companies

Marketing is an uphill battle for solar companies. While there is a lot of interest and excitement around solar alternatives in general, consumers are relatively resistant to making an investment in solar products. Effective marketing must overcome the barriers of cost, reliability, complexity, and fear to convert interest into revenue.

Let's look at how to use the marketing strategies to address these barriers and create marketing success for your solar company.

a) Website Development

Solar products are perceived as complex by the general public. This complexity barrier makes an intuitive, user friendly website crucial to your marketing success. Keep it simple by offering clear navigation options, layman's language, easy to follow graphics.

b) Blogging

Consumers are looking for information to ease their concerns and motivate them to action. Providing a compelling blog communicates your message and engages the consumer in your mission. Consider outsourcing your blog efforts. Rank Up, a service we offer at MSI, adds a custom Word Press blog to your site and provides regular content with your target audience in mind.

c) SEO

Solar products are a hot search topic. Aligning your keywords and content with the most frequent searches is a winning strategy. Use natural keywords rather than scientific terminology. Use your site's content and video to explain solar alternatives and address reliability concerns.

d) Email Marketing

Email marketing, done properly, can overcome consumer inertia. Consider sending an informative email to a targeted customer list or a thank you email to environmental advocates.

e) Paid Search

Google and Facebook offer advertising in a variety of paid search options. You can offer a promotional discount, sponsor additional links within your listing, or advertise your products through images and present product information directly on the listing page. This strategy generates qualified leads by giving the consumer information immediately and motivating them to take action.

f) Social Media

This is the age of social media. Environmental issue fan pages are alive with social media activity. You can leverage this excitement by getting involved. Offer content and promotions that support the interests of these groups. Provide links and social media buttons on your site to encourage consumers to engage and connect.

g) Direct Mail

Buying solar leads for direct mail campaigns is a good investment. This warm list can provide solid results when you focus your message to their interests and demographic.

h) Press Releases Campaigns

The public is hungry for information about solar products. The

media is open to press releases and PR efforts related to your products. Use this to educate consumers and establish your company as an industry leader.

i) Guerrilla Marketing

What is guerrilla marketing? It's using the media in an organic way to market your company. Things like sponsoring an alternative energy event in your community, donating solar products to a charity or non-profit, or even sponsoring a sports team or local activity establish your company in the public arena and help develop trust between you and the consumer. Good will media coverage that includes your company provides effective marketing with a low investment.

Information Products

Don't overlook information products in your marketing strategy. You are probably already familiar with case studies and white papers. While these are effective, balance them with e-books, webinars and videos designed to reach an average audience. Highlight the benefits of solar products to the environment or the ease of use. Overcome the barriers of cost or reliability by giving compelling information anyone can understand comparing solar products with more traditional options.

5. Research Methodology

Research design

A research design is considered as the framework or plan for a study that guides as well as helps the data collection and the analysis of data. Descriptive research design is adopted for this research.

Sampling Design/Techniques

Sampling is the process of selecting a sufficient number of elements from the population, so that a study of the sample and an understanding of its properties or characteristics would make it possible for us to generalize such properties or characteristics to the population elements. Sampling design is to clearly define set of objects, technically called the universe to be studied. Sampling technique used is Stratified Random sampling.

Sample size

The study sample constitutes 200 respondents constituting in the research area.

Sampling Area

The study is conducted on customers of solar energy Management Company's in Salem District.

6. Data Collection Methods Primary data

The primary data's are those, which are collected afresh and for the first time and thus happen to be original in character. With help of the structured questionnaire, personally administered interview technique has been used for the collection of primary data from the respondents.

Secondary Data

The secondary data's are those which have already been collected by someone else and which already have been passed through the statistical process. The secondary data has

been collected from the, company records, journals, magazines and websites.

7. Tools of the Study

The statistical tools analyzing the study includes....

- 1. percentage analysis
- 2. Mean, Standard deviation and Mean percentage
- 3. One way analysis (ANOVA)
- 4. Chi-square test

8. Findings

8.1 Section –I: Description of demographic characteristics

The finding is obtained from this research are as follows:

- Majority of the respondent's age is an important factor for purchasing solar products.
- Education is the one of the most important factors of wise decision making. Because, educated persons will be able to select an appropriate product according to their needs and wants.
- The highest percentage of the respondents' occupation is business
- The highest percentage of the respondents' nature of family is individual family.
- The highest percentage of the respondents' size of the family is 3-4.
- The highest percentage of the respondents' annual income is Rs.200001-300000.
- Most of the purchasing decisions are based on the domicile/place of the respondents here the Majority of the respondents' are located in town.
- Most of the respondents are using kcp solar industry products in Salem.
- Majority of the respondents are using solar panels.
- Majority of the respondents were accepted solar products and equipment price is reasonable.
- Most of the respondents were aware of solar products are reach through personal selling.
- Majority of the respondents were said influence factors you to purchase solar products neither satisfied nor satisfied.
- Most of the respondents are satisfied.
- The impact of solar products promotional strategy, it shows that most of the respondents were satisfied.

- Highest percentage of the respondents satisfied in solar dealers and company's promotional strategy.
- Most of the problems are faced by solar companies in Salem the respondents were said very low.

8.2 Assessment of promotional strategy of solar energy Management Company

Table 1: Area wise distribution of mean, SD and mean percentage of promotional strategy scores of solar energy Management Company

promotional	Ra	nge	Mean	SD	Mean %	
strategy	Minimum	Maximum	Mean	SD		
Awareness	6	10	8.23	1.142	9.00	
Factors influencing	11	18	13.63	2.048	15.00	
Impact	9	13	10.29	1.197	11.00	
Problem	10	20	17.57	2.413	19.00	

The distribution of mean, SD and mean percentage of promotional strategy scores of solar energy Management Company shows that among four areas, the highest mean score (17.57 \pm 2.413) which is 19.00 % was obtained for problem, whereas, the lowest mean score (8.23 \pm 1.142) which is 9.00 % was obtained for the area awareness. However, for the factor the mean percentage is 15.00 (Table 1).

8.3 Section III- Average Score Analysis between Personal Profile Factors and the awareness of solar energy Management Company

The average score analysis between Opinion about the advantage particularly and awareness, factors, impact and problem the personal profile factors namely Age, Educational qualification, number of members in family, occupation, nature of family, income, nature of domicile was analyzed in this section.

8.3.1 Age and Awareness of solar energy Management Company

To study the effect of age, the distributions of sample respondents according to age the awareness of solar energy Management Company among the respondents are shown in the following table 2.

Table 2: Awareness of	of solar energ	y Management Cor	npany
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A 550	Ra	nge	Mean SD N		Mean %	F Statistics	P
Age	Min	Max	Mean	Wiean SD		r Staustics	r
Up to 20	0	0	0	0	0		
21 – 30	6	10	8.27	1.245	20.6		
31 – 40	6	10	8.53	1.016	28.5	2.203	.089
41 – 45	6	10	8.13	.991	22.2		
Above 45	6	10	8.00	1.246	28.7		
Overall	6	10	8.23	1.142	100.0		

It could be noted from the table that the Opinion about the awareness of solar energy management company among 21 to 30 was ranged between 6 and 10 with an average of 20.6, the Opinion about the among awareness of solar product 31 to 40 was ranged between 6 and 10 with an average of 28.5, the Opinion about the awareness of solar product among 41 to 45

was ranged 6 and 10 with an average of 22.2 and the Opinion about the awareness of solar energy management company among above 45 was ranged between 6 and 10 with an average of 28.7.

Further to test the significant difference between the mean score among the demographic variable of Age in vrs the ANOVA test is used and the result is also shown in table 2. Since the P value is greater than 0.05 hence there is no significant difference in the mean scores regarding awareness is found with respect to Age. Thus, it is inferred from the above analysis that the maximum Opinion about the educational empowerment of SHG was among 36 to 40.

8.3.2 Educational qualification and Awareness of solar energy Management Company

To study the effect of educational qualification, the distributions of sample respondents according to educational qualification the awareness of solar energy Management Company among the respondents are shown in the following table 3.

Table 3: Awareness of solar energy Management Company

Educational	Ra	nge	Maan	CD.	Maan %	E Statistics	P
qualification	Min	Max	Mean	SD	Mean %	F Statistics	r
Illiterate	6	10	7.96	1.274	12.1		
Up to HSC	6	10	8.22	1.095	40.5	1.160	.326
Graduate	6	10	8.38	1.119	38.7		
Post graduate	6	10	8.00	1.237	8.7		
Overall	6	10	8.23	1.142	100.0		

It could be noted from the table that the awareness of solar energy management company among Illiterate was ranged between 6 and 10 with an average of 7.96, the awareness of solar energy management company among up to HSC was ranged between 6 and 10 with an average of 8.22, the awareness of solar energy management company among graduate was ranged between 6 and 10 with an average of 8.38 and the among awareness of solar energy management company post graduate was ranged between 6 and 10 with an average of 8.00.

Further to test the significant difference between the mean score among the demographic variable of educational qualification in yrs the ANOVA test is used and the result is also shown in table 3. Since the P value is greater than 0.05

hence there is no significant difference in the mean scores regarding awareness of solar products is found with respect to educational qualification.

Thus, it is inferred from the above analysis that the maximum Opinion about the awareness of solar products was among up to HSC.

8.3.3 Nature of family and Awareness of solar energy Management Company

To study the effect of nature of family, the distributions of sample respondents according to nature of family the Opinion about the awareness of solar energy Management Company among the respondents are shown in the following table 4.

Table 4: Awareness of solar energy Management Company

Noture of family	Ra	nge	Mean SD		Moon 0/	T Statistics	_
Nature of family	Min	Max	Mean	SD	Mean %	1 Statistics	p
Joint family	6	10	8.33	1.047	44.5	1.196	.276
Individual family	6	10	8.15	1.210	55.5	1.190	.270
Overall	6	10	8.23	1.142	100.0		

It could be noted from the table that the awareness of solar energy Management Company among joint family was ranged between 6 and 10 with an average of 8.33 and the awareness of solar energy Management Company among Individual family was ranged between 6 and 10 with an average of 8.15. Further to test the significant difference between the mean score awareness of solar energy Management Company among the demographic variable of nature of family the t test is used and the result is also shown in table 4. Since the P value is greater than 0.05 hence there is no significant difference in the mean scores regarding is found with respect

to nature of family.

Thus, it is inferred from the above analysis that the maximum the awareness of solar energy Management Company was among individual family.

8.3.4 Size of family and the Awareness of solar energy Management Company

To study the effect of size of family, the distributions of sample respondents according to size of the family the awareness of solar energy Management Company among the respondents are shown in the following table 5.

Table 5: Awareness of solar energy Management Company

Circ of family	Range		Mean	SD	Mean %	F Statistics	P
Size of family	Min	Max	Mean	SD	Mean %	r Statistics	r
Only 2	6	10	8.00	1.359	6.8		
3 – 4	6	10	8.24	1.177	65.6	.202	.895
5 – 6	6	10	8.26	1.052	23.6	.202	.893
6 and above	7	9	8.25	.707	4.0		
Overall	6	10	8.23	1.142	100.0		

It could be noted from the table that the awareness of solar energy management company among only 2 was ranged

between 6 and 10 with an average of 8.00, the Opinion about the awareness of solar energy management company among 34 was ranged between 6 and 10 with an average of 8.24 and the awareness of solar energy management company among above 5-6 was ranged between 6 and 10 with an average of 8.26 and the awareness of solar energy management company among above 6 and above was ranged between 7 and 10 with an average of 8.25.

Further to test the significant difference between the mean score among the demographic variable of size of family in yrs the ANOVA test is used and the result is also shown in table 5. Since the P value is greater than 0.05 hence there is no significant difference in the mean scores regarding awareness of solar energy Management Company is found with respect to size of family.

Thus, it is inferred from the above analysis that the maximum Opinion about the awareness of solar energy Management Company was among up to 3-4.

8.3.5 Occupation and the Awareness of solar energy Management Company

To study the effect of occupation, the distributions of sample

respondents according to occupation the awareness of solar energy Management Company among the respondents are shown in the following table 6.

It could be noted from the table that the awareness of solar energy management company among private service was ranged between 6 and 10 with an average of 8.20, the awareness of solar energy management company among government service was ranged between 6 and 10 with an average of 8.42, the awareness of solar energy management company among business was ranged between 6 and 10 with an average of 8.22, the awareness of solar energy management company among agriculturist was ranged between 6 and 10 with an average of 8.15.

Further to test the significant difference between the mean score awareness of solar energy management company among the demographic variable of occupation in yrs the ANOVA test is used and the result is also shown in table 6. Since the P value is less than 0.05 hence there is significant difference in the mean scores regarding is found with respect to occupation.

Table 6.	Awareness	of solar energy	v Management	Company
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Occupation	Ra	Range		SD	Mean %	F Statistics	2
Occupation	Min	Max	Mean	SD	Mean 70	r statistics	р
Private service	6	10	8.20	1.229	24.9		
Govt.service	6	10	8.42	1.251	16.9	416	.742
Business	6	10	8.22	1.027	34.4	.416	
agriculturist	6	10	8.15	1.148	23.8		
Overall	6	10	8.23	1.142	100.0		

Thus, it is inferred from the above analysis that the maximum the awareness of solar energy Management Company was among business.

8.3.6 Family income and Opinion about the Awareness of

solar energy Management Company

To study the effect of family income, the distributions of sample respondents according to family income the awareness of solar energy Management Company among the respondents are shown in the following table 7.

Table 7: Awareness of solar energy Management Company

Family Income	Range		Moon	SD	Maan 0/	F Statistics	P
Family Income	Min	Max	Mean	SD	Mean %	r Statistics	r
Above Rs.200000	6	10	8.43	1.142	28.7		
Rs.200001-Rs.300000	6	10	8.14	1.188	46.5	.822	.483
Rs.300001-Rs.400000	6	10	8.21	1.139	16.5	.822	.465
Rs.400001-Rs500000	6	9	8.12	.857	8.4		
Above 500001	0	0	0	0	0		
Overall	6	10	8.23	1.142	100.0		

It could be noted from the table that the awareness of solar energy management company among above Rs.200000 was ranged between 6 and 10 with an average of 8.43 the awareness of solar energy management company among Rs.200001-300000 was ranged between 6 and 10 with an average of 8.14, the awareness of solar energy management company among Rs.300001-400000 was ranged between 6 and 10 with an average of 8.21 and the awareness of solar energy management company among above Rs.400001-Rs.500000 was ranged between 6 and 9 with an average of 8.12.

Further to test the significant difference between the mean score among the demographic variable of family income in yrs the ANOVA test is used and the result is also shown in table 7. Since the P value is greater than 0.05 hence there is no significant difference in the mean scores regarding awareness of solar energy Management Company is found with respect to family income. Thus, it is inferred from the above analysis that the maximum the awareness of solar energy Management Company was among above Rs.200000.

8.3.7 Nature of domicile and the Awareness of solar energy Management Company

To study the effect of area of residence, the distributions of sample respondents according to age the awareness of solar energy Management Company among the respondents are shown in the following table 8.

Table 8: Awareness of solar energy Management Company

Area of residence	Range		Mean	SD	Mean %	F Statistics	ъ
Area of residence	Min	Max	Mean	SD	Mean %	r Statistics	r
Town	6	10	8.25	1.143	77.7	246	621
Village	6	10	8.16	1.147	22.3	.246	.621
Overall	6	10	8.23	1.142	100.0		

^{*} Significant at 5 % It could be noted from the table that the awareness of solar energy management company among town was ranged between 6 and 10 with an average of 8.25, the awareness of solar energy management company among village was ranged between 6 and 10 with an average of 8.16.

Further to test the significant difference between the mean score among the demographic variable of area of residence in yrs the ANOVA test is used and the result is also shown in table 8. Since the P value is less than 0.05 hence there is no significant difference in the mean scores regarding awareness of solar energy Management Company is found with respect to area of residence.

Thus, it is inferred from the above analysis that the maximum the awareness of solar energy Management Company was among Town.

8.4 Association between Personal Profile Factors and awareness about solar company and dealers in Salem

The association between the awareness about solar company and dealers in Salem and the personal profile factors was analyzed in this section. The chi square test is used at 5% level of significance.

Null Hypothesis: H_0 : There is significant association between the demographic variables and awareness about solar company and dealers in Salem

Table 9: awareness about solar company and dealers in Salem-Chi square Test

Demographic variables	Value	df	P value	Remark
Age	4.240	3	.237	Not Significant
Educational Qualification	65.720	3	.000	Highly Significant
Nature of family	13.080	3	.004	Significant
Family size	2.880	1	.090	Significant
Occupation	192.600	3	.000	Highly Significant
Family Income	67.000	3	.000	Highly Significant
Domicile	60.500	1	.000	Highly Significant
Awareness of solar company	31.750	4	.000	Highly Significant

It is noted from the above table that the 'p' value for the demographic variables of Educational Qualification, Occupation, are less than 0.05 and hence the result is significant at 5% level. From the above the Nature of family, family size analysis it is concluded that there is no significant association is found between the Age of the respondents and awareness about solar company and dealers in Salem.

Similarly the 'p; value for the occupation, family income, domicile, awareness of solar company is less than 0.01 and hence the result is highly significant at 1% level. From the analysis it is concluded that there is highly significant association is found between the occupation, family income, domicile, awareness of solar company of the respondents.

8.4.1 Association between Nature of family and Influence to force the decision

The association between the Nature of family and Influence to force the decision was analyzed in this section. The chi square test is used at 5% level of significance.

Null Hypothesis: H_0 : There is significant association between and Nature of family and Influence to force the decision.

In order to find the relationship between the Nature of family respondents and Influence to force the decision, a chi-square test was used and result of the test is shown in the following table. 10.

Table 10: Association between Nature of family and Influence to force the decision-Chi-Square Test

Demographic variables	Value	df	P value	Remark
Nature of family	2.880	1	.090	Significant
Influence to force the decision	87.120	1	.000	Highly Significant

It is noted from the above table that the 'p; value for the demographic variables of Nature of family is less than 0.05 and hence the result is significant at 5% level. From the analysis it is concluded that there is significant association is found between the natures of family of the respondents.

Similarly the 'p; value for the Influence to force the decision is less than 0.01 and hence the result is significant at 1% level. From the analysis it is concluded that there is highly significant association is found between the Influences to force the decision of the respondents.

8.4.3 Association between family income and solar product price

The association between the family income and solar product price was analyzed in this section. The chi square test is used at 5% level of significance.

Null Hypothesis: \boldsymbol{H}_0 : There is highly significant association between the between family income and solar product price In order to find the relationship between the family income of the respondents and solar product price, a chi-square test was used and result of the test is shown in the following table 11.

It is noted from the above table that p value for the family income and solar product price is less than 0.01 and hence the result is significant at 1% level. From the analysis it is concluded that there is highly significant association is found between the family income and of the respondents and solar product price.

Table 11: Association between family income and solar product price –Chi square Test

Demographic variables	Value	Df	P value	Remark
Family income	67.000	3	.000	Highly Significant
Solar product price	82.090	2	.000	Highly Significant

From the analysis it is concluded that there is highly significant association is found between the family income and solar product price.

8.4.4 Association between nature of domicile and type of solar product purchased:

The association between the nature of domicile and type of solar product purchased was analyzed in this section. The chi square test is used at 5% level of significance.

Null Hypothesis: H_0 : There is highly significant association between the nature of domicile and type of solar product purchased In order to find the relationship between the nature of domicile of the respondents and type of solar product purchased, a chi-square test was used and result of the test is shown in the following table 12.

It is noted from the above table that the 'p; value for the nature of domicile is less than 0.01 and hence the result is highly significant at 1% level. From the analysis it is concluded that there is highly significant association is found between the nature of domicile of the respondents and type of solar product purchased.

Table 12: Nature of domicile and type of solar product purchased – Chi square Test

Demographic variables	Value	df	P value	Remark
Nature of domicile	60.500	1	.000	Highly Significant
Type of solar product purchased	59.980	5	.000	Highly Significant

It is noted from the above table that the 'p; value is less than 0.01 and hence the result is highly significant at 1% level. From the analysis it is concluded that there is highly significant association is found between the Nature of domicile and type of solar product purchased.

8.4.5 Association between Number of members in family and satisfaction level

The association between the number of members in family and satisfaction level was analyzed in this section. The chi square test is used at 5% level of significance.

Null Hypothesis: H_0 : There is highly significant association between the number of members in family and satisfaction level In order to find the relationship between the nature number of members in family and satisfaction level, a chi-square test was used and result of the test is shown in the following table 13.

It is noted from the above table that the 'p; value for number of members in family satisfaction level is less than 0.01 and hence the result is highly significant at 1% level. From the analysis it is concluded that there is highly significant association is found between the satisfaction levels.

Table 13: Number of members in family and satisfaction level –Chi square Test

Demographic variables	Value	df	P value	Remark
Number of members in family	192.600	3	.000	Highly Significant
satisfaction level	48.020	1	.000	Highly Significant

It is noted from the above table that the 'p; value is less than 0.01 and hence the result is highly significant at 1% level. From the analysis it is concluded that there is highly significant association is found between the Number of members in family and satisfaction level.

Summary of Recommendations

The following is the prioritized summary list of promotional tools suggested for development and use by solar manufacturers, the Solar Energy Industries Association, or other entities involved in marketing solar water heaters in the new home industry. Suggestions for solar materials and equipments will be developed in the body of this report, including type of equipments, messages.

General suggestions for layout or flow of information where appropriate.

Essential

- Promote the usage of the products as a technology to be used in residential and industrial building sectors. Develop relationships with architects and building companies.
- ➤ Build and use relevant marketing mixes for different market segments
- > Build and maintain the company's image and reputation.
- > Develop manufacturer identity and brand.
- Establish the presence of the company on the Internet. Conceive E-marketing strategy, programs and campaigns, identify and use the e-marketing tools.
- ➤ Build and maintain the network with suppliers, clients, regulating authorities, professionals, Ecologist organizations.
- ➤ Organize the presence of the company to international seminars and conferences regarding PV products, technologies, green energy and social responsibility
- > Develop social responsibility programs.
- Point-of-purchase displays or counters cards for models
- Press releases with full colour photography of installations and home exteriors and public relations program.
- Sales training materials for builder staff
- ➤ The government has to give full reduction in tariff for solar PV raw materials through government policies. And to provide credit facilities, Incentives and rebates can reduce the cost of two solar PV installation in every house in Salem.
- Solar power production products are one of the alternative natural energy powers for industries and public in Salem.

- To avoid environment pollution and it also create a lot of employment opportunities for employees in Salem district
- Tariff based competitive Tendering or bidding system as major promotional strategy for the support of renewable solar (PV) energy system.
- Through feed-in-tariff the price per unit of electricity that a utility or supplier is legally obligate to pay for solar (PV) photovoltaic renewable electricity from private generators or producers.
- Exemption from Payment of Electricity Tax and Investment subsidies include rebate and tax incentives programs to promote solar photovoltaic energy and to give discounts for establishment of Solar Power Plants in Industrial Estates.
- > To give Incentives to Manufacturers and renewable Energy Certificate and Carbon Credits etc., and conduct in plant training and small entrepreneurship development programs in Salem city.

9. Conclusion

Worlds' non-renewable resources are finite. The increasing demand for electricity consumption can't be alone fulfilled on the expense of fossil fuels. Thus, there is a dire need to move towards some permanent solution that is feasible on the basis of economic as well as environmental cost. Development of solar energy, which is indigenous and distributed and has low marginal cost of generation, can increase energy security by diversifying supply, reducing import dependence, and mitigating fuel price volatility. Solar energy management company's promotional strategies development in Salem can also be an important tool for encourages regional economic development, particularly for many underdeveloped states and districts like Salem, dharmapuri, namakkal, erode, krishnagiri, attur, sangagiri in Tamilnadu India, which have the greatest potential for developing solar power systems and solar equipment and products which is unlimited and clean source of energy. The research would be useful to improving the requirement of solar applications like solar water heating systems, solar cookers, solar motors, Photovoltaic, Solar street lighting systems, home lighting systems, power plants and solar pumps etc., and this research provides promotional techniques and strategy for solar energy management company's in Salem district. Solar energy solves electricity problems and this study will help to develop and increase the sales of solar energy management companies sales and marketing in Salem city. It can provide secure electricity supply to foster domestic industrial development. So it can be concluded that photovoltaic power systems will have an important share in the power sector in the future not only in India, but all over world.

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