

# ANALYZE THE FACTORS INFLUENCING SOLAR ENERGY PRODUCT PURCHASES IN SURAT CITY

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## ABSTRACT

This research provides insights and highlights the elements that influence the procurement of solar products in Surat city. The solar energy business is experiencing significant growth in the Indian economy, indicating a substantial market potential. This study provides an overview of solar products, including their advantages and disadvantages. It also examines the global, national, and state-level scenarios of the solar power industry, specifically in Surat city. Additionally, it includes a PESTEL analysis of the current trends in the solar power industry and highlights the major players and offerings in the solar industry in Surat city.

The objective of this research is to investigate the factors that influence the procurement of solar products in Surat city. A total of 205 respondents from Surat city have completed the questionnaire. It is often assumed that nearly every citizen is aware of solar products. The prices of solar products are rather unfamiliar to the general public, and there is a lack of awareness regarding their affordability. Buying decisions can be influenced by factors such as family income, family size, and education.

**Key words:** Solar energy, PESTEL analysis, Buying decisions, Solar products.

## 1. INTRODUCTION

Solar energy is the radiant heat and light from the Sun that is captured by a variety of technologies, including solar building, solar thermal energy (including solar water heating), and solar power to produce electricity. It is a crucial source of renewable energy, and based on how solar energy is captured, distributed, or transformed into solar power, its technologies are generally classified as passive solar or active solar. Utilizing photovoltaic systems, concentrated solar power, and solar water heating are examples of active solar methods. A building's orientation towards the Sun, the choice of materials with favorable thermal mass or light-dispersing qualities, and the creation of naturally ventilated areas are all examples of passive solar techniques.

On Earth, we use photovoltaic or solar thermal collectors to capture and transform solar energy from the sun into useful energy. Despite making up a relatively tiny portion of the world's total energy consumption, solar energy is becoming more widely available due to the decreasing cost of solar panel installation. Solar energy is a clean, renewable resource that will be crucial to the future of worldwide energy.

## INTERNATIONAL SOLAR POWER INDUSTRY.

The market for solar energy was estimated to be worth USD 167.83 billion in 2021 and is anticipated to increase from USD 234.86 billion in 2022. Based on air analysis, the global solar power market showed growth of 17% in 2020 compared to 2019. The COVID-19 pandemic has been unprecedented and staggering, with solar power experiencing higher than expected demand across all regions compared to pandemic level.

In recent years, the generation of electricity has been directly impacted by the growing populace in developing nations. Accompanied by a greater decrease in carbon. production of electricity using renewable energy sources in place of conventional power sources. Products like oil and coal are growing at a healthy pace.

Solar energy generates electricity by using the sun's energy as either heat energy or photovoltaic cells in solar boards and transparent photovoltaic glass. The total amount of solar energy incident on earth is currently enormously abundant and can meet future energy needs. This widely dispersed source has the potential to satisfy all current and future energy demands if properly utilized. Due to its unlimited availability and environmentally favorable characteristics, solar energy has been shown to be a significant renewable energy source that can replace the finite fossil fuels such as coal, oil, and natural gas.

The demand for renewable energy and its sources has increased because of the growing desire to lessen our reliance on fossil fuels and reduce the carbon emissions that result from burning them. During the forecast period, this factor is anticipated to fuel market growth.

### **INDIAN SOLAR POWER INDUSTRY**

India's solar power business is expanding quickly. As of December 31, 2022, the nation had 63.203 GW of total solar power. India's use of solar energy will place fourth worldwide in 2021.

The Indian government had set an aim of 20 GW capacity for 2022, but after achieving that goal four years early in 2015, the goal was increased to 100 GW by that same year. To provide land to the proponents of solar plants, Targeting India has built 42 solar parks close by.

In addition to its large-scale grid-connected solar photovoltaic project, roof top solar accounts for 2.1 GW in 2018, with 70% of that being industrial or commercial. Off-grid solar energy is being developed in India to meet local energy requirements. By the end of 2015, just fewer than one million solar and related products had been sold in the nation, reducing the need for kerosene. Solar products have increasingly served to satisfy rural needs. Under a national initiative, 46,655 solar street lighting installations were made that year. In India, a little more than 1.4 million solar cookers were given.

The estimated solar energy incidence on India's land region is approximately 5 quadrillion kilowatt-hours per year, with about 300 clear and sunny days per year. The amount of solar energy produced in a single year is greater than the total amount of fossil fuel energy sources in India combined. According to widely available and tested technology, the average daily solar power plant generation capacity in India is 0.30 KWH per m<sup>2</sup> of land area used, or 1400–1800 peak capacity operating hours per year.

India started a project with a budget of Rs. 40 crores in June 2015 to detect solar radiation with a 3 by 3 km spatial resolution. The Indian solar radiation atlas is built on the foundation of this network for monitoring solar radiation. The national institute of wind energy has placed 121 solar radiation assessment stations throughout India.

### **SOLAR POWER INDUSTRY IN GUJARAT**

Gujarat, a large and mostly arid state in India, has a rapidly growing solar energy sector. It was one of the first states in India to increase its capability for solar generation. The state's entire installed solar power generation capability as of March 31, 2022, was 7180 MW.

Gujarat currently has 19.41K MW of total renewable energy, including 9419.42 MW from wind energy, 7806.80 MW from solar energy, 1990 MW from hydropower, 109.26 MW from bio power, and 89.39 MW from small hydropower.

With a goal of establishing 40,000 MW of solar capacity, an ultra-mega solar power project is currently under construction as part of the plan for the development of solar parks.

Along with the current solar power strategy. The state has also released a solar wind hybrid strategy that favors the creation of four to five such parks with a minimum capacity of MW.

The state's total capacity for installed solar power production grew from 4431 MW in March 2021 to 7,180 MW in March 2022. Gujarat had a total installed rooftop solar power of 1.27 giga watts as of June 30, 2021, and more than 2 lakh homes had installations. In terms of rooftop solar performance, Gujarat is the best-performing province in India.

### PESTEL ANALYSIS OF SOLAR INDUSTRY

The strategic management instrument PESTEL Analysis is used by Solar Industries India. Political, Social, Economic, Technological, Environmental, and Legal (PESTEL) factors that affect the overall environment in which a company works is referred to as. Solar Industries India Ltd. operates in a dynamic environment where it is influenced by consumer spending patterns, governmental policies, technological advancements, societal trends, and an expanding regulatory framework for environmental factors, as well as a legal system that is constantly changing.

### MAJOR SOLAR ENERGY PRODUCTS

Solar Water Heater, Solar Water Pumps, Solar Air Conditioner, Solar Water RO, Solar Cell Phone, Solar Charger, Solar Inverter, Solar Cooker, Solar Chimney, Solar Street Light, Solar EPC. Solar Balloon.

## 2. LITERATURE REVIEW

**Sohail Ayoub, Ghulam Dastgir, Muhammad Waqas (2019)** the study was to find the factors affecting consumer purchase intentions for solar energy applications at domestic level. Energy is considered backbone of an economy, and it is considered as one of the most important commodities of a country. The need for the energy has been increasing very sharply since last few years due to the change in people lifestyle, industrial development throughout the world. Quantitative methodology was used for the study. Research design was cross sectional, and a positive approach is used for collection of data. Questionnaire was used as a source of data collection. A mix of systematic and convenience-based sampling was used. the cost of using and purchasing solar energy, perceived ease of use and attitude towards purchase of solar energy all affect positively the consumer purchase intentions for solar energy at domestic level.

**Sudharsan T.M, Suresh M (2016)** The results indicate that institutional and fire hazards are the most crucial factors for the purchase decision of solar lanterns by street vendors. This paper suggests that air pollution and environmental factors are the key driving factors for the purchase of a solar lantern. Also, other nine factors such as institutional, technology, cost, battery storage, inverter efficiency, temperature, monetary, social and fire hazards add on to the key factors that influence the purchase of solar lanterns by street vendors. We also observe that street vendors on a major scale use kerosene lantern.

**Mehrab Nazir, Jain Tian (2022)** This research was conducted to examine the influences of renewable energy and marketing factors on purchase intention through attitude. The primary purpose of this study is to

examine the influence on purchase intention with the indirect effect of attitude. Proposed hypotheses have been tested using structured questionnaires through SPSS (AMOS) based on a sample of 497 respondents. The main findings revealed interesting consumer purchase intention regarding renewable energy technology. The results showed a significant positive relationship between influential determinants and purchase intention towards the use of renewable energy technology. This study suggests that these marketing approaches can be used as a brand marketing strategy to enhance customer purchase intention.

**Mirza Huzaifa Asif et.al. (2022)** The study added to the theory of planned behavior by adding three new variables, namely, environmental knowledge, environmental concern, and beliefs about the benefits of solar energy. Study outcomes emphasize the critical significance of changing societal norms, boosting consumer awareness, redesigning regulatory mechanisms, and stressing the benefits provided by solar power through coherent and persistent efforts while simultaneously enhancing environmental sustainability practices.

**Bikrant Kesari, Sunil Atulkar, Satyanarayan Pandey (2018)** The study focuses on the six significant factors of customer attribute related to environmental concern which stimulate the purchase behaviour to adopt residential PV technology. Therefore, the study considers various factors of environmental concerns, retrieved from a previous literature review by the researchers. The result indicates that the environmental concern factors such as social influence, environmental attitude, environmental knowledge, environmental responsibility and government initiative have significant positive influence on customer intention to adopt residential PV technology. The outcome of the study will provide some valuable insights to the policymakers, marketers and government for further expansion of solar energy market by using various promotional programmes and strategies, consciousness and sharing responsibility towards saving our environment from detrimental effects of conventional energy resources. Higher level of environmental knowledge increases the green purchase intention in the customers, which lead to more adoption of residential PV systems and influence customer purchasing patterns to buy greener products in the future.

**Malik, Muhammad Imran et.al. (2020)** This study used a cross-sectional design and used a single segment of products that are solar panels (renewable energy technology/ product). It is recommended that future studies must use other research designs with diverse samples and products. The effort is made to know the customer intentions for purchasing renewable energy products for environmental protection. Greater the knowledge higher will be the propensity of developing purchase intentions. Marketers must focus on reducing risks and enhance confidence by educating them for increased purchase intentions, particularly when it is about renewable energy products. The purchase intentions are developed due to the knowledge held regarding renewable products and upon having environmental concerns.

**Dansi Ram Bhandari et.al (2021)** Investment decision is becoming a challenging job in this dynamic business environment in the globe. This paper includes the major gaps in the previous studies on investment decisions. It tries to explore questions for further research. The decisions of the investors are subjective because their decisions are based on the planned cost, their technical skills as well as their risk perception. Most of the investors are influenced by current economic indicators, financial statements of the firm, the output of technical analysis and internal information. Conclusion of Mojan and Ali is that financial indicators mainly per share earnings and dividends affect investors' decision to purchase shares.

**Bhavna Prajapati (2022)** Energy is a vital factor and an inescapable component for economic advancement. It is also substantial for enhancing and sustaining the quality of life. The solar power goods can be a useful choice for energy production as it is effortlessly accessible and is a fresh resource of energy generation. Solar energy has a dazzling capability to be the clean source of energy for the future and to be employed by individual consumers in India. The study focuses on various factors affecting the satisfaction

of solar panel users. This study will be valuable for marketers and for advertisers to comprehend and reach the target buyers in an efficient way and design marketing plan.

**Waad Bouaguel et.al (2022)** The Saudi government has granted individuals the right to install solar photovoltaic systems in their homes and has taken many steps to encourage this initiative. Therefore, it is important to examine the various factors that influence Saudi society's perceptions and attitudes toward the acceptance or rejection of new solar technologies. The model examines intentions and attitudes to adopt new technologies based on two constructs: perceived usefulness and perceived ease of use. The results recommend that the Saudi government should focus on increasing Saudi environment awareness, reconsidering solar PV costs, and putting more emphasis on the relative advantages of solar PV in residential use.

**Asmare Mossie Zerua, Dawit Diriba Guta b et.al (2021)** This study shows significant variation in many socioeconomic and demographic characteristics between adopters and non-adopters of solar home system. The result of the binary logistic regression model indicated that as income of household increase, their propensity to adopt solar home system also increases. Policy measures should create awareness through training, education, and information access or better media availability, and improving the economic status of households through creating lucrative off-farm income-earning opportunities to achieve enhanced adoption of the solar home system.

**Dafit Bagus Maha Bakti et.al (2020)** This investigation was conducted based on integrating the unified theory of acceptance and use of technology and the theory of planned behavior. The results indicated that price value (PV) has a positive relationship and a significant influence on attitude toward use (ATU), which leads to the behavioral intention (BI) to make the construct the most affecting factor. This is the first comprehensive study to analyze the intention to use rooftop solar panels based on the UTAUT2 and TPB framework.

**Sagar Sanap, Suhas Bagal, Dushyant Pawar (2020)** The present research uses factor analysis to determine factors affecting farmers decision of adoption of solar powered pumps. The study provides the various variables that impact on these factors. The main focus of the study on six determined factors compared to other factors such as quality of product, new technology, advertising and marketing, maintenance cost, availability, weather conditions, ease of installation which have less impact on decision of adoption of solar powered pumps. Solar powered pumps system has benefited agricultural sectors around the world.

**U. C. Bandara, T. S. M. Amarasena (2020)** The result of the study indicates that perceived ease of use has the most significant impact on adapting to solar energy technology. Awareness of the technology and relative advantage become the second and third influential factors of adoption. Perceived behavioral control also has a positive impact on adoption to solar energy technology while costs have a negative impact. From a managerial viewpoint these findings can be used for implementing solar energy technology as a household renewable energy source for upcoming future energy crisis. Though geographical unfairness acts as the main limitation, since the high density of population, income level and urbanization of observed area, the result can be generalized to the urbanized households.

**Hrishikesh Sharma, Dr. Runu Bhattacharya (2018)** The study aims to understand the attitude and awareness of people towards solar energy and the decision-making parameters for solar energy products purchase. This paper gives an extensive insight on the attitude and purchase behavior of consumers taking educational institutions as the consideration set. A set of educational institutions having a capacity exceeding 20Kw of electricity has been selected as the sample set of study. Focus has been majorly in

developing the technology to higher efficiency levels. Attention has now shifted to understand the demand side of solar energy.

**Victoria Marion Linda Ncube, Weidong Wang (2022)** The technology of solar photovoltaic panels has been vastly studied in various aspects, but little attention has been paid to examining the purchase intention of the photovoltaic solar systems in developing countries. Based on the literature, perceived cost, social influence, perceived usefulness, and perceived ease of use are the main factors influencing purchase decisions of photovoltaic solar panels and were treated as the independent variables of this study, while purchase intention was treated as a dependent variable. Focusing on this relationship, the study acknowledges the mediating role of willingness to adopt. The results indicate that all the proposed hypotheses of this study are proven significant; emphasizing that purchase intentions of photovoltaic solar panels in the studied region are influenced by the independent variables of the study and stakeholders should formulate incentives that accelerate the adoption based on the country's situation.

**Imran Khan (2015)** It includes factors that make consumers buy solar energy products. These factors describe pre-purchase and post-purchase behavior. The methodology adopted was descriptive research. Descriptive research is done using factor analysis by using a statistical tool called SPSS. A standard and structured questionnaire was prepared and used during the interviews as a tool for research to find the level of importance of each factor. The company must establish an R&D department. Most of the people are not aware of solar products, so the company must bring awareness to people through various promotional activities.

### 3. RESEARCH METHODOLOGY

#### Research objectives:

- To study the factor that affects the consumer purchase intention or installation of solar energy sources.
- To identify the factor influencing the consumer buying behavior and attitude towards solar energy product in Surat city.
- To identify the factor for choosing solar energy system.
- To determine the factor that motivates consumer to purchasing behavior of solar energy product.

#### Research Design:

The research study is Descriptive in nature as it is used in this study to know the respondents in an accurate way and to describe specific opinions of customers towards solar energy products.

**Sampling method:** Convenience nonprobability sampling method used.

**Sample size:** This study has 250 samples taken from Surat city.

#### 4. DATA ANALYSIS AND RESULT

Table 1 Demographic data

<b>Demographic data</b>		
	<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>		
Male	99	48.3
Female	106	51.7
<b>Age</b>		
18-30	111	54.1
31-40	50	24.4
41-50	29	14.1
More than	15	7.3
<b>Occupation</b>		
Student	42	42
Businessman	20.5	20.5
Employee	43	43
Retired	21.0	21.0
<b>Education Qualification</b>		
Postgraduate	<b>57</b>	<b>27.8</b>
Graduate	<b>30</b>	<b>14.6</b>
12th pass	<b>80</b>	<b>39.0</b>
10th pass	<b>38</b>	<b>18.5</b>
<b>Annual income</b>		
Less than 5 lakhs	113	55.1
5 to 10 lakhs	48	23.4
10 to 20 lakhs	41	20.0
10 to 20 lakhs	3	1.5

Types of family		
Joint family	91	44.4
Small family	91	44.4
Nuclear family	23	11.2

The table above indicates that most male and female candidates are the same respondents that provided answers to these questions. Many individuals, comprising 54.1%, belong to the age category of 18-30. Following that, 24.4% of individuals fall into the age range of 31-40. The data indicates that most respondents are employed and working in various fields that align with their qualifications. The frequency of both joint families and tiny families is almost the same, with a frequency of 91 and a percentage of 44.4%. People have a graduate education qualification, which means they have a good understanding of energy products and how they are used. Additionally, the data reveals that among the 205 respondents, 113 individuals have an annual income of less than 5 lacs. This indicates that they require or utilise a greater number of solar energy products to decrease their power expenses.

### Which solar equipment presently use.

**Table 2** Types of solar equipment use

Solar equipment	Frequency	Percent
Solar Energy Inverter	25	12.2
Solar Energy Water heater	56	27.3
Solar Energy Air Conditioner	13	6.3
Solar Energy Panel	57	27.8
Solar Energy Home Lighting System	27	13.2
Solar Energy Water RO	15	7.3
Other	12	5.9

Most people here utilize solar water heaters, accounting for 27.3% of the population. Additionally, 27.8% of people use solar panel water heaters, while other alternative methods are used in smaller proportions compared to these two.

### From where you get the solar energy equipment information

**Table 3** Source solar equipment information

Source of information	Frequency	Percent
Advertisement	45	22.00
Family and friends	92	44.90
Print media	25	12.2



Internet or online	42	20.5
Other	1	0.50

According to the data, the majority of individuals, accounting for 44.9%, get knowledge about solar energy systems through their family and friends. The percentages for ads and internet are 22% and 20.5% respectively. The print media accounts for only 12.2%.

**Mode of buying solar energy equipment.**

**Table 4** Mode of buying solar energy equipment

Mode of purchase	Frequency	Percent
Cash purchase	57	27.8
Instalments	43	21.0
On loan with Govt. subsidy	82	40.0
Loan without subsidy	23	11.2

The table above indicates that 40% of individuals purchase solar products with government subsidies, while 27.8% purchase them in cash.

**People Awareness about proper use of solar energy products.**

**Table 5** Awareness about solar products use

Awareness about use	Frequency	Percent
Yes	156	76.1
No	49	23.9

The table above indicates that most individuals, 76.1 percent, are aware of the appropriate use of solar products.

**Factors that influence the decision of the solar energy product.**

**Table 6** Factors that influence on buying decision

Factors	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
Price of Product	29.3	22.0	19.5	19.0	10.2
Discount Available	11.2	22.4	27.3	26.3	12.7
Warranty provided by company	12.7	9.8	26.3	36.6	14.6

Durability of Product	8.8	18.5	26.8	28.8	17.1
Availability of power all time	14.6	17.1	23.9	28.8	15.6
Utility of the product is good	14.6	15.1	14.6	33.7	22.0
Solar System become an asset	14.1	14.6	26.3	28.8	16.1
Affordable Technology	12.7	17.1	20.0	31.7	18.5
Service facilities are available	16.6	10.7	23.9	31.2	17.6
Credit / Loan facilities is available	17.6	15.6	23.4	31.7	11.7
Maintenance free	13.2	16.1	25.9	31.2	13.7
Safe form of power supply	13.2	14.1	21.5	30.7	20.5
Future will be on solar system	13.2	11.7	22.4	31.7	21.0
Increased property value	14.1	13.7	19.0	31.2	22.0
Solar power is clean energy	23.9	13.2	12.2	24.4	26.3
Solar power is symbol of modern living	10.7	14.6	17.6	28.8	28.3

The table above suggests that the price of the solar energy product does not influence the purchasing decisions of individuals, as they are inclined to purchase products that are of high quality and have the capacity to meet their needs. There is a 26.3% agreement with the discount that is available for solar products. The seller's warranty has an impact on individuals, with a ratio of 36.6%. There is a 28% agreement among individuals that the durability of solar products is impacted by their purchase. 29% of individuals concur that electricity is accessible, while 24% disagree. The utility of the product is deemed to be satisfactory and user-friendly, as 34% of respondents concur that it is suitable for routine use. Although solar products are assets, 26% of respondents are not in agreement or disagreement with this assertion. The photovoltaic product is a technology that is both affordable and efficient, with a ratio of 31.7%. When purchasing a solar product, 1.2% of individuals concur that service is available. 31.7% of individuals purchase solar products due to the availability of loans, while 23.4% are not influenced by the availability of loans. Because solar products are maintenance-free, they are installed once and can be used indefinitely, 31.2% of individuals purchased them. Thirty percent of respondents concur that solar products are a secure source of electricity, while twenty percent are adamant about this fact. 31% of individuals concur that the future will be dominated by solar energy, while 21% are in complete agreement. 52% of individuals concur and strongly concur that solar products have enhanced the value of their properties, while 19% are neutral. Approximately 50% of respondents stated that it is a pure energy source, while 12% were neutral. They have not yet determined whether the source is pure or unclear. The majority of individuals, 57%, agreed that it is a symbol of contemporary living. The remaining individuals either disagree or strongly disagree with it.

**Barriers that preventing to buying solar products**

**Table 7** Barriers that preventing to buying solar products

<b>Barriers</b>	<b>Strongly Admits</b>	<b>Admits</b>	<b>Neither Admits nor Denies</b>	<b>Denies</b>	<b>Strongly Denies</b>
Not a safe form of power generation	43.4	18.0	11.7	16.1	10.7
Waste of money	18.5	22.0	21.5	24.9	13.2
Solar system needs more maintenance	22.0	17.6	25.4	27.8	7.3
Does not add value of property	20.5	22.9	21.0	26.3	9.3
Difficult to install	18.5	13.7	22.0	30.7	15.1
Installment cost is high	19.5	19.0	23.4	28.3	9.8
Repairing the PV panels and parts not possible	18.5	14.6	20.0	27.8	19.0

The table indicates that 43.3% of individuals strongly acknowledge that it is not a safe form of power supply. We observe that 24% of individuals deny that it is a waste of money, while 21.5% neither acknowledge nor deny that it is a waste of money. 2% of respondents vehemently acknowledge that it requires additional maintenance, while 27.8% deny that it requires additional maintenance. The data indicates that 26.3% of respondents deny that it adds value to property, while 22.9% acknowledge that it does not. Consequently, the results are nearly identical. It is evident that 26.3% of respondents deny that it adds value to property, while 22.9% acknowledge that it does not. Consequently, the results are nearly identical. 30.7% of respondents deny that the installation process is challenging, while 22% neither deny nor acknowledge that the installation process is challenging. Most individuals are denying that the product is seasonal, while 8.3% deny it and 19% acknowledge it. This suggests that the product is not seasonal and is effective throughout the year. The data indicates that 27.8% of individuals deny the possibility of rectifying the damage if a solar energy product is purchased. The data indicates that 27.8% of individuals deny the possibility of repairing the item. Consequently, it is evident that purchasing a solar energy product is a viable option.

## 5. FINDINGS

- On basis of gender group 51.7% are female respondent and 48.3% are male respondent in this survey.
- Based on age group most of the respondents are fall in the age group of 1830 and they Are students, businessman and employee.
- We can see that mostly joint family and small family are used solar product whose income mostly under 5 lacs so it can reduce their electricity bill.
- We see that mostly people use solar pane and water heater they listen about solar product from family and friend.
- Mostly people aware about solar product use and their brand name and they mostly purchased it from loan with government subsidy.
- It was discovered that while selecting solar product service provide from seller is very important like discount, warranty, durability loan facility and most important factor is price of the product.
- It demonstrates to other that I am a person who is open to new experience. Show other how much he appreciates them and show to other they are using Morden living technology.
- Most people thing that it adds property value and become assets and contribute to make clean environment. Respondent were found good attitude when choosing residential solar product. The majority found that it saves electricity.
- The initial cost of material set up and instalment is high and need more maintenance. And security provide by organization are some of the problems that prevent you from purchasing solar power product.

## 6. CONCLUSION

The study concludes that the majority of customers like to buy solar energy panels and solar water heaters, so it reduced their electricity bill. Respondent of the Surat city is knowledgeable sufficient and that they decide upon privet interaction from the solar groups.

After much awareness, wide people are going for solar renewable energy. Generation of electricity with the help of solar panels is easy and convenient and the most prior factor that solar panel is one time investment. Solar products are easily available in the market, so people are moving towards the solar system.

During the study, all the renewable source of energy people prefers solar over the other. It rises after the help from government in subsidy manner and mostly people used subsidy and purchased solar product. People are attracted to it because it saves electricity bills. Its ecofriendly one more plus point that attracts the public. People also think about its negative points such as the initial cost of material and the setup of the system was too much high including subsidy. Since there is lot middle class family of in India, the prices incused in a solar power product is taken at the better aspect however searching on the long-time period prospect, solar power is an ought to and efficient solution in today's world. So, there's a big mark place in Surat city developing for solar group within side the close to future.

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