

Awareness and Attitude towards Solar energy in Kurukshetra Haryana

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Abstract: This study explores the awareness and attitude toward solar energy in rural and urban areas of Haryana point that are collected from 62 people from kurukshetra, Haryana state of India through filling the questionnaires via email. Respondents was selected randomly. This study considered various factor related to the respondents Such as age group, gender, education level, user or non-user, media used for aware people, government schemes. Ministry of new and renewable energy launched a number of schemes to promote the use of solar energy such as Jawaharlal Nehru National solar scheme, solar energy subsidy scheme, and rooftop scheme etc. This study found that people with the high education level have more knowledge about solar energy system due to easy accessibility to internet.

Keywords: solar energy system, Awareness, Internet Government scheme.

Introduction:

India is the 3rd largest consumer of energy in the world. India produce 20% of the total installed Power capacity by renewable energy. There are various type of renewable energy like photovoltaic cells, wind energy, water energy, biomass. India is blessed with full of solar energy potential of sunlight. Therefore, Indian government took initiative to use these (renewable energy) abundant resources efficiently. Government of India has launched different type of solar schemes in India to promote the use of solar energy system in rooftop in rural as well as urban areas government provide 30% subsidy on solar energy system to motivate people how to use solar panels for power generation. The users of solar energy system can also save 90% electricity bills. The manufacture of solar panels are also offering some other benefits such as 25 year warranty of solar panels exactra. Ministry of new and renewable energy has been providing spot for organising seminars, workshops, conferences exactra. There are various institutes and agencies in India for promoting use of solar energy such as National institute of solar energy, National institute of wind energy, Solar Energy Corporation of India etc.

Review of literature:

The purpose of literature review is to critically review literature related to the theoretical concept of the topic of awareness and attitude towards solar energy in rural and urban areas. The literature review help us to formulate a theoretical framework for the research study. The researcher who have given their views over awareness and attitude towards solar energy system and related aspect are as follow:

1) Bang, Ellinger (2000): Studied consumer concern, knowledge, believes and attitude toward renewable energy. This research study the relationship of three variables knowledge about renewable energy, environment concern, belief with consumer attitude toward willingness to pay for solar energy system. for this study, survey method why you was used. The data was collected from 347 respondents. In this research, it was found that willingness to pay more for solar energy system was positively related to beliefs about prominent consequences of using renewable energy. Additionally, people with more knowledge and concerned with environment both were found to be positively connected with willingness to pay premium for renewable energy then consumer who have less knowledge about it.

2) Faiers, Neame (2006): Anticipated the consumer attitudes towards domestic solar power system. Therefore, a survey was conducted on 100 early adopters and 1000 early majority .Conjoint analysis or kelly's repertory grid had applied on the study. This research conclude that, early adopters are presently adopting the system point, unless attributes of solar power change. On the other hand, early majority demonstrate highly positive perception of the environment characteristics of solar power. This research study have and major limitation that the term solar power used, not clearly defined between PV and Solar thermal.

3) Schelly, (2014): Examines the questions, what motivates household to adopt solar home system. to conduct this research 48 people interviewed of wisconsin' state. This paper also examined the environmental motivation, demographic characteristics, economic consideration influencing the acceptance and dispersion of innovation .This study suggest - The environmental values are not sufficient to motivate adoption of solar energy. Another payback period is not a universally motivating factor. It was found that people with higher education level are highly motivated for adopting solar home system as compared to who have less educated.

Objectives of the study:

- 1) To study the awareness about solar energy in kurukshetra Haryana.
- 2) To study the attitude of people about solar home system.
- 3) To study the most effective source of information and awareness media in rural as well as urban areas regarding solar energy.

Advantages of Solar energy system:

The benefits of solar energy system are as follow:

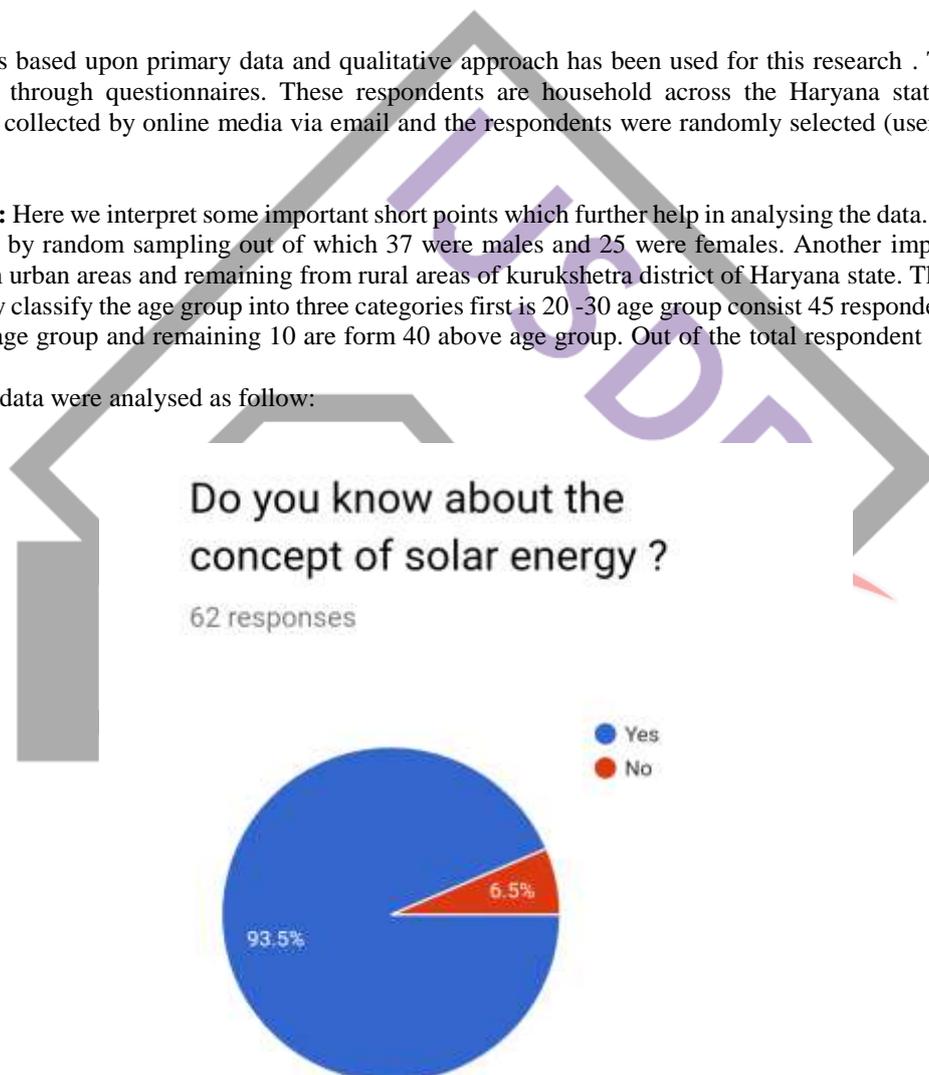
- 1) **Renewable energy sources:** The most important benefit is that solar energy is a renewable energy sources. We cannot run out of solar energy, like another sources of energy. We have easily access solar energy as long as we have sunlight. India is blessed with about 300 sunny aur clear days in a year.
- 2) **Reduce electricity bills:** once you adopt or install solar energy system, it will help you to reduce the electricity bills. Moreover not only you reduce the bills, there is also a possibility to gain money from the surplus energy production.
- 3) **Low maintenance cost:** the another most important benefit of solar energy system is that it don't require a lot of maintenance and care. It only need to keep clean .Mostly solar panels manufacturers offers 20-25 years warranty. Here you can expect very little spending on maintenance and repair work of solar system.
- 4) **Technological development:** We know that there is a vast scope of solar energy industry in future. In constantly changing environment it a lot of innovations and technology changes increases the effectiveness of solar panels and increase the power generation potential by double or even triple time of input.
- 5) **Solar energy is applicable everywhere:** solar energy system can be deployed anywhere, as long as Sunshine is available. There is vast number of places where electricity is not available. So independent solar system could be deployed in these regions and help people to improve their lives. Moreover solar energy system can also used to power up boards and spacecrafts.

Methodology:

The whole study was based upon primary data and qualitative approach has been used for this research . The data was collected from 63 respondent through questionnaires. These respondents are household across the Haryana state district kurukshetra. Questionnaires were collected by online media via email and the respondents were randomly selected (user and non uses of solar energy).

Data interpretation: Here we interpret some important short points which further help in analysing the data. The data was collected from 62 respondents by random sampling out of which 37 were males and 25 were females. Another important factor is that 21 respondents are from urban areas and remaining from rural areas of kurukshetra district of Haryana state. Third important factor is age group. This study classify the age group into three categories first is 20 -30 age group consist 45 respondents, seven respondents comes under 30-40 age group and remaining 10 are form 40 above age group. Out of the total respondent 45 were non-users and 17 were users.

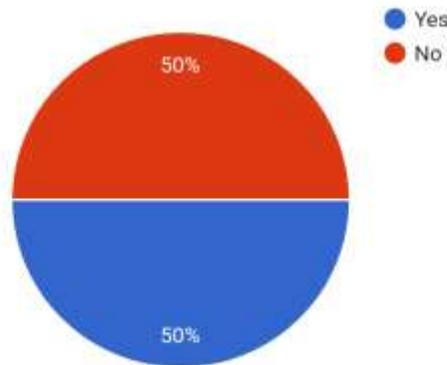
Data Analysis: The data were analysed as follow:



As shown in the pie chart it clearly indicate that most of the people have knowledge about the basic concept of the solar energy. 58 respondents have knowledge about it. We can see that good number of people are aware about solar energy in rural as well as urban area.

Do you have technical knowledge about Solar energy system like cost and capacity ?

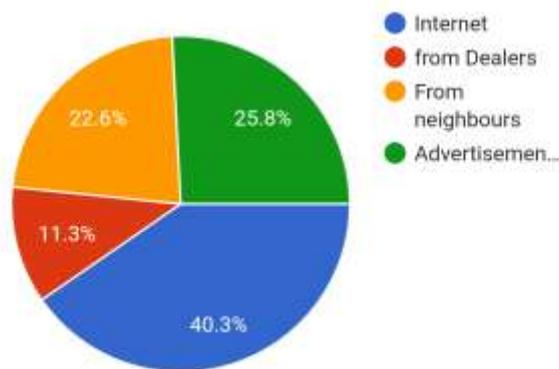
62 responses



Here we can see that 50% of the respondents have knowledge about technical parts solar energy system like cost, capacity and 50% of the respondent have no idea about it.

From where you gather information about Solar energy system?

62 responses

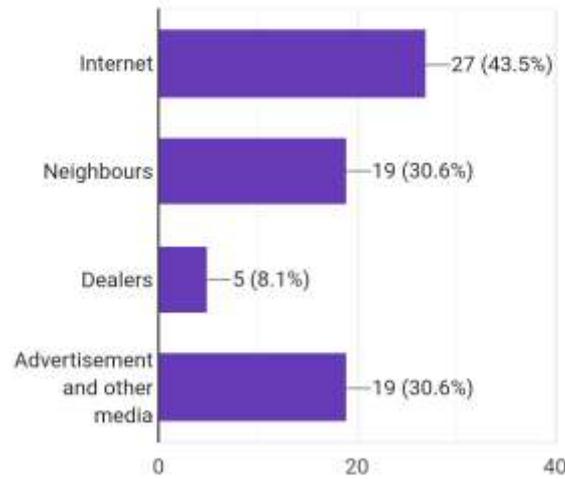


Nowadays, we are living in technical environment. This pie chart is showing that 40.3% of the total respondents were gathered information from internet. Secondly 25.8 percent respondents gathered information from advertising and other medias. 22.6% respondents gathered information from neighbours and remaining from dealers. Thus we can say internet is the most powerful and most commonly source used by people to get information about solar energy system.

Which of the source of information influence you more?



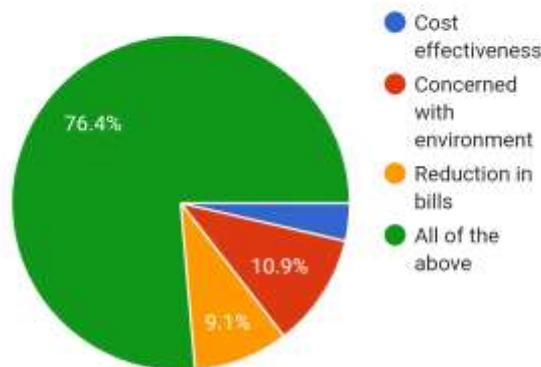
62 responses



This diagram shows that internet influence 27 respondents, 19 respondents reply that they were most influenced by neighbours and 19 respondents influenced by media and advertising and remaining 5 respondents were influenced by dealers. Again internet is proved most influencing source of information.

Which factor you consider while adopting the Solar home system?

55 responses

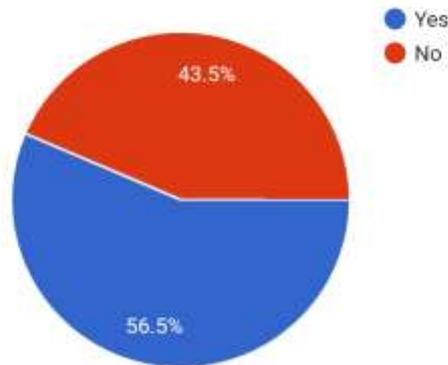


This result shows that 76.4% of the total respondents were considered all of the factors such as cost effectiveness, concerned with environment, reduction in bill while adopting the solar energy system or plan for adopting . Only 10.9% people concerned with environment and 9.1% given preference to reduction in bill.

Do you know about any government scheme promoting solar energy system?



62 responses



This pie chart shows that 56.5 % respondents have aware about government schemes launched for promoting solar energy and 40 3.5% respondents are not aware about it.

Question title: If you are user, did you get any benefit from adopting the solar home system? (Only for user).

Out of the total 17 users, 10 uses of solar energy got both of the benefits such as reduction in bill and subsidy also. And 6 users are only got reduction in bill and only one respondent got nothing from the solar energy system.

Question title: Are you satisfied from adopting the solar home system? (Only for user)

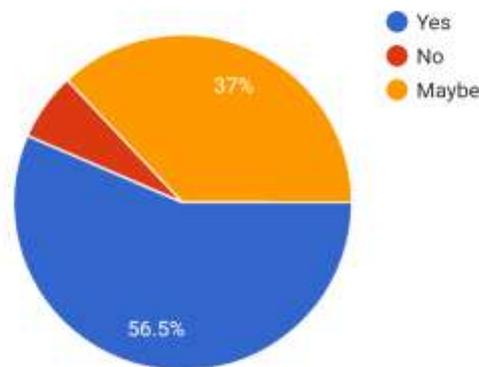
15 respondents who have used the solar energy system are satisfied from adopting the solar energy system and remaining two are neutral.

Question title: Will you suggest others to adopt solar home system? (Only for users)

All of the users will interested to suggest other people about the adoption of solar energy system Thus, this result show that it all users have positive attitude towards solar energy system.

If you are a non user, do you want to install solar home system in future? (Only for non users)

46 responses



This picture shows that 56.5 percent of non-user respondents who were interested to install solar home system in future. 37% were in neutral stage (they may be install solar energy system or not) remaining were not interested to install solar home system.

Limitations of the study: In the field of research, some of the limitation are existing during the research. In our study there is a limitation that data had collected from highly educated people and from young age group (20-30). An another problem is also faced by researchers that respondents were not read the questionnaire attentively before filling it.

Suggestions to aware people about solar energy: As per this research study we give some suggestions how to aware people about Solar energy system .

- 1) Government agencies should work on aware the rural people about the solar energy with the help of organising village fairs, exhibition and provide some practical and technical knowledge about the solar system like demonstration of solar energy system.
- 2) Dissemination of information about government initiatives and schemes related to solar energy system.
- 3) Give more and more TV ads.

Conclusion: In India, Solar energy system have a vast potential to grow. Government policies initiative and schemes play a significant role to aware people about solar energy and motivate them to adopt solar system by providing subsidies and and other benefits. This study examines various factor which affect the awareness about solar energy system in rural as well as urban areas such as age, education level exactra. This research study conclude two main aspects - people with higher education level would have more knowledge and awareness about solar energy and its technological aspect and also have positive attitude towards solar energy system then who have less knowledge about it. This study also explorer that internet is the most influencing source of information because nowadays, everyone have easily access to internet as compared to other source of information and media.

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