

CURRENT STATUS OF SOLAR ENERGY IN INDIA - A Review

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ABSTRACT

Renewable energy source like Solar have the potential to overcome with the problem related to electricity and many other things. In the review paper we have discuss about the Adoption Parameter, like what care should be taken while adopting solar, Consumer Studies such as review related to solar and Current Status of the Solar energy in India. In this we have discussed the scenario of solar such as in which region the setup of solar is best suitable and what are the advantages and how solar can overcome the problem related to electricity. The review paper contains the total information and status of solar in India.

INTRODUCTION:

Solar is one of the most talked-about alternative energy sources in the world today. Enough energy comes from the Sun in an hour that the Globe can provide electricity for a year. Sunlight is a totally renewable resource, unlike oil, coal, etc.

We know that our sun is actually a very large and hot star emitting lots of power in its rays. We can harness that power effectively, so it can help in generating electricity, which is an important part of modern life.

The sun rays transmit both heat and light. The heat is used in thermal systems to produce hot water and hot air for commercial and residential heating use, as well as power generation with steam or sterling engines. The light is used in photovoltaic systems to convert light to electricity and this is one of the main areas where our solar industry is concentrating its efforts today. Our aim in this study is to help decision-makers understand solar energy's potential future importance, the obstacles that may prevent solar technologies from realizing that potential, and the elements of sound public policies that could reduce current obstacles.

ADOPTION PARAMETER

Future solar deployment will depend heavily on uncertain future market conditions and public policies including but not limited to policies aimed at mitigating global climate change. We concentrate on the use of grid-connected solar-powered generators to replace conventional sources of electricity. For the more than one billion people in the developing world who lack access to a reliable electric grid, the cost of small-scale PV generation is often outweighed by the very high value of access to electricity for lighting and charging mobile telephone and radio batteries. In addition, in some developing nations it may be economic to use solar generation to reduce reliance on imported oil, particularly if that oil must be moved by truck to remote generator sites. The main disadvantage of solar energy is its unavailability. The weather conditions are major factor on availability of solar radiation. So, we can't say in a particular time the energy from solar will be available to us or not. The amount of land required for utility-scale solar power plants is currently approximately 1km² for every 20–60MW generation.

CONSUMER STUDIES

Shopping for a solar power system and choosing a solar installer can be an exciting time for many people, but as with any investment, you will need to be careful who you deal with. A company genuinely committed to solar power is in business to make money, however they will often offer energy efficiency suggestions as to how you can decrease the cost of acquiring a system. In order to make a system appear more powerful, some companies may focus on promoting inverter size. A system with a 4kW rated solar inverter but with only 1.5kW of solar panels is a 1.5kW system. The larger inverter will not boost the amount of electricity generated compared to a smaller, suitably sized inverter. In order to claim rebates, all systems must contain certified components. Many solar panel and related component manufacturers have been established around the world in the last couple of years. While the warranty the new companies may offer can be the same duration as the more recognised brands; the warranty will be of little value if the company disappears. Even with any rebates or incentives, you're still investing a sizeable sum from your own pocket and your house is being modified. You should ensure that the right person is executing the installation, it's critical you choose a suitable solar installer.

CURRENT STATUS OF SOLAR ENERGY IN INDIA

As surveyed, the four largest energy consumers in the world are United States, China, Russia and India. Currently the R&D team of every country is focusing on the renewable energy sources. The energy consumption is very high as the sources are in limit. As surveyed in 2014, India has an predictable solar power potential of about 1,00,000 MW out of which the total installed capacity as of 31st March 2014 was 2,647 MW. The top installers of 2016 were China, the United States, and India. There are more than 24 countries around the world with a cumulative PV capacity of more than one gigawatt. Austria, Chile, and South Africa, all crossed the one gigawatt in 2016. India's installed PV capacity by the end of 2016 is 9000(MW). The development and stratege is monitored by India's Ministry of New Renewable Energy (MNRE), Energy development agencies in various states and Indian Renewable Energy Agency Limited (IREDA).

Number of Solar thermal application have been developed which include water heating, drying, etc. Rajasthan is best suited for solar power generation as average rain fall is minimum. Rajasthan has more than 325 sunny days in a year having solar radiation nearly about 6–7 kW h/sq-m/day. So it would be the ideal land for Solar PV. Second in the list is Gujarat. Gujarat receives 5.5–6 kW h/sq.m/day having 300 sunny days in a year. It is also an ideal land for solar PV. According to the latest update of the MNRE, Solar in India has crossed the 2 GW landmark Jawaharlal Nehru National Solar Mission (JNNSM) was started to establish India as a global leader in Solar energy, by creating the policy conditions for its large scale usage across the country as quickly as possible. Solar in India is developing very fast as people are getting aware. The R&D team of India is continuously working on the development of the renewable energy. People are also adopting Solar energy as the uses are very progressive.

Conclusion

In India the consumption rate is very high and for that consumption rate, there is a necessity of renewable energy sources and its development. The problem people are facing regarding shortage of electricity, it should be solved and the use of Solar energy should be done as it can be used in many ways. The problem of electricity can be solved, if right step by the people and people's government is taken.

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