



# Buyer Readiness in Adoption of Solar Energy Systems in National Capital Region of Delhi

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## Abstract

Amongst the renewable energy sources, solar energy is emerging as the fastest growing source among renewables. Though solar panel products were initially commercialized in the 1970's the technology was not well developed enough to become popular. In recent years however, there has been major technological developments in renewable especially solar energy products. As a result, research in this market has gradually started to emerge. This paper reviews the current state of research in solar energy especially solar panel products. The review is based on a thematic approach whereby solar energy literature is categorized based on certain themes. The paper further highlights potential for future research in this area to guide policy makers and practitioners in the area of solar energy markets.

**Keywords:** Renewable energy, Solar energy, Solar power, Solar panels, Adoption and Diffusion, Solar photovoltaics, Solar PV, Literature review

## Introduction

The UN Intergovernmental Panel on Climate Change (IPCC) places emphasis on renewable energy in managing climate change in cities. Modern marketing today has the onerous responsibility of adapting marketing to make it more sustainable (Kotler, 2011). One recent example of this adaptation is the introduction of renewable energy technologies as an alternative to fossil fuels for energy generation. As part of the UN Sustainable Energy for All Initiative, 50 High Impact Opportunities (HIOs) have been identified which include opportunities in renewable energy. Thus, renewable energy especially solar energy is expected to have an increasing importance in the energy mix in the coming years. Solar energy is also relevant because it has the potential to create an ecosystem for the development of charging systems for e-vehicles.

## Scope and Methodology

This review of literature paper attempts to understand the research done in the area of solar energy products with a focus on non-utility level solar PV. This review follows a Thematic-Chronological approach. The work done in this area has been divided into various themes which are further analyzed chronologically.

## Literature Review

Various issues concerning the adoption of solar energy systems have been a subject of study since the 1970s. But a major part of the research has been done in recent times i.e. post-2000 period. This literature review first classifies and assesses the published articles in terms of the overall research techniques used, i.e. quantitative or qualitative.

It then analyses the articles according to the Thematic-Chronological approach. The work done in this research area has been divided into various themes which are further analyzed generally in a chronological manner. These themes have been categorized as Adoption and Diffusion of Innovations Model, Awareness and Acceptance, Important Factors, User Satisfaction and Willingness to Pay.

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## Conclusion

This paper has attempted to look at various studies to understand the direction of current research and to identify new perspectives for further study in today's dynamic environment. Current research has primarily been product centric and in an entirely different situation. Also, it has primarily been conducted in an era where solar PV products were not yet cost-effective making them unattractive to the consumers.

However, fast-paced developments have today changed the market scenario. In the light of these developments, future research needs to focus on identifying measures to increase the adoption of these solar energy systems for a sustainable future through suitable marketing strategies. As a result, this provides direction for a further study related to the level of readiness of buyers in the adoption of solar PV systems in the National Capital Region of Delhi. This is expected to have strategic implications for marketers and the government in creating a market that will contribute towards a sustainable future.

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