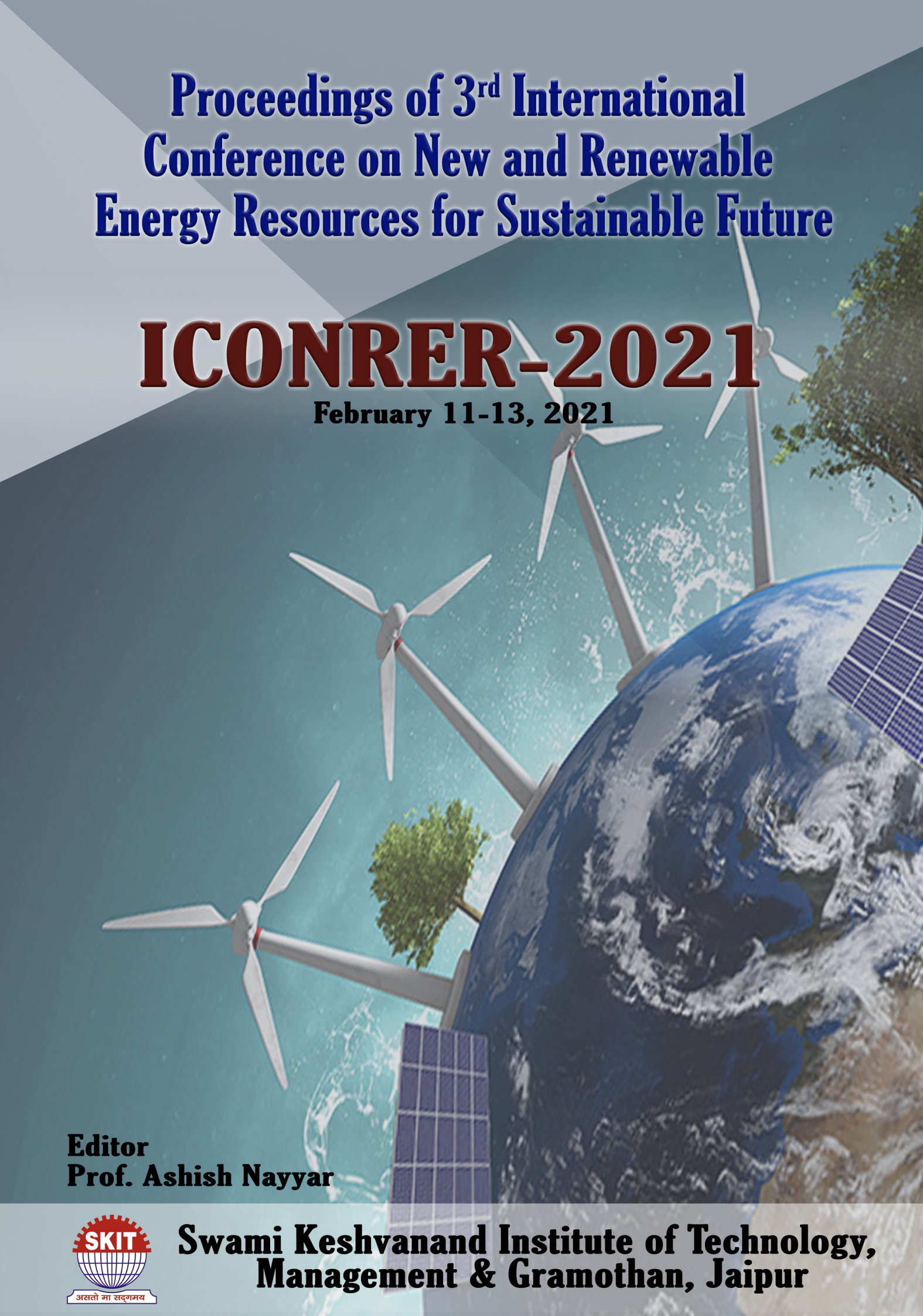
Proceedings of 3rd International Conference on New and Renewable Energy Resources for Sustainable Future

ICONRER-2021

February 11-13, 2021



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SOLAR ENERGY DEVELOPMENT, TRENDS AND INITIATIVES IN CONTEXT OF INDIAN AND RAJASTHAN STATE GOVERNMENT

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Abstract-

Solar power is appealing the world as it is abundant and provide a solution to fossil fuel emission and global climate change. Solar energy is one of the most promising sources of electricity generation from non-conventional sources of energy. From the entire electricity consumption, the contribution of solar energy at the moment accounts for only one percent. Moreover solar energy is a good substitute to depleting fossil fuel and free from pollution. This paper discusses the potential of solar energy in India, specifically in Rajasthan. It gives a brief account of the technologies developed and government initiatives in India and Rajasthan. The major central policies that promote solar energy production are Electricity Act (2003), Jawaharlal Nehru National Solar Mission etc. Many agencies like MNRE and IREDA monitor the framework related to solar energy in India. With the help of Rajasthan government initiatives Rajasthan has utilised to its advantage the fact that western part of it receives highest annual radiation for example Rajasthan Policy 2004, Rajasthan Solar Policy 2011 creation of solar parks etc. With continuous efforts the total power generation from solar energy is expected to exceed 20,00 MW by 2022.

Keywords: **Conventional sources, Solar Technologies, Government initiatives, Policies.**

ABBREVIATIONS

GBI	Generation Based Incentives
MNRE	Ministry of New and Renewable Energy
IREDA	Indian Renewable Energy Development Agency
NAPCC	National Action Plan on Climate Change
PV	Photo Voltaic
PPA	Power Purchase Agreement
STU	State Transmission Unit
T&D	Transmission & Distribution
R&D	Research & Development
RERC	Rajasthan Electricity Regulatory Commission
RREC	Rajasthan Renewable Energy Corporation
RRVPN	Rajasthan Rajya Vidyut Prasaran Nigam

INTRODUCTION

Solar energy is the radiant light and heat from the sun which is harnessed using a range of ever changing technologies. Sun liberate energy at the mass-energy conversion rate of 4.26 million

ICONRER-2021

Renewable energy and sustainable development are the key technologies to offer solutions to the ever-increasing environmental pollutions and depleting conventional fuel reserves. With an aim to discuss the state of art technologies pertaining to the renewable energy domain, RTU (ATU) TEQIP III Sponsored 3rd International Conference on New and Renewable Energy Resources for Sustainable Future (ICONRER-2021) was organized by the Department of Mechanical Engineering, Swami Keshvanand Institute of Technology, Management and Gramothan, Jaipur in collaboration with Rajasthan Technical University and Department of Mechanical Engineering, Assiut University, Assiut (Egypt) from February 11 to 13, 2021. ICONRER is a series of the conference started in 2017 and it was 3rd event of that series.

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ISBN:978-81-954233-3-0