

1. Record Nr.	UNINA9910878062103321
Autore	Kolhe Mohan Lal
Titolo	Smart Grid and Renewable Energy Systems : Proceedings of 14th International Conference on Renewable and Clean Energy (ICRCE2024) / / edited by Mohan Lal Kolhe
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	9789819757824 9789819757817
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (108 pages)
Collana	Lecture Notes in Electrical Engineering, , 1876-1119 ; ; 1238
Disciplina	621.042
Soggetti	Renewable energy sources Wind power Solar energy Electric power-plants Photovoltaic power generation Electric power distribution Renewable Energy Wind Energy Solar Thermal Energy Power Stations Photovoltaics Energy Grids and Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Preface -- Conference Committees -- Contents -- Renewable Energy Generation and Clean Energy Systems -- Blade Parameter Optimization in Pump as Turbine (PAT) -- 1 Introduction -- 2 Geometric Parameters and Methodology and Boundary Conditions of Pump as Turbine -- 2.1 Geometric Parameters of the PAT -- 2.2 Methodology -- 2.3 Boundary Conditions -- 2.4 Validation of the Model -- 3 Best Efficiency Prediction of PAT -- 4 Results and Discussions -- 5 Conclusions -- References -- Economical and Environmental Life Cycle Analysis of Compound Parabolic Collector

for the Textile Process Industry -- 1 Introduction -- 2 Ichalkaranji Cluster Scenario -- 3 Performance of the Solar Thermal CPC System -- 4 Time Value of Money -- 5 Projected Impact of CPC System Integrated with Existing Thermal System -- 6 Conclusion -- References -- Stall Effect Applied to Blade of Design and Experiment on Small Horizontal Axis Wind Turbine -- 1 Introduction -- 2 Blade Design -- 2.1 Graphical User Interface (GUI) Program -- 2.2 Airfoil Selection and Characteristics -- 3 Wind Tunnel Experiment -- 3.1 Experimental Platform of Wind Tunnel -- 3.2 Analysis of Experimental Data -- 4 Conclusions -- References -- Implementation of Energy-Efficient Technologies in Fisheries: Installation of Solar Technology on Board Croatian Purse Seiner -- 1 Introduction -- 2 Solar Energy in Fisheries -- 3 Case Study -- 4 Conclusion -- References -- Comparative Life Cycle Assessment of Photovoltaic Systems with Uncertainty Analysis -- 1 Introduction -- 2 Methodology -- 2.1 Assessment Scope and Key Assumptions -- 2.2 Life Cycle Inventory and Impact Assessment -- 2.3 Uncertainty Analysis -- 3 Results and Discussion -- 3.1 Evaluation of Global Warming Impact and the Uncertainty -- 4 Conclusion -- References -- Electric Vehicles and Battery Technology. Thermal Behavior Prediction of Li-Ion Batteries - A Study with Different Electrochemical Models -- 1 Introduction -- 2 Cell Details and Heat Generation Models -- 2.1 Cell Chemistry -- 2.2 Material Properties -- 2.3 Heat Generation Models -- 3 Numerical Methodology -- 3.1 Orthogonal Array -- 3.2 Grid and Time Independence Study -- 3.3 Boundary Conditions -- 3.4 Comparison of NTGK, ECM and P2D Models -- 4 Result and Discussions -- 4.1 Prediction of Thermal Properties of Cell -- 4.2 Prediction of Electrical Properties of Cell -- 5 Conclusions -- References -- Efficient Self-driving Control for Electric Vehicles -- 1 Introduction -- 2 Vehicle Modeling -- 3 Online Learning Model -- 4 Simulation Results -- 5 Conclusions -- References -- Electricity Market and Energy Management -- Effect of RE Incentive on Base Electricity Tariff Under Incentive Based Regulation Framework Using System Dynamics Approach: Case of Malaysia -- 1 Introduction -- 1.1 Investment Tax Allowance (ITA) in Malaysia Electricity Supply Industry -- 2 System Dynamic Modelling -- 2.1 System Dynamics Modelling Process -- 3 Simulation and Results Analysis -- 4 Conclusion -- References -- Economic Viability of Battery Storage Systems in Energy-Only Electricity Markets -- 1 Introduction -- 1.1 Battery Storage Overview -- 1.2 Energy Arbitrage -- 1.3 Need for Economic Analysis -- 2 Literature Review and Gaps -- 2.1 Deregulated Electricity Market -- 3 Methodology -- 3.1 Assumptions -- 4 Results and Discussion -- 4.1 Model Results -- 4.2 Analysis: Profit Depends upon Intra-day Price Spreads -- 4.3 Analysis: Each Hub Produced Similar Results -- 4.4 Analysis: The Secret Sauce is Power Price Spikes -- 4.5 Capacity Investments Are Always Tough in Energy-Only Markets -- 4.6 Feasible Use Cases for Battery Storage -- 4.7 Policy Implications -- 5 Conclusions -- References. The Effect of Occupant in Energy Consumption Prediction via Multiple Linear Regression Model in an Educational Building -- 1 Introduction -- 2 Methodology -- 2.1 Educational Building -- 2.2 Occupant and Outdoor Temperature as Independent Variables -- 3 Results and Discussions -- 4 Conclusions -- References -- Author Index.

Sommario/riassunto

This proceedings contains peer-reviewed papers from International Conference on Renewable and Clean Energy 2024 which was held in Tokyo, Japan, Feb 24-26, 2024 (contributions from various authors from all sectors of academia and industries), exploring cutting-edge solutions and best practices for renewable and clean energy technologies for achieving the UN's SDG7 to "ensure access to

affordable, reliable, sustainable and modern energy for all." This book presents innovative grid integration technologies for techno-economic operation of renewable and clean energy technologies (e.g., solar photovoltaic, wind energy, hydrogen technologies including electrolyzer and fuel cell, energy storage technologies, etc.). It covers key aspects on energy conversion systems related to renewable energy technologies and their grid integration, techno-economic power dispatching from the distributed environmental-friendly energy sources considering combined heat and power applications, electrical energy network operation with increasing penetration of renewable energy sources, energy efficiency and demand side management, e-mobility, including machine learning applications for intelligent operation of energy systems, etc. The key objective of book is to educate the readers on how sustainable energy technologies can be integrated with energy conversion processes for achieving net zero targets in real-world applications. The book will serve as a useful reference for graduate students, academicians, industry professionals and policy makers interested in exploring the potential of energy technologies in development of sustainable energy system.
