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Titolo	Accelerating the Transition to a 100% Renewable Energy Era // edited by Tanay Sdk Uyar
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ISBN	3-030-40738-1
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (578 pages)
Collana	Lecture Notes in Energy, , 2195-1284 ; ; 74
Disciplina	333.794
Soggetti	Renewable energy resources Energy systems Energy policy Energy storage Renewable and Green Energy Energy Systems Energy Policy, Economics and Management Energy Storage
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Role of PV Technologies Research and Innovation for Transition to 100 % Renewable Energy Course Titles -- Role of Exergy in Renewable Energy System Design -- Energy Storage -- Smart Energy Systems The design of 100 % Renewable Energy Solutions -- How did Europe managed to commercialize renewable energy Technologies? -- Energy Storage -- Impact of Wind Year Selection on the Design of Optimized Energy Systems Based on Variable Renewable Energy Sources -- Effect of air inlet geometry on raw gas composition and tar content in a fuel flexible small scale downdraft gasifier -- Large Scale Wind Turbine Installation for Offshore Gas Platforms; Is It Feasible? -- Grid Code Survey on Frequency Control for Wind Power System -- The Thermodynamic analysis of a Solar-Wind Hybrid System in Lebanon- A case study in Deir Ammar El Baddawi -- A Portrait of Municipal Wastewater Treatment Systems in Turkey as Self-sustaining Renewable Energy Producers -- Urban Scaled Reference Energy System

Development with a Sectoral Focus -- A Model Based Analysis on End-Use Energy Efficiency for Çanakkale, Turkey -- Developing the Business as Usual Scenario for TR-33 Region with EnergyPLAN -- Design and Analysis of a 0.5 MW Grid-Connected Solar PV System in Karabuk University Using PVSYST Simulator -- A Review of Perylene Diimides for Solar Cell Application -- Energy and Exergy Analysis of Combined Cooling System with Parabolic Solar Collector Using Phase Change Material -- An Investigation of the Environmental Impacts on the Efficiency of Photovoltaic Panel in Adyaman, Malatya, anliurfa Region An Investigation of the Environmental Impacts on the Efficiency of Photovoltaic Panel in Adiyaman, Malatya, anliurfa Region -- Analysis of Funded PV Battery Systems in Germany: Prices, Design Choices and Purchase Motivation -- The Renewable Energy Act in Germany: Its Basic Idea and Recent Developments -- Performance Comparison of Multi-Effect Solar Assisted Absorption Refrigeration Systems Using Libr-H<sub>2</sub>O and LiCl-H<sub>2</sub>O Working Pairs -- Turkey's Forecasting of Energy Demand with Artificial Neural-Network -- Determination of Biothermal Power Capacity of Some Agricultural Compost Varieties -- Design and Performance Assessment of a Grid-Connected PV System for Residential Power Generation -- Economic Comparison Of Building Heating With Geothermal Energy and Natural Gas -- A Review on The Economic Impact of Ice Thermal Energy Storage System -- Overview of Future for Offshore Wind Energy In Turkey -- Design Principles of Wind Turbine Installation Vessels -- The Affecting Factors of PV Efficiency and Applying FMEA Method -- Design and Analysis of Grid-Tied PV Panels with Cascaded H-Bridge Multilevel Inverters -- Development of Solar Energy Market, Industry and Utilization in Turkey -- Distributed Grid Integration of PV Generators and Islanding Protection in Turkey -- The Effects Of Soiling On Solar Photovoltaic Systems In The Cyprus -- Efficient Use of Energy to Achieve Global Warming Targets -- Decentralized Grid Control -- PV Integration in Diesel Grids -- Fuel Saving Technologies -- The Paris Agreement and the Future Role of Bioenergy -- Developing Bankable Biomass-To-Energy Projects Across Africa -- Performance Analysis of Grid Connected 250 kWp Dicle University Solar Power Plant in Diyarbakır/Turkey and Comparison with Simulation Results at Winter Conditions -- Control Techniques for Oscillating Wave Energy Converter -- The Techno-Economic Comparison of Solar Power Generation Methods for Turkish Republic of North Cyprus -- A Sustainable Power Generation Infrastructure Model For Turkey -- Turkey's Renewable Future: Alternative Power Supply Scenarios for Turkey until 2030 -- Switch from Gas to Biomass in DH: Success Story of Lithuania -- Present Developments And Potential Of Biomass To Energy In Australia -- Comparison Of Renewable Energy Potential In Relation To Renewable Energy Policy In Ecowas Countries -- Predictive Analytics for Wind Farms -- Project Experience with Intelligent IT Solutions for Optimization of Plant Efficiency and Availability.

## Sommario/riassunto

This book discusses renewable energy systems and applications, and demonstrates how an accelerated transition to 100% renewable energy can be achieved. It examines the systems from a thermodynamic perspective, focusing on the irreversible aspects of the current energy system and highlighting the solutions developed to date. Presenting global research and developments, this book is intended for those working within the field of renewable energy research and policy who are interested in learning how they can contribute to the transition from fossil fuels to renewable resources.