

1. Record Nr.	UNINA9910299618303321
Titolo	Progress in Sustainable Energy Technologies: Generating Renewable Energy // edited by Ibrahim Dincer, Adnan Midilli, Haydar Kucuk
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-07896-8
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (737 p.)
Disciplina	338.927 621.042
Soggetti	Renewable energy resources Sustainable development Energy systems Renewable and Green Energy Sustainable Development Energy Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Comparative Study of Effect of Cloudiness/Haziness Factor on the Quality of Solar Radiation -- Investigation of a Renewable Energy-Based Integrated System for Baseload Power Generation -- Investigation of Organic Rankine Cycle Performance with Variable Mixture Composition -- Comparative Performance Assessment of Two Geothermal-Based Integrated Systems for Hydrogen Production -- Exergetic Optimization of Two Renewable Energy Based Tri-Generation Systems Using Genetic Algorithm -- Performance Evaluation of Integrated Energy Systems -- Performance Assessment of a Two-Stage Heat Pump-Drying System -- Comparative Assessment of Nuclear Based Hybrid Sulfur Cycle and High Temperature Steam Electrolysis Systems Using HEEP -- Thermodynamic Analysis of a Cycle Integrating a Solid-Oxide Fuel Cell and Micro Gas Turbine with Biomass Gasification -- Exergy Analysis of Scroll-Based Rankine Cycles with Various Working Fluids -- Thermochemical Energy Storage Systems: Design, Assessment and Parametric Study of Effects of Charging Temperature -- Thermodynamic Assessment of Seasonal

Stratified Thermal Storage -- Recent Developments in Solar-Powered Micro CHP Systems -- Evaluation of Transient Behavior of a Single-Effect Absorption Chiller -- Combined Effect of Global Warming and Buildings Envelope on the Performance of Ground Source Heat Pump Systems -- Concentrated Solar Power: A Vision for Rajasthan -- Dynamic Exergy Analysis of a Solar Ejector Refrigeration System with Hot Water Storage Tank -- Combined Photovoltaic Solar Cell – Fuel Cell System: Powering a Dormitory Building -- Investigation of a Combined Air Source Heat Pump and Solar Thermal Heating System within a Low Energy Research Home -- A Solar Water Heater for Subzero Temperature Areas -- Modeling of the Heliostat Field in Central Receiver Systems for a Given Input Power -- Single Pass Solar Air Heater without Absorber -- An Alternative Energy Concept: A Solar Power Plant with a Short Diffuser -- Production of Renewable Hydrogen by Aqueous-Phase Reforming of Glycerol over Ni-Cu Catalysts Derived from Hydrotalcite Precursors -- Effects of Pyrolysis Conditions on Structural Ingredients and Functional Groups of Hybrid Poplar -- Contribution for Solar Mapping in Algeria -- Experimental and Theoretical Investigations of Performance of Psychrometric Humidification and Dehumidification Solar Water Desalination System Coupled with an Evacuated Tube Solar Collector -- Optimal Siting of Offshore Wind Farms -- An Investigation into a Small Wind Turbine Blade Design -- Hydrogen Production by Reforming Clathrate Hydrates Using the In-Liquid Plasma Method -- Facilitation of Wind Energy Conversion System Selection as Distributed Generation in Household/Commercial and Agricultural Sectors; Case Study of Iran -- An Integrated Monitoring Framework for Geothermal Space-Heating Systems in Residential Buildings, Fort McMurray -- Characterization of Heat Transport Processes in Geothermal Systems -- The Prospects for Geothermal Application in Algeria -- Thermal Interactions of Vertical Ground Heat Exchangers for Varying Seasonal Heat Flux -- Environmentally Friendly Systems: Earth Heat Pump System with Vertical Pipes for Heat Extraction for Domestic Heating and Cooling -- Thermal Response Test Analysis for an Energy Pile in Ground-Source Heat Pump Systems -- Thermal Performance Comparison between Longitudinal and Lateral Hollow Plate Fin Heat Sinks -- Model-Based Analysis of Singapore's Energy System -- Analysis of a Combined Power and Heating Thermodynamic System Driven by Low Temperature Heat Source -- A Comparative Life Cycle Assessment (LCA) of Compressed Natural Gas (CNG) and Diesel Powered Refuse Collection Vehicles (RCVS) -- Anaerobic Treatment and Biogas Production of Raw Leachate from Fresh Market Waste Composting by an Anaerobic Hybrid Reactor -- A First Experimental Survey on the Urban Heat Island in Padua (Italy) -- Microwave Enhanced Pyrolysis of Gumwood -- Improving Operating Efficiency of Installed Capacity in a Power and Water Cogeneration Plant -- Simulation, Modeling and Analysis of Water/Power Ratios for a Dual Purpose Water and Power Production Plant.

Sommario/riassunto

This multi-disciplinary volume presents information on the state-of-the-art in sustainable energy technologies key to tackling the world's energy challenges and achieving environmentally benign solutions. Its unique amalgamation of the latest technical information, research findings, and examples of successfully applied new developments in the area of sustainable energy will be of keen interest to engineers, students, practitioners, scientists, and researchers working with sustainable energy technologies. Problem statements, projections, new concepts, models, experiments, measurements, and simulations from not only engineering and science, but disciplines as diverse as ecology, education, economics, and information technology are included, in

order to create a truly holistic vision of the sustainable energy field. The contributions feature coverage of topics including solar and wind energy, biomass and biofuels, waste-to-energy, renewable fuels, geothermal and hydrogen power, efficiency gains in fossil fuels and energy storage technologies such as batteries and fuel cells.
