Record Nr. UNINA9910437778803321

Titolo Renewable Energy Systems [[electronic resource] /] / edited by Martin

Kaltschmitt, Nickolas J. Themelis, Lucien Y. Bronicki, Lennart Söder, Luis

A. Vega

Pubbl/distr/stampa New York, NY:,: Springer New York:,: Imprint: Springer,, 2013

ISBN 1-78539-624-2

1-4614-5820-X

Edizione [1st ed. 2013.]

Descrizione fisica 1 online resource (eReference.)

Disciplina 621.042

Soggetti Total energy systems (On-site electric power production)

Renewable energy sources Sustainable development

**Energy Systems** 

Renewable and Green Energy Sustainable Development

Lingua di pubblicazione Inglese

Formato Materiale a stampa

Livello bibliografico Monografia

Note generali Bibliographic Level Mode of Issuance: Monograph

Nota di contenuto Part I: Geothermal Power Stations -- Engineered Geothermal Systems.

Geothermal Energy, Nature, Use, and Expectations -- Geothermal Energy, Geology and Hydrology of -- Geothermal Field and Reservoir Monitoring -- Geothermal Power Capacity, Sustainability and Renewability of -- Geothermal Power Conversion Technology -- Geothermal Power Economics -- Geothermal Power Stations, Introduction to -- Geothermal Resources Worldwide, Direct Heat Utilization of -- Geothermal Resources, Drilling for -- Geothermal Resources, Environmental Aspects of -- Hydrothermal Systems, Geochemistry of -- Reservoir Engineering in Geothermal Fields -- Part

Development and Sustainability of -- Geothermal Energy Utilization --

II: Ocean Energy -- Marine and Hydrokinetic Energy Environmental Challenges -- Ocean Energy, Introduction -- Ocean Thermal Energy Conversion -- Offshore Wind Energy Technology Trends, Challenges, and Risks -- Tidal Energy -- Part III: Renewable Energy from Biomass -- Algae, a New Biomass Resource -- Biodiesel -- Bioethanol from

Environmental Comparison -- Biofuels: Upgraded New Solids -- Biogas for Electricity Generation, Hi-tech Applications -- Biogas Production and Energy crops -- Biogas Production Developing Countries -- Biogas Substrates from Municipalities and Industries -- Biomass as Renewable Source of Energy, Possible Conversion Routes -- Biomass Combustion for Electricity Generation -- Biomass Energy Heat Provision for Cooking and Heating in Developing Countries -- Biomass Energy Heat Provision in Modern Large-Scale Systems -- Biomass Energy Heat Provision in Modern Small-Scale Systems -- Biomass Energy Small-Scale Combined Heat and Power Systems -- Biomass Gasification for Electricity and Fuels, Large Scale -- Biomass Gasification for Rural Electrification, Small Scale -- Biomass Production -- Biomass Provision and Use, Sustainability Aspects -- Biomass Pyrolysis -- Biomass Resources. Worldwide -- Biomass to Liquid (BtL), Concepts and Their Assessment -- Biomass Use on a Global Scale -- Biomethane from Anaerobic Processes -- Biosynthetic Natural Gas -- Co-combustion of wood in Coal-Fired Large-Scale Power Plants -- Hydrogen from Biomass --Lignocellulosic Energy Crops, Production and Provision -- Plant Oil Fuels Combined Heat and Power (CHP) -- Renewable Energy from Biomass, Introduction -- Solid Biofuels, Fuels and Their Characteristics -- Part IV: Waste to Energy -- Gasification and Liquefaction Alternatives to Incineration in Japan -- Greenhouse Gas Emission Reduction by Waste-to-Energy -- Hitachi Zosen Inova Technology -- Incinerator Grate Combustion Phenomena -- Life Cycle Comparison of Waste-to-Energy to Sanitary Landfill -- Martin Waste-to-Energy Technology --Plasma-Assisted Waste-to-Energy Processes -- Thermal Treatment of Waste: Key Element for Sustainable Waste Management -- Waste Management for Sustainable Society -- Waste-to Energy: Decreasing the Entropy of Solid Wastes and Increasing Metal Recovery -- Wasteto-Energy Ash Management in Europe -- Waste-to-Energy Ash Management in the United States -- Waste-to-Energy Facilities as Power Plants -- Waste-to-Energy for District Heating -- Waste-to-Energy Using Refuse-Derived Fuel -- Waste-to-Energy, Introduction --Waste-to-Energy: Energy Resource in Solid Wastes -- Waste-to-Energy: Fluidized Bed Technology -- Part V: Wind Power -- Electricity Generation with Small Wind Turbines -- Global Wind Power Installations -- Meteorology and Wind Power -- Offshore Wind Power -- Wind Power Balancing -- Wind Power Generator Systems and Local Power System Interconnection -- Wind Power Grid Integration: Transmission Planning -- Wind Power, Aerodynamics and Blade Technology -- Wind Power, Introduction -- Wind Power: Basic Challenge Concerning Social Acceptance -- Wind Power: Economy, Market, Subsidies, Payment Mechanisms, and Capacity Credit -- Wind Turbine Noise Emissions. Humanity is facing a steadily diminishing supply of fossil fuels, causing researchers, policy makers, and the population as a whole to turn increasingly to alternative and especially renewable sources of energy to make up this deficit. Gathering over 80 peer-reviewed entries from the Encyclopedia of Sustainability Science and Technologies, Renewable Energy Systems provides an authoritative introduction to a wide variety of renewable energy sources. State-of-the-art coverage includes geothermal power stations, ocean energy, renewable energy from biomass, waste to energy, and wind power. This comprehensive, twovolume work provides an excellent introduction for those entering these fields, as well as new insights for advanced researchers, industry

experts, and decision makers.

Celluloses -- Bioethanol from Starch -- Bioethanol from Sugar: the Brazilian Experience -- Biofuels: A Technical, Economic and

Sommario/riassunto