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Descrizione fisica	1 online resource (XIII, 302 p. 224 illus., 50 illus. in color.)
Collana	Green Energy and Technology, , 1865-3537
Disciplina	381 333.7932
Soggetti	Renewable energy sources Energy policy Electric power distribution Hydrogen as fuel Sustainability Renewable Energy Energy Policy, Economics and Management Energy Grids and Networks Hydrogen Energy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Why we need the distributed energy solution for a low carbon society -- Integration study on distributed energy resource and distribution system -- Integrated plan and evaluation of distributed energy systems taking into consideration renewable resources -- Integrated plan and evaluation of distributed energy systems by area energy network in a low carbon community -- Modelling and evaluation for distributed power systems with consideration of supply and demand sides -- Maintenance management and reliability in distributed energy resource system -- Economic potential and implication of hydrogen energy systems with carbon tax introduction -- Multi-criteria evaluation of a distributed energy system focusing on grid stabilization and carbon emission reduction -- Impact of renewable energy policies on solar photovoltaic energy: comparison of China, Germany, Japan, and the

United States of America -- Smart house design for energy saving and economic optimization -- Limitation of Renewable Energy Penetration and Its Impact on the Public Grids Under Different Power Supply systems -- Feasibility assessment of introducing distributed energy systems in shanghai of China.

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Sommario/riassunto

The future of the distributed energy generation market is promising, with opportunities in the residential, commercial, and industrial sectors driven by increasing awareness of clean energy, greenhouse gas (GHG) emission reduction targets, and rising global demand for energy. This book focuses on UN Sustainable Development Goal 7, which aims to "ensure access to affordable, reliable, sustainable, and modern energy for all." It provides research results, applications, and case studies on the potential of distributed energy resources as a solution to building a low-carbon society. Coverage includes modeling and evaluation of distributed power systems, system maintenance and reliability, economic potential and implications of hydrogen energy systems, grid stabilization and carbon emission reduction, smart design, and the impact of energy penetration on public power grids. Case studies include the effects of renewable energy policies on solar photovoltaic energy in China, Germany, Japan, and the United States of America and a feasibility assessment of distributed energy systems in Shanghai. Distributed Energy Resources: Solutions for a Low Carbon Society will be a valuable resource for postgraduate students and researchers in energy systems, urban energy management, and renewable energy technologies and a reference guide for practicing engineers, urban energy planners, and energy system managers. Discusses the future of the distributed energy generation market Examines residential, commercial, and industrial energy sectors Includes case studies. .

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