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Titolo	Handbook of smart energy systems // edited by Michel Fathi, Enrico Zio, Panos M. Pardalos
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Descrizione fisica	1 online resource (3382 pages) : illustrations (some color)
Altri autori (Persone)	FathiMichel ZioEnrico PardalosP. M <1954-> (Panos M.)
Disciplina	658.5
Soggetti	Electric power system stability Electric power systems - Automatic control
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	A Stackelberg Game-Theoretic Model of Fee-and-Rebate Pricing in a Load-Reduction Emergency Demand Response Program -- Planning to Incorporate Energy Conservation Practices, Renewable Energy Production Systems, and Eco-friendly Building Design Practices to Support Sustainability in US Public Schools -- The Need for Self-Sufficiency and Integrated Water and Energy Management: The Case Study in the Water Supply System in a Small Mountain Town -- The Role of Blockchain and Cryptocurrency in Smart Grid: Renewable Energy Trading, System Security and Privacy Preservation -- Rethinking Renewable Energy Development in the Republic of Kazakhstan from the Perspectives of International Relations -- A PDE-Based Aggregate Power Tracking Control of Heterogeneous TCL Populations -- Energy Harvesting for Smart Energy Systems -- A PDE-Based Aggregate Power Tracking Control of Heterogeneous TCL Populations -- Energy Harvesting for Smart Energy Systems -- Dynamic Bayesian Network Based Approach for Modeling and Assessing Resilience of Smart Grid System -- An Integrated AI-Multiple Criteria Decision-Making Framework to Improve Sustainable Energy Planning in Manufacturing Systems: A Case Study -- Application of Machine Learning in Occupant and Indoor Environment Behavior Modeling: Sensors, Methods, and

Algorithms -- Novel Integrated Membrane Auto-thermal Reactors (NIMATRs) for Energy Efficiency and Sustainability -- Software Engineering Smart Energy Systems -- Potential Impact of Net-Zero Energy Residential Buildings on the US Electric Grid -- Economical and Reliable Design of a Hybrid Energy System in a Smart Grid Network -- Energy Simulation Optimization for Building Insulation Materials.

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Sommario/riassunto

This handbook analyzes and develops methods and models to optimize solutions for energy access (for industry and the general world population alike) in terms of reliability and sustainability. With a focus on improving the performance of energy systems, it brings together state-of-the-art research on reliability enhancement, intelligent development, simulation and optimization, as well as sustainable development of energy systems. It helps energy stakeholders and professionals learn the methodologies needed to improve the reliability of energy supply-and-demand systems, achieve more efficient long-term operations, deal with uncertainties in energy systems, and reduce energy emissions. Highlighting novel models and their applications from leading experts in this important area, this book will appeal to researchers, students, and engineers in the various domains of smart energy systems and encourage them to pursue research and development in this exciting and highly relevant field.

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