Record Nr. UNINA9910728930003321 Autore Zobaa Ahmed F Titolo Modernization of Electric Power Systems: Energy Efficiency and Power Quality // edited by Ahmed F. Zobaa, Shady H.E. Abdel Aleem Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2023 **ISBN** 3-031-18996-5 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (562 pages) Altri autori (Persone) Abdel AleemShady H. E Disciplina 621.31 Soggetti Electric power production Power electronics Renewable energy sources Electric power distribution **Electrical Power Engineering** Power Electronics Renewable Energy Mechanical Power Engineering **Energy Grids and Networks** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Energy Efficiency: Opportunities and Challenges -- Overview of Related Nota di contenuto Standards -- Efficient Power System Components and Equipment --Management Systems -- HVAC Technologies and Applications --Efficient Lighting Systems -- Efficient Industrial Heating -- Efficient Electric Traction -- Demand-Side Management Aspects -- Hosting Capacity of Modern Power Systems -- Internet of Things Applications -- Voltage Control Aspects -- Thermal Overloading and Power Losses Aspects -- Power System Protection Aspects -- Power Quality Aspects -- Reactive Power Control -- Energy Storage Technologies. This timely book examines the significant challenges and possible Sommario/riassunto solutions for enabling efficient modernization of electric power systems. It addresses rapidly changing electricity infrastructure needs and technical requirements and provides a practical introduction to the

past, present, and future of energy efficiency and power quality

concepts. The book also looks at recent developments in custom power conditioners that help improve the performance of transmission and distribution systems, ensure reliability, and reduce costs.

Modernization of Electric Power Systems is a valuable resource for practicing engineers, students, and researchers interested in exploring and implementing energy efficiency and power quality in modern energy systems with renewables. Examines cutting-edge technologies deployed worldwide; Offers a comprehensive look at energy efficiency and power quality concepts; Includes case studies from selected countries.