1. Record Nr. UNINA9910829892503321 Autore Tagare D. M. Titolo Electric power generation: the changing dimensions // Digambar M. **Tagare** Pubbl/distr/stampa [S.I.]:,: IEEE,, c2011 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2011] **ISBN** 0-470-87265-9 1-283-28254-2 9786613282545 0-470-87266-7 Descrizione fisica 1 online resource (406 p.) Collana IEEE press series on power engineering;; 56 Disciplina 621.31 621.3121 Soggetti Electric power production Electric power 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 Electricity History: A Review and the Road Ahead -- Risks, Operation, and Maintenance of Hydroelectric Generators -- Hydroelectric Generation: Pumped Storage, Minor Hydroelectric, and Oceanic-Based Systems -- Thermal Power Generation-Steam Generators -- Thermal Station Power Engineering -- Environmental Constraints in Thermal Power Generation-Acid Rain -- Environmental Constraints in Thermal Power Generation-Carbon and the Kyoto Proposals -- Nuclear Power Generation -- Wind Power Generation -- Photovoltaic Energy-Solar Cells and Solar Power Systems -- Direct Conversion into Electricity-Fuel Cells -- Hybrid Systems -- Combined Generation-Cogeneration --Distributed Generation (DG) and Distributed Resources (DR) --Interconnecting Distributed Resources with Electric Power Systems --Energy Storage-Power Storage Super Capacitors -- Hydrogen Era --Basic Structure of Power Marketing -- Looking into the Future. Sommario/riassunto Significant breakthroughs in the research and development of electricity power generation have been non-existent over the last few

decades. Weaving new technologies into existing monolithic processes

remains the accepted pathway for implementing change, and can be more aptly classified as maintenance rather than restructuring. In an effort to revitalize a technologically dormant electrical industry in need of fresh approaches, Electricity Power Generation integrates historical analysis, insight into emerging power sources, and forward-thinking perspective to help spur innovative new ways for harnessing energy. Electricity Power Generation looks at conventional power sources such as hydroelectric, thermal, and nuclear power production, along with current renewable alternatives, such as wind and solar energy, to provide an overall view of where power generation has taken us and where it can eventually lead us. This book:. Offers basic insight into the power sector and offers the latest technology. Can be used as a comprehensive reference tool and a teaching aid. Is highly illustrated and written in language that is simple and easy to read. Contains chapters on the compelling developments in tidal and wave energy. Covers power marketing and how it is shaping the methods for generating powerAs power generation operates within the context of environmental issues, exploration of new energy solutions becomes paramount. Electricity Power Generation focuses on this concern and calls for the development of a new paradigm-one that champions sustainability by advancing powerful alternatives for cleaner and more efficient ways of generating power. Digamber M. Tagare is founder and Managing Director of Madhav Capacitors Pvt. Ltd. He is responsible for bringing capacitor manufacturing technology to India, and was awarded with the title of "Father of Capacitor Industries in India" from Indian Electrical and Electronics Manufacturers Association (IEEMA) in 2002. Mr. Tagare has published more than 100 technical papers and four books on capacitors and reactive power management. He is a member of both the National Association of Corrosion Engineers and the Electrical Research Association, as well as a Senior Life Member of the IEEE.