

1. Record Nr.	UNINA9911004836503321
Autore	Barnett Dave
Titolo	Electric power generation : a nontechnical guide / / Dave Barnett & Kirk Bjornsgaard
Pubbl/distr/stampa	Tulsa, Okla., : PennWell, c2000
ISBN	1-62870-288-5
Descrizione fisica	1 online resource (358 p.)
Altri autori (Persone)	BjornsgaardKirk
Disciplina	621.31
Soggetti	Electric power production Electrification
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 (p. 312-313) and index.
Nota di contenuto	<p>""Dedication""; ""Table of Contents""; ""Figures List""; ""Tables List""; ""Acronyms List""; ""Introduction: A Change in the Air""; ""Part 1: Electricity""; ""Chapter 1 From Frogs Legs to Microwaves""; ""Chapter 2 Generation Is Energy Conversion""; ""Part 2: Planning and Development of Electric Power Stations""; ""Chapter 3 Classic Considerations""; ""Chapter 4 Technology-driven Changes""; ""Chapter 5 Fuels and Fuel Handling""; ""Traditional Fuels: Coal, Natural Gas, Nuclear, and Oil""; ""Alternative fuels: hydroelectric, solar, wind, and biomass""; ""Part 3: Electric Power Generation"" ""Chapter 6 Prime Movers: Steam Boilers, Storage, and More""""Chapter 7 Furnaces and Boilers""; ""Chapter 8 Steam Turbines""; ""Chapter 9 Generators""; ""Chapter 10 Fossil-fired Steam Plant""; ""Chapter 11 Nuclear Steam Plants""; ""Chapter 12 Gas Turbine Plants and Cogeneration""; ""Chapter 13 Hydroelectric vs. Pumped Storage""; ""Chapter 14 The ""Alternative"" Fuels: Geothermal, Wind, Solar, Tidal, and Biomass Generation""; ""Chapter 15 The Future: Building on What's Been Done""; ""Part 4: Maintenance and Operations and Transmission and Distribution""; ""Chapter 16 Maintenance"" ""Chapter 17 Operations""""Chapter 18 Transmission and Distribution: How Generation is Delivered""; ""Part 5: Ecological and Environmental Considerations and Safety""; ""Chapter 19 Cultural Aspects""; ""Chapter 20 Safety First, Last, and Always""; ""Appendix""; ""Glossary""; ""Bibliography""; ""Index""</p>

Sommario/riassunto

Unlike more technical texts stuffed with formulae and theories, this book explains in plain English how power is created and replaces formulae with everyday examples and easy-to-understand illustrations. It opens with an explanation of how electricity is generated, then covers the planning and development of electric power stations, emphasizing modern considerations of merchant power plants, repowering, and the growth of gas turbine generation. The "facts" of generation are covered in part two--boilers, turbines, generators, hydro and pumped storage, and "alternative" generations sources, suchs geothermal, tidal, solar, and wind. Maintenance and operations are covered in basic overview format. Finally, environmental considerations--again, an increasing concern in light of deregulation and environmental law--are reviewed. In addition, the authors cover specific features and fuel-types in nontechnical terms. Industry newcomers will appreciate this clear explanation of how power is created.
