1. Record Nr. UNINA9910454070603321

Autore Murray Barrie

**Titolo** Power markets and economics [[electronic resource]]: energy costs,

trading, emissions / / Barrie Murray

Chichester, West Sussex, United Kingdom; ; Hoboken NJ, : Wiley, 2009 Pubbl/distr/stampa

**ISBN** 1-282-34944-9

> 9786612349447 0-470-74301-8

Descrizione fisica 1 online resource (327 p.)

Disciplina 333.793/23

333.79323

Soggetti Electric power

> Power resources Electronic books.

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.

Power Markets and Economics: Energy Costs, Trading, Emissions; Nota di contenuto

Contents: Foreword: Preface: One Industry Infrastructure: 1 Approach to Restructuring; 1.1 INTRODUCTION; 1.2 INDUSTRY PHYSICAL

STRUCTURE: 1.3 INTRODUCTION OF COMPETITION: 1.4

RESTRUCTURING OPTIONS; 1.5 COMPARISON OF STRUCTURES; 1.6 SUMMARY; 2 Market Mechanisms; 2.1 INTRODUCTION; 2.2 MARKET

PARTICIPANTS; 2.3 MARKET MECHANISMS; 2.4 MARKET

IMPLEMENTATION; 2.5 PRICE ANALYSIS; 2.6 SUMMARY; Two The Cost Chain; 3 Basic Generation Energy Costs; 3.1 INTRODUCTION; 3.2 COST

COMPONENTS: 3.3 PRACTICAL OPERATING EFFICIENCIES 3.4 IMPACT OF UTILISATION ON COSTS 3.5 COMPARISON OF GENERATION COSTS; 3.6 INTERNATIONAL COMPARISONS; 3.7 SUMMARY; 4 Alternative Energy Sources; 4.1 INTRODUCTION; 4.2 COMPETING SOURCES: 4.3 CURRENT PRODUCTION EUROPE: 4.4

ALTERNATIVE SOURCES; 4.7 COMPARISONS; 4.8 SUMMARY; 5

Emissions; 5.1 INTRODUCTION; 5.2 EMISSION TRADING SCHEMES (ETS);

5.3 LARGE COMBUSTION PLANT DIRECTIVE (LCPD); 5.4 GENERATION

INCENTIVE SCHEMES; 4.5 MARKET PRICING; 4.6 THE ECONOMICS OF

5.9 INTERNATIONAL APPROACH 5.10 SUMMARY; 6 Transmission; 6.1 INTRODUCTION; 6.2 IMPACT OF TRANSMISSION CONSTRAINTS IN MARKETS; 6.3 TRANSMISSION CHARGING; 6.4 DERIVATION OF USE OF SYSTEM CHARGES: 6.5 INTERNATIONAL TARIFF COMPARISONS: 6.6 TRANSMISSION INVESTMENT; 6.7 INTERCONNECTION INVESTMENT APPRAISAL; 6.8 INTERNATIONAL PRACTICE; 6.9 SUMMARY; 7 Distribution; 7.1 INTRODUCTION; 7.2 MARKET STATUS; 7.3 COMMERCIAL ARRANGEMENTS; 7.4 METERING AND BALANCING; 7.5 COST OF DISTRIBUTION; 7.6 DISTRIBUTION TARIFFS; 7.7 OPEX REGULATION: 7.8 CAPEX REGULATION: 7.9 BUSINESS RISK: 7.10 DISTRIBUTED GENERATION 7.11 SUMMARY 8 End User Charges and Prices; 8.1 INTRODUCTION; 8.2 PRICE COMPARISONS: 8.3 END USER ENERGY PRICES: 8.4 TOTAL END USER PRICES; 8.5 TARIFF DEVELOPMENT; 8.6 CUSTOMER SWITCHING; 8.7 SUMMARY; Three Market Operation; 9 Market Trading; 9.1 INTRODUCTION; 9.2 EUROPEAN MARKETS; 9.3 DEVELOPING MARKETS -CHINA: 9.4 MARKET POWER: 9.5 TRADING ARRANGEMENTS: 9.6 BILATERAL TRADING; 9.7 BALANCING MARKET; 9.8 EXCHANGE TRADING; 9.9 SUPPLIER RISK; 9.10 GENERATION RISK; 9.11 MARKET INTERACTION; 9.12 ARBITRAGE SPARK SPREAD; 9.13 SUMMARY; 10 Market Analysis: 10.1 INTRODUCTION: 10.2 MODELLING OVERVIEW 10.3 DISPATCH MARKET SIMULATION 10.4 LOAD DURATION MODEL; 10.5 HYDRO GENERATION; 10.6 INTERCONNECTION MODELLING; 10.7 PREDICTING DEMAND DATA; 10.8 GENERATION DATA; 10.9 CALCULATIONS; 10.10 PRICE DURATION CURVE; 10.11 STATISTICAL FORECASTING; 10.12 PREDICTING NEW ENTRY; 10.13 SUMMARY; 11 Ancillary Service Markets; 11.1 INTRODUCTION; 11.2 ANCILLARY SERVICE REQUIREMENTS: 11.3 MARKET VOLUME: 11.4 PROCUREMENT PROCESS: 11.5 COST OF PROVIDING SERVICES: 11.6 PREDICTING REVENUES: 11.7 SUMMARY: 12 Cross-border Trading: 12.1 INTRODUCTION; 12.2 GOVERNANCE; 12.3 CROSS-BORDER CAPACITY; 12.4 NEW INVESTMENT 12.5 MANAGING OPERATION

CO2 EMISSIONS; 5.5 PRODUCTION COSTS; 5.6 NATIONAL ALLOCATION

PLANS: 5.7 MARKET OPERATION: 5.8 IMPACT OF CAPACITY MIX

## Sommario/riassunto

It is now almost twenty years since liberalisation and the introduction of competition was proposed for electricity utilities. Some form of restructuring has been widely adopted around the world to suit local objectives. The industry now faces new challenges associated with global warming, rising prices and escalating energy demand from developing countries like China and India. The industry will have to cope with; managing emissions; managing variable energy sources like wind, dev eloping clean coal technology; accommodating distributed generation and new nuclear stations and managing the imp