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River Publishers Book Catalogue

Series in Energy Sustainability and
Efficiency

River Publishers Series in Energy Sustainability and Efficiency

Green Energy Technologies for a Sustainable Future

Editors:

Yashvir Singh, Graphic Era Deemed to be University, Dehradun, India

Prateek Negi, Graphic Era Deemed to be University, Dehradun, India

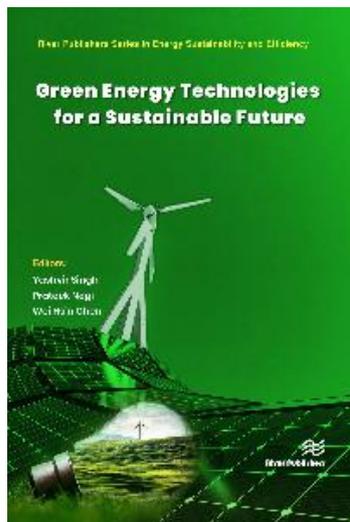
Wei Hsin Chen, National Cheng Kung University, Tainan, Taiwan

ISBN: 9788770226349

e-ISBN: 9788770226332

Available From: October 2021

Price: € 98.50



Description:

This book examines the key aspects that will define future sustainable energy systems: biofuels, green nanomaterials and the production of bioethanol and bio-hydrogen from bio-waste. Bio-based fuels are the future energy carriers for internal combustion engines as they have lower environmental impact and higher efficiency. The book clearly illustrates the requirement for a unified engineering approach based on solid mathematical and engineering principles. Aside from the ecological advantages, support for sustainable energy can help the socioeconomic situation of developing countries by providing a consistent supply of new energy along with the generation of new job opportunities. The sustainable energy applications and existing contextual investigations provide useful guidance for the broad comprehension of the significance of sustainable energy.

Technical topics discussed in the book include:

- Thermochemical Conversion process;
- Catalytic conversion process;
- Rankine cycle;
- Nanomaterials;

Keywords: biofuels, nanomaterials, bioethanol, sustainability, green energy, biowaste, energy storage, sustainability, energy technology, bio-lubricants.

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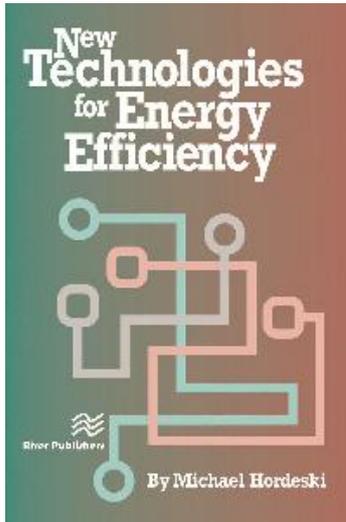
New Technologies for Energy Efficiency

Author: Michael Frank Hordeski

ISBN: 9788770223508

Price: £ 82.00 | \$ 119.95

[Distributed exclusively by Routledge](#)



Description:

This book examines the full scope of technologies available to address the electricity supply crisis. The author details the tools and technologies available for incorporating smaller, cleaner, more efficient energy into energy management plans. He examines the role of new technologies in reducing operating costs and developing more innovative and practical approaches to energy management. Topics include implementation of alternative energy programs, management of power quality, cost-effective power generation solutions, cost-effective energy services, information monitoring and diagnostic systems, energy storage options, integration of lighting and cooling systems, and more.



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Practical Solutions for Energy Savings

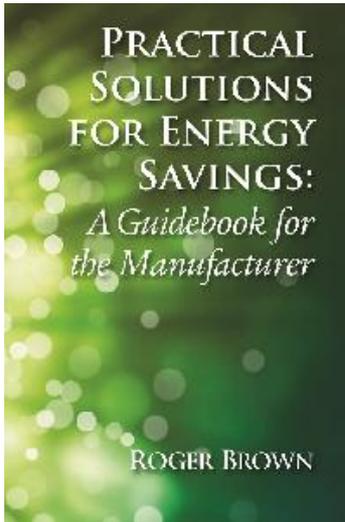
Author: Roger Brown

ISBN: 9781138311329

e-ISBN: 9788770222600

Price: £ 75.00 | \$ 105.00

Distributed exclusively by Routledge



Description:

This book will reveal cost reductions and how to slash your energy costs without investing big money. The three pillars of costs reduction will be discussed: Assembling your options and analyzing your risk; developing options with your utility; and cutting out obvious waste in your operation. Those who will benefit from this excellent text are business owners, CFOs, plant managers, plant engineers, and energy managers. You will learn how to distill what savings are possible and how you can quickly accomplish those savings from what you already know and can expect to walk away at the end of this book with confidence and a realistic plan of action for reducing your costs.

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River Publishers Series in Energy Sustainability and Efficiency

Canadian Energy Efficiency Outlook

Authors:

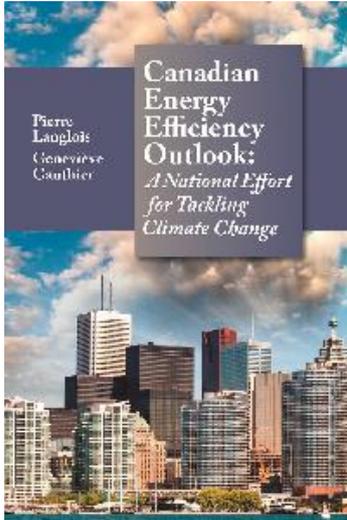
Pierre Langlois and Genevieve Gauthier

ISBN: 9781138311336

e-ISBN: 9788770222617

Price: £ 96.00 | \$ 135.00

Distributed exclusively by Routledge



Description:

Energy Efficiency (EE) has been recognized since the early 1970s as the most relevant mechanism to optimize the way we meet our energy needs. The rationale behind this book is to present where the Canadian EE sector stands today to all Canadian stakeholders and those interested around the world. The Canada Energy Efficiency Outlook aims to outline the different environments that support EE development in our highly diversified provinces and territories, as well as at the national level, and consequently allow the reader to better understand the complexities involved. More globally, this book serves as an important reference for all interested parties on how Canada has variably innovated and developed mechanisms to achieve the goal of making this country more energy efficient.

River Publishers Series in Energy Sustainability and Efficiency

International Solutions to Sustainable Energy, Policies and Applications

Authors:

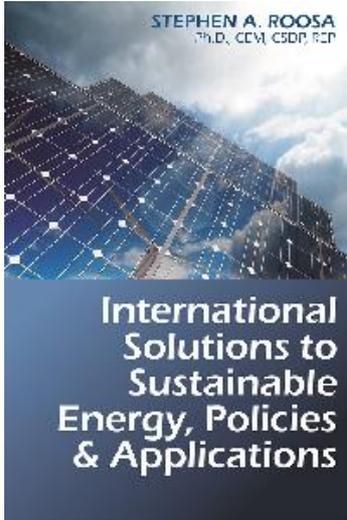
Stephen A. Roosa

ISBN: 9780815381020

e-ISBN: 9788770222211

Price: £ 105.00 | \$ 140.00

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Description:

Offering an in-depth examination into sustainable energy sources, applications, technologies and policies, this book provides real-world examples of ways to achieve important sustainability goals. Themes include program assessment, energy efficiency, renewables, clean energy and approaches to carbon reduction. Included are a compiled set of chapters discussing the various international strategies and policies being planned and implemented to reduce energy use, impact carbon emissions and shift towards alternative energy sources. Taking an international perspective, contributors from the U.S., Canada, Trinidad and Tobago, Peru, Hungary, Spain, Iran, Ukraine, Jordan, the UAE, Nigeria, South Africa, India, China and Korea, offer their views of energy issues and provide detailed solutions. These can be broadly applied by engineers, scientists, energy managers, policy experts and decision makers to today's critical energy problems.

River Publishers Series in Energy Sustainability and Efficiency

Water Poverty

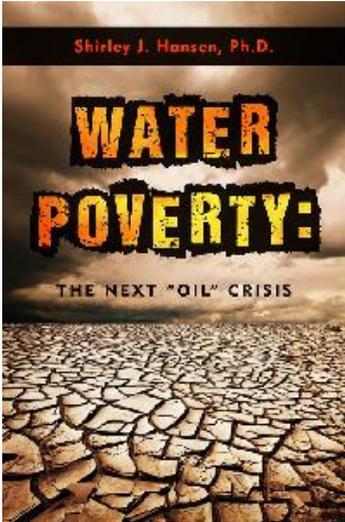
Author: Shirley J. Hansen

ISBN: 9781498796439

e-ISBN: 9788770223355

Price: £ 90.99 | \$ 145.00

[Distributed exclusively by Routledge](#)



Description:

A water crisis on our immediate horizon is destined to hurt, even kill, millions of children, and the window of opportunity to do something about it is rapidly closing. There is, however, a glimmer of hope that could turn into rays of sunshine. Water is a commodity, and we have just come through some painful times dealing with the shortage of another commodity—energy. For those who lived through the "energy crisis," this book offers a brief trip down memory lane.

River Publishers Series in Energy Sustainability and Efficiency

Energy Conservation Guidebook, Third Edition

Authors:

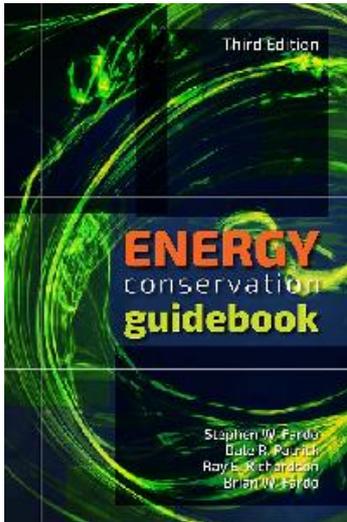
Dale R. Patrick, Stephen W. Fardo, Ray E. Richardson and Brian W. Fardo

ISBN: 9781482255690

e-ISBN: 9788770223195

Price: £ 105.00 | \$ 145.00

Distributed exclusively by Routledge



Description:

Revised and edited, this new third edition reference covers the full scope of energy management techniques and applications for new and existing buildings, with emphasis on the "systems" approach to developing an effective overall energy management strategy. Foremost in the enhancements to the new edition is content that reflects the emphasis on conservation for "green energy" awareness.

Also examined are building structural considerations, such as heat loss and gain, windows, and insulation. A thorough discussion of heating and cooling systems basics is provided, along with energy management guidelines. Also covered are energy conservation measures that may be applied for lighting systems, water systems, and electrical systems. Specific energy management technologies and their application are discussed in detail, including solar energy systems, energy management systems, and alternative energy technologies.

- Covers the full scope of energy management techniques and applications for new and existing buildings
- Emphasizes a "systems" approach to developing an effective overall energy management strategy
- Includes enhanced content that reflects the emphasis on conservation for "green energy" awareness

River Publishers Series in Energy Sustainability and Efficiency

Grid Parity

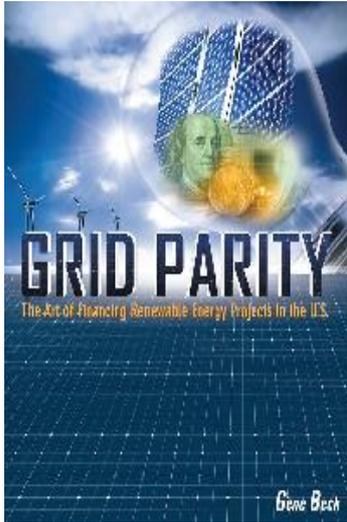
Author: Gene Beck CEM, CLP

ISBN: 9781482241709

e-ISBN: 9788770223157

Price: £ 200.00 | \$ 270.00

Distributed exclusively by Routledge



Description:

Grid Parity provides an in-depth examination of the knowledge, insights, and techniques that are essential to success in financing renewable energy projects. An energy project finance expert with 35 years of experience in capital asset financing, the author provides a comprehensive overview of how to finance renewable energy projects in America today. He explores all components of "the deal" including tax, accounting, legal, regulatory, documentation, asset management and legislative drivers to this dynamic growth sector. Filled with case studies, the book provides a thorough examination of what it takes to compete in the green-energy marketplace.

River Publishers Series in Energy Sustainability and Efficiency

Power Generation and the Environment

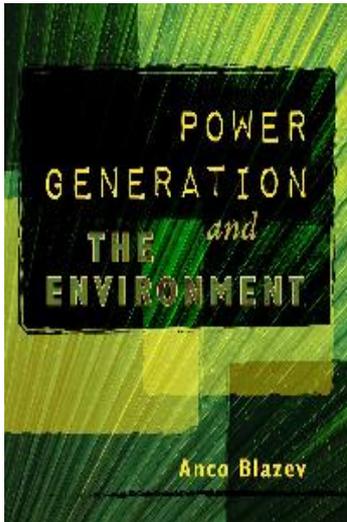
Author: Anco S. Blazev

ISBN: 9781482222999

e-ISBN: 9788770223102

Price: £ 225.00 | \$ 305.00

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Description:

Natural and man-made changes in the environment create a very complex picture. This book analyzes this picture and provides snapshots of different areas of interest and makes suggestions for future work on cleaning and stabilizing the Earth's environment. Starting with conventional energy generation and moving on to renewable energies, this book analyzes and calculates their environmental impact and the lesser-known aspects of their "cradle-to-grave" life cycle such as the irreversible environmental damage done during the manufacturing of solar and wind equipment and during the installation, operation, and decommissioning of large scale hydro, solar, and wind power plants.



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Creating a Strategic Energy Reduction Plan

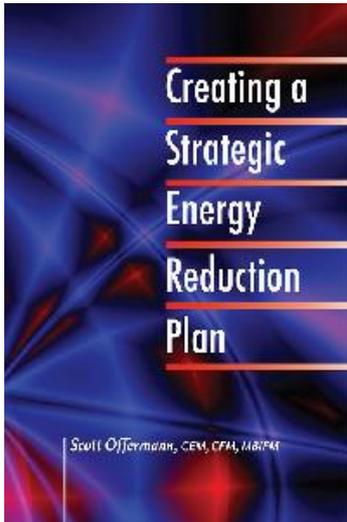
Author: Scott Offermann, CEM, CFM, MBIFM

ISBN: 9781482228847

e-ISBN: 9788770223126

Price: £ 105.00 | \$ 145.00

Distributed exclusively by Routledge



Description:

This book outlines a simple and easy-to-follow process for auditing building operation to identify and reduce energy consumption. It explains the operational and cost-based opportunities, assessing the current conditions, analyzing the opportunities, and reporting the findings and documenting the plan. The book discusses the different building components and systems and how they affect energy efficiency and describes the operational energy efficiencies that can be gained by implementing no cost changes or alternate maintenance activities already funded. Capital improvement opportunities, and evaluating Return on Investment and life cycle replacement of equipment are also covered.

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River Publishers Series in Energy Sustainability and Efficiency

Solar Technologies for the 21st Century

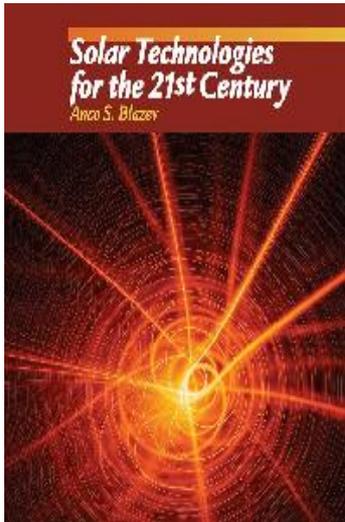
Author: Anco S. Blazev

ISBN: 9781466582910

e-ISBN: 9788770223072

Price: £ 120.00 | \$ 165.00

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Description:

This book examines solar technologies, describes their properties, and evaluates the technological potential of each. It also reviews the logistics of deploying solar energy as a viable and sustainable way to solve urgent energy, environmental, and socio-economic problems. Topics discussed include solar power generation, today's solar technologies, solar thermal, silicon PV, thin PV, 3-D solar cells, nano-PV, organic solar cells, solar successes and failures, solar power fields, finance and regulations, solar markets and solar energy and the environment.

River Publishers Series in Energy Sustainability and Efficiency

Alternative Fuels

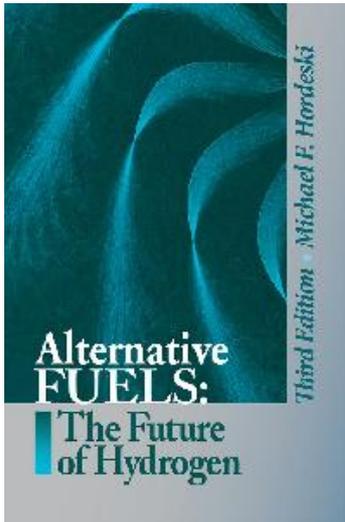
Author: Michael Frank Hordeski

ISBN: 9781466580244

e-ISBN: 9788770223065

Price: £ 105.00 | \$ 145.00

Distributed exclusively by Routledge



Description:

Revised and updated, *Alternative Fuels* addresses many of the factors affecting our energy use, including the availability and desirability of various fuels—especially the use of hydrogen. This new edition covers new hydrogen developments in technology, oil supplies and new drilling techniques, latest information on hydrogen highway projects, breakthroughs in fuel cell technology and ultra low emissions in transportation, the latest statistics on emerging oil markets, energy reserves, and carbon dioxide increases.

Also included is material on energy policy, fuel supply trends, alternative scenarios, energy utilization, sustainable energy, cost analysis, fuel escalation, energy and development, regulatory issues, barriers to implementation, conversion systems, storage systems, thermodynamic efficiency, fuel chain efficiency, life-cycle efficiency, technology issues extracting, refining, air emission issues, safety, natural gas hydrogen gas, methanol, ethanol, steam reforming and fuel cells.

River Publishers Series in Energy Sustainability and Efficiency

Efficient Lighting Applications and Case Studies

Authors:

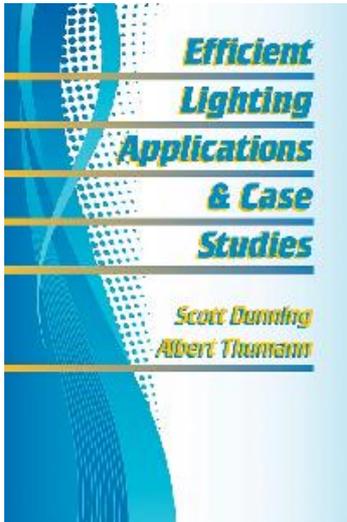
Scott C. Dunning and Albert Thumann

ISBN: 9781466571549

e-ISBN: 9788770223058

Price: £ 95.99 | \$ 130.00

Distributed exclusively by Routledge



Description:

With the increased concern for energy conservation in recent years, much attention has been focused on lighting energy consumption and methods for reducing it. Along with this concern for energy-efficient lighting has come the realization that lighting has profound effects on worker productivity as well as important aesthetic qualities. This book presents an introduction to lighting design and energy efficiency which can be utilized while maintaining the quality of illumination. Topics include lighting energy management, selection of lamps, task lighting, lighting design, lighting control, reflectors, ballast selection, natural daylighting, wireless lighting control, and case studies.

River Publishers Series in Energy Sustainability and Efficiency

Saving Energy and Reducing CO2 Emissions with Electricity

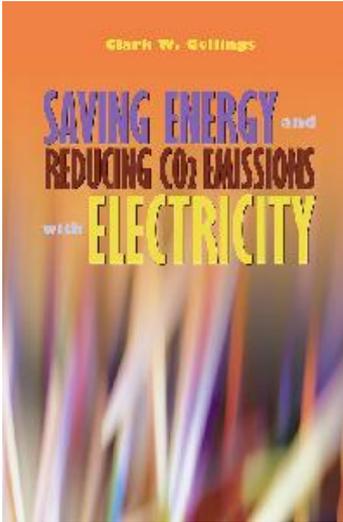
Author: Clark W. Gellings

ISBN: 9781439870129

e-ISBN: 9788770222952

Price: £ 105.00 | \$ 145.00

[Distributed exclusively by Routledge](#)



Description:

The upcoming decrease and possible elimination of the use of fossil fuels will be a result of the ongoing imperative to make existing uses of electricity efficient and practical. This book guides the reader toward electrification with explanations on the concept of electrification and of CO2 reductions through expanded end-use applications of electricity. Topics covered include electric cars; airport, seaport, railroad and mining electrification; industrial uses of electricity in a variety of processes; residential building use of electricity; enhancing energy efficiency and demand response.



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Plant Engineers and Managers Guide to Energy Conservation

Authors:

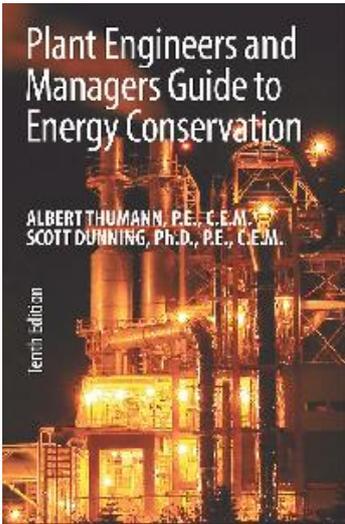
Albert Thumann and Scott C. Dunning

ISBN: 9781439856062

e-ISBN: 9788770222938

Price: £ 100.00 | \$ 140.00

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Description:

Completely revised and updated, this tenth edition of a bestseller covers both management and technical strategies for slashing energy costs by as much as 40 percent in industrial facilities. It discusses cogeneration, gas distributed generation technologies, steam system optimization, geothermal heat pumps, energy outsourcing, electricity purchasing strategies, and power quality case studies. It also provides guidelines for life cycle costing, electrical system optimization, lighting and HVAC system efficiency improvement, mechanical and process system performance, building energy loss reduction, financing energy projects, and more.

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River Publishers Series in Energy Sustainability and Efficiency

Sustainability Management Handbook

Authors:

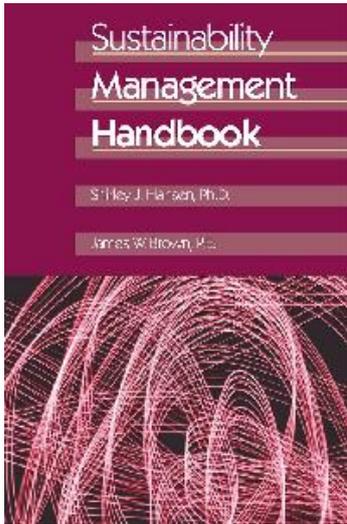
Shirley J. Hansen and James W. Brown

ISBN: 9781439851951

e-ISBN: 9788770222891

Price: £ 115.00 | \$ 155.00

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Description:

A strong sustainability program requires leadership to draw on a solid knowledge base, manage resources wisely, identify sustainability opportunities, make difficult choices, and accept the challenge to lead, influence, and persuade colleagues. This book cuts through the hyperbole and offers practical steps for protecting the world around us. Rich in case studies, it addresses a range of critical stewardship issues. Developed out of a keen desire to protect the planet, the text helps management transform important information and critical leadership skills into socially responsible operations.



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Megatrends for Energy Efficiency and Renewable Energy

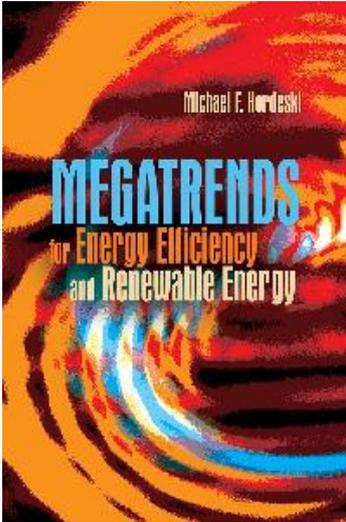
Author: Michael Frank Hordeski

ISBN: 9781439853542

e-ISBN: 9788770222921

Price: £ 105.00 | \$ 145.00

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Description:

The use of energy is being shaped by environmental issues including the fear of global warming. This has resulted in the development of renewable energy sources and more efficient building technology. Examining trends in energy efficiency, this book explores energy technologies and fuels, their prospects in a world with greenhouse gas restrictions. It looks at the technical and economic tradeoffs of traditional renewables such as wind and solar, as well as large scale PV and concentrated thermal power. It also considers biomass technologies. For each of these technologies, it discusses planning, siting, installation, operation and maintenance, health and safety, power conditioning, and efficiency innovations.

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Sustainable Development Handbook, Second Edition

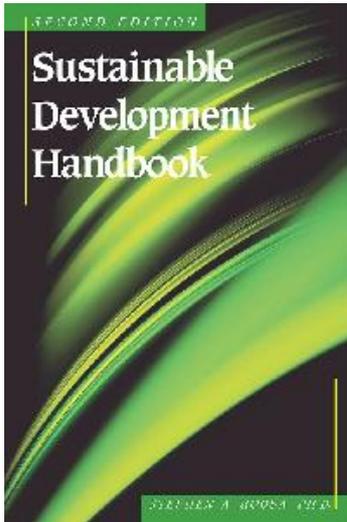
Author: Stephen A Roosa

ISBN: 9781439850480

e-ISBN: 9788770222877

Price: £ 115.00 | \$ 155.00

Distributed exclusively by Routledge



Description:

Gaining momentum globally, sustainable development is beginning to significantly redefine the policies of corporations and governmental entities. Updated throughout, the second edition of this popular resource includes updates on LEED® measurement and verification and a new chapter on cities and carbon reduction. Clarifying critical issues, this volume examines proven approaches as well as problems with failed initiatives. In addition to core concepts and trends, it explores specific renewable energy and environmental solutions. It examines global initiatives, local politics, and ways to effectively measure and track progress.



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The Smart Grid

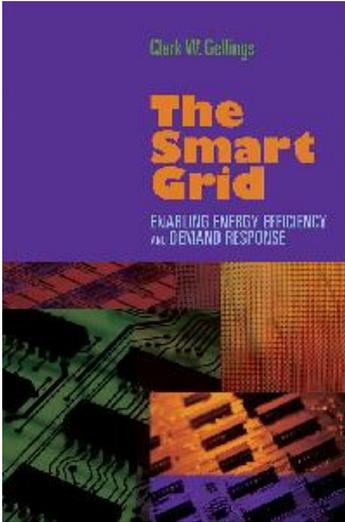
Author: Clark W. Gellings

ISBN: 9781439815748

e-ISBN: 9788770222839

Price: £ 105.00 | \$ 145.00

Distributed exclusively by Routledge



Description:

The power system has often been cited as the greatest and most complex machine ever built, yet it is predominantly a mechanical system. Technologies and intelligent systems are now available that can significantly enhance the overall functionality of power distribution and make it ready to meet the needs of the 21st century. This book explains how sensors, communications technologies, computational ability, control, and feedback mechanisms can be effectively combined to create this new, continually adjusting "smart grid" system. It provides an understanding of both IntelliGridSM architecture and EnergyPortSM as well as how to integrate intelligent systems to achieve the goals of reliability, cost containment, energy efficiency in power production and delivery, and end-use energy efficiency.

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River Publishers Series in Energy Sustainability and Efficiency

Carbon Reduction

Authors:

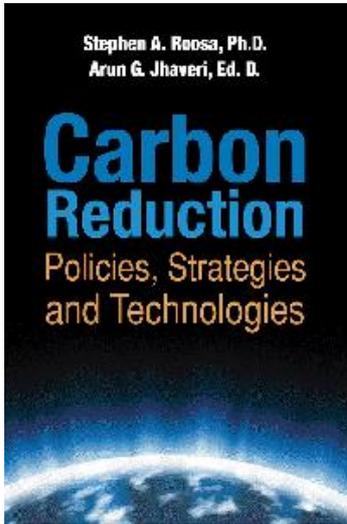
Stephen A. Roosa and Arun G. Jhaveri

ISBN: 9781420083828

e-ISBN: 9788770222716

Price: £ 100.00 | \$ 145.00

[Distributed exclusively by Routledge](#)



Description:

Significant reduction of local, regional, national and international greenhouse gas emissions in homes, businesses, industries and communities has become an international priority. This book describes in clear, concise, and understandable terms the nature and scope of the climate change problem. The authors combine their considerable expertise to offer guidelines for defining and applying effective carbon reduction policies, strategies, and technologies. They propose a well-defined road map which can be implemented to help control and abate the alarming increases in carbon dioxide and other greenhouse gas emissions.

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Green Facilities Handbook

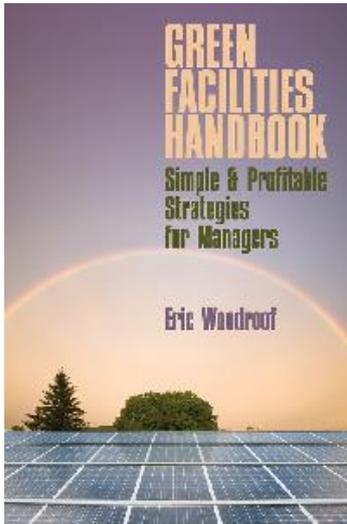
Author: Eric Woodroof

ISBN: 9781420084900

e-ISBN: 9788770222754

Price: £ 95.99 | \$ 130.00

[Distributed exclusively by Routledge](#)



Description:

Meeting a need in the marketplace for information on how to operate a sustainable facility and reduce carbon emissions, the Green Facilities Handbook clearly explains why green business is good business and delineates practical strategies to green your operations in energy and management. The book explores issues in the greening of a facility, including janitorial considerations, fuel choices for fleets, and recycling. Additional information is provided on carbon reduction terminology, monitoring and reporting, and carbon trading as well as offset strategies. Special bonus chapters include valuable information on financing and procedures for “green” marketing.

River Publishers Series in Energy Sustainability and Efficiency

Efficient Electrical Systems Design Handbook

Authors:

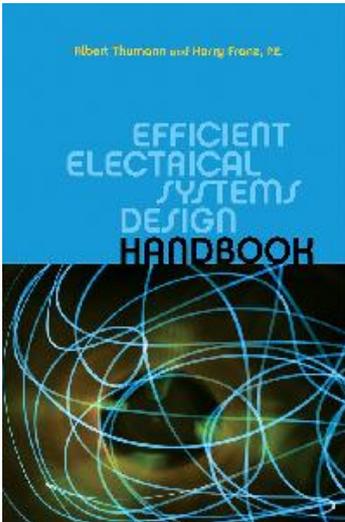
Albert Thumann and Harry Franz

ISBN: 9781439803004

e-ISBN: 9788770222785

Price: £ 58.99 | \$ 91.95

[Distributed exclusively by Routledge](#)



Description:

Now you can achieve optimum performance and efficiency in the design of electric systems for virtually any size or type of building or industrial facility utilizing the state-of-the-art methodologies detailed in this comprehensive handbook. Step-by-step guidelines take you through each phase of design, covering equipment selection, power distribution system analysis, conduit and conductor sizing, lighting system design, control systems, electronic instrumentation, protective relaying, energy management systems, power quality, variable speed drives, motor selection, and more.

The latest codes (NEC 2008) as well as currently available equipment are referenced. Numerous examples and simulation exercises are included, along with detailed design examples. Fully illustrated with many useful diagrams and tables, this book is a practical guide for electrical engineers, plant and facility engineers, and other professionals responsible for implementing or overseeing the design of facility electrical systems.

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Visions for a Sustainable Energy Future

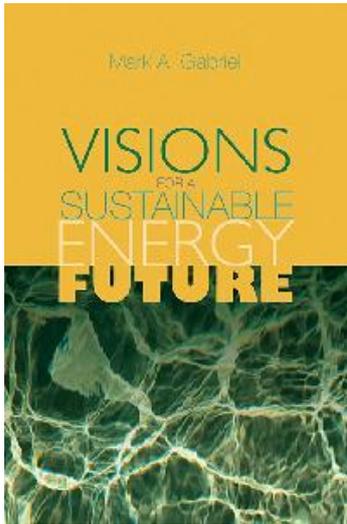
Author: Mark A. Gabriel

ISBN: 9780849398179

e-ISBN: 9788770222570

Price: £ 83.99 | \$ 115.00

Distributed exclusively by Routledge



Description:

This book offers a unique insight into the corporate health of energy companies in an evolving landscape of deregulation. Cutting across both historical and present-day situations, it demonstrates important elements vital to the success of energy companies coming out of a safe regulated structure and dealing with a new competitive environment.

Targeted at corporate executives, energy professionals, the financial and investment communities, strategic planners and regulators, readers will find this resource helpful to understand how energy companies can meet the challenges of a competitive environment, what it will take to evolve into healthy energy companies, the impacts of deregulation and assessment of successful and unsuccessful strategies for energy companies, the role of technology in business/product reinvention and a successful business model, and the differences and similarities of electricity to other commodities-the challenges to generation, power delivery, environmental science and end-use sectors of the business.

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Performance Contracting

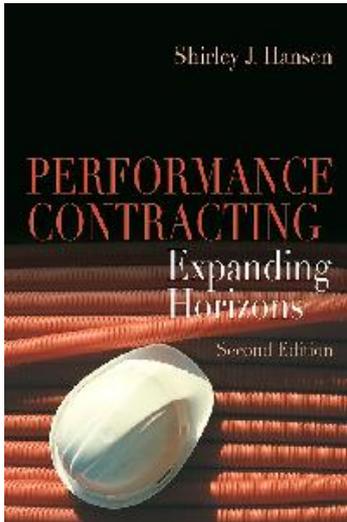
Author: Shirley J. Hansen

ISBN: 9780849393808

e-ISBN: 9788770222549

Price: £ 86.99 | \$ 120.00

Distributed exclusively by Routledge



Description:

Performance Contracting is a must-read for those concerned about energy and the environment. It examines state-of-the-art facts and pragmatic realities from financing to measurement and verification, and includes up-to-date how-to's for both end users and energy service companies. Readers will find expert advice on RFPs and RFQs, tips on making an energy project investment worthy, and guidelines for effectively negotiating and developing energy services agreements. They will also learn the key strategies for managing risks, both from a user's and a service provider's point of view, as well as ways to expand business and serve customers more effectively.

River Publishers Series in Energy Sustainability and Efficiency

Alternate Energy

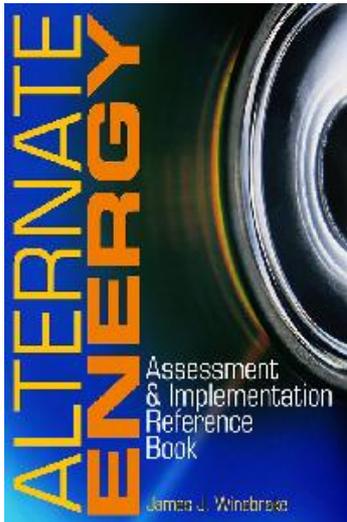
Editor: James J. Winebrake

ISBN: 9780824742898

e-ISBN: 9788770222389

Price: £ 125.00 | \$ 165.00

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Description:

Here's your opportunity to look into the future of energy technologies, with emphasis on alternative, or non-conventional technologies, their potential impacts, and the technical, economic and policy issues that will affect their successful integration into global energy markets. Over the past several years, industry and government have turned to a strategic planning technique called "roadmapping" to help assess future energy management practices and technologies. This book considers energy management and technology development over the next several decades by exploring data from these energy technology roadmaps. International in scope, the book examines both the technical and non-technical aspects of emerging technologies. Detailed technology assessments for specific alternative energy resources are presented. An overview of the problems associated with conventional energy consumption is included, as well as an insightful discussion of technology implementation issues from the author's own well-informed and cautiously optimistic perspective