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KEY=INDUSTRIAL - PEARSON MCCANN

Energy Management and Conservation Handbook

CRC Press Energy is the mainstay of industrial societies, and without an adequate supply of energy the social, political and economic stability of nations is put into jeopardy. With supplies of inexpensive fossil fuels decreasing, and climate change factors becoming more threatening, the need to conserve energy and move steadily to more sustainable energy sources is more urgent than ever before. The updated Second Edition of this successful handbook includes chapters from leading experts on the economics and fiscal management of energy, with a focus on the tools available to advance efficiency and conservation measures. Updated coverage of renewable energy sources, energy storage technologies, energy audits for buildings and building systems, and demand-side management is provided. The appendix of the handbook provides extensive data resources for analysis and calculation.

Handbook of Industrial Energy Conservation

Van Nostrand Reinhold Company

Handbook of Water and Energy Management in Food Processing

Elsevier Effective water and energy use in food processing is essential, not least for legislative compliance and cost reduction. This major volume reviews techniques for improvements in the efficiency of water and energy use as well as wastewater treatment in the food industry. Opening chapters provide an overview of key drivers for better management. Part two is concerned with assessing water and energy consumption and designing strategies for their reduction. These include auditing energy and water use, and modelling and optimisation tools for water minimisation. Part three reviews good housekeeping procedures, measurement and process control, and monitoring and intelligent support systems. Part four discusses methods to minimise energy consumption. Chapters focus on improvements in specific processes such as refrigeration, drying and heat recovery. Part five discusses water reuse and wastewater treatment in the food industry. Chapters cover water recycling, disinfection techniques, aerobic and anaerobic systems for treatment of wastewater. The final section concentrates on particular industry sectors including fresh meat and poultry, cereals, sugar, soft drinks, brewing and winemaking. With its distinguished editors and international team of contributors, Handbook of water and energy management in food processing is a standard reference for the food industry. Provides an overview of key drivers for better management Reviews techniques for improvements in efficiency of water and energy use and waste water treatment Examines house keeping procedures and measurement and process control

CRC Handbook of Energy Efficiency

CRC Press Addressing the needs of engineers, energy planners, and policy makers, *CRC Handbook of Energy Efficiency* provides up-to-date information on all important issues related to efficient energy use, including: Efficient energy technologies Economics Utility restructuring Integrated resource planning Energy efficient building design Industrial energy conservation Wind energy Solar thermal systems Photovoltaics Renewable energy Cogeneration Fossil fuel cost projections The rapid changes that characterize the technology of energy generation systems, and the forthcoming competition among energy producers, make this handbook a must for anyone involved in the science, technology, or policy of energy. The 53 expert contributors from industry, government, and universities, and the 600+ figures and tables make *CRC Handbook of Energy Efficiency* a professional and valuable resource.

Energy Efficiency Manual

For Everyone who Uses Energy, Pays for Utilities, Controls Energy Usage, Designs and Builds, is Interested in Energy and Environmental Preservation

Energy Inst Press Energy Efficiency Manual, by Donald Wulfinghoff, is the new comprehensive reference & how-to-book for energy conservation in commercial buildings, residential buildings & industrial plants. It combines the features of encyclopedia, textbook & practical field manual. This handbook details 400 actions for conserving energy in design, construction, retrofit, operation & maintenance. They cover heating & cooling efficiency, water conservation, insulation, air leakage, lighting, daylighting, solar heating & industrial equipment. The second part explains renewable energy sources, passive solar, wind energy, geothermal heat pumps, energy conservation codes, environmentally safe refrigerants, energy management computers & building automation systems, electricity rates, high efficiency motors, boilers, air conditioning equipment, fans, pumps, insulation, high efficiency lamps, thermostats, time controls & many other topics. Written as an easy conversation with readers of all backgrounds, it is packed with ratings, tips, illustrations & examples that make it easy to find the right conservation measures for every application. The clear non-mathematical presentation is for everyone from homeowners to architects, engineers, contractors, property managers, plant operators, business owners, financial managers, energy auditors, public utilities, students & faculty. Environmental protection, comfort, health & safety are major themes. Learn how to improve indoor air quality & avoid "sick building syndrome."

Guide to Energy Management

International Version

The Fairmont Press, Inc. Topics include distributed generation, energy auditing, rate structures, economic evaluation techniques, lighting efficiency improvement, HVAC optimization, combustion and use of industrial wastes, steam generation and distribution system performance, control systems and computers, energy systems maintenance, renewable energy, and industrial water management."--BOOK JACKET.

Handbook of Cumulative Impact Assessment

Edward Elgar Publishing This important Handbook is an essential guide to the state-of-the-art concepts, debates and innovative practices in the field of cumulative impact assessment. It helps to strengthen the foundations of this challenging field, identify key issues demanding solutions and summarize recent trends in forward progress, particularly through the use of illustrative case examples.

Kent and Riegel's Handbook of Industrial Chemistry and Biotechnology

Springer Science & Business Media This substantially revised and updated classic reference offers a valuable overview and myriad details on current chemical processes, products, and practices. No other source offers as much data on the chemistry, engineering, economics, and infrastructure of the industry. The two volume Handbook serves a spectrum of individuals, from those who are directly involved in the chemical industry to others in related industries and activities. Industrial processes and products can be much enhanced through observing the tenets and applying the methodologies found in the book's new chapters.

Handbook on Battery Energy Storage System

Asian Development Bank This handbook serves as a guide to deploying battery energy storage technologies, specifically for distributed energy resources and flexibility resources. Battery energy storage technology is the most promising, rapidly developed technology as it provides higher efficiency and ease of control. With energy transition through decarbonization and decentralization, energy storage plays a significant role to enhance grid efficiency by alleviating volatility from demand and supply. Energy storage also contributes to the grid integration of renewable energy and promotion of microgrid.

Occupational Outlook Handbook

A Handbook of Sustainable Building Design and Engineering

An Integrated Approach to Energy, Health and Operational Performance

Earthscan The combined challenges of health, comfort, climate change and energy security cross the boundaries of traditional building disciplines. This authoritative collection, focusing mostly on energy and ventilation, provides the current and next generation of building engineering professionals with what they need to work closely with many disciplines to meet these challenges. A Handbook of Sustainable Building Engineering covers: how to design, engineer and monitor a building in a manner that minimises the emissions of greenhouse gases; how to adapt the environment, fabric and services of existing and new buildings to climate change; how to improve the environment in and around buildings to provide better health, comfort, security and productivity; and provides crucial expertise on monitoring the performance of buildings once they are occupied. The authors explain the principles behind built environment engineering, and offer practical guidance through international case studies.

Process Management in Spinning

CRC Press A Straightforward Text Summarizing All Aspects of Process Control Textile manufacturing is one of the largest industries in the world, second only to agriculture. Spinning covers a prominent segment in textile manufacturing, and this budding industry continues to thrive and grow. Process Management in Spinning considers aspect of process management, and offers insight into the process control procedures and methods of spinning. Focusing on the technology as well as the management of the process, it examines both the economic and technological advancements currently taking place in the spinning industry. This text takes a close look at the advancing technology in manufacturing and process, and product quality control. It provides a basic overview of the subject, and also presents applications of this technology for practicing engineers. Incorporates Industry-Based, Real-World Examples The book contains 15 chapters that specifically address the stages of process control, energy management methods, humidification and ventilation systems basics, pollution management, process management tools, productivity, waste control, material handling, and other aspects of spinning mills. It also includes real-time case studies involving typical problems that arise in spinning processes and strategies used to contain them. The author provides a broad outlook on various topics including mixing, winding, raw material and optimizing raw material properties, bale management, yarn engineering systems, processing, and process management systems. He also details the defects associated with each and every process with causes, effects, and control measures. The book addresses process management as it relates to productivity, quality, and costs, as well as process control as it relates to man, machine, and material. Provides the scientific method for optimization/optimizing the properties of the fibers Familiarizes the reader with remedial measures to enhance the quality of the product Addresses productivity measurement and its role in controlling the cost of the manufacturing process Contains detailed examples, as well as linear programming and optimization techniques, and statistical applications Covers the areas of process control methods in spinning, defect analysis and rectification, improving productivity and quality, and using statistical tools Process Management in Spinning establishes the various process management measures required to help improve the process efficiency in spinning mills and the textile industry overall. Aimed at professionals in the textile industry, this text is a perfect resource for textile engineers/technologists/manufacturers, spin quality control engineers, spin quality assurance personnel, and other industry professionals.

Energy Conservation Handbook

Callisto Reference Energy conservation refers to the reduction in the consumption of energy by using less of an energy service. It includes the efficient use of energy as well as the reduction in the amount of services used. Energy conservation seeks to increase the environmental quality. It also reduces energy costs by preventing future resource depletion. One of the major ways of improving conservation of energy in buildings is through conducting an energy audit. It is concerned with an analysis and inspection of energy flow and consumption for energy conservation in a building, system or process. This book unfolds the innovative aspects of energy conservation which will be crucial for the holistic understanding of the subject matter. Most of the topics introduced herein cover new techniques of energy conservation. This book aims to serve as a resource guide for students and experts alike and contribute to the growth of the discipline.

Environmentally Conscious Manufacturing

John Wiley & Sons The second volume of the Wiley series, Environmentally Conscious Manufacturing focuses on environmentally preferable approaches to manufacturing. Contributors present and discuss the technologies engineers need to specify and employ to make manufacturing operations environmentally friendly and conform to environmental regulations. Chapters cover Hazardous Waste Minimization and Management; Cost-Effective Manufacturing; Real-time Process Monitoring and Control; Ethics in ECM; Governmental Regulations and Policies, and Total Quality Management. In each chapter case studies are provided to guide readers in areas outside their expertise.

Environmental Subsidies to Consumers

How did they work in the Japanese market?

Routledge A typical consumer underestimates the benefits of future energy savings and underinvests in energy efficiency, relative to a description of the socially optimal level of energy efficiency. To alleviate this energy-efficiency gap problem, various programs have been implemented. In recent years, many governments have started providing consumers with subsidies on the purchases of eco-friendly products such as hybrid cars and energy efficient appliances. This book conducts a comprehensive analysis of the environmental subsidy programs conducted in Japan and examines their impacts on consumer product selection, consumer product use, and environmental outcome. The book also proposes recommendations for future environmental and industrial policies. The book's empirical findings will be of interest to those who are researching on and policymakers of environmental and industrial policies.

Dictionary of Environmental Health

Rowman & Littlefield The Dictionary of Environmental Health is a one-of-a-kind comprehensive reference that serves as both a dictionary and encyclopedia. It defines over 17,000 words illustrating the enormous magnitude of the environmental health field. This book is an indispensable resource for individuals throughout environmental and public health industries.

Handbook on Electricity Markets

Edward Elgar Publishing With twenty-two chapters written by leading international experts, this volume represents the most detailed and comprehensive Handbook on electricity markets ever published.

Container Nursery Production and Business Management Manual

UCANR Publications This colorful manual includes research-based information on all aspects of production of landscape plants in commercial nurseries. Written primarily for wholesale nursery growers and propagators; a wide range of those involved in the nursery industry will find this a valuable reference. Twenty chapters in five broad sections cover topics from nursery site selection to crop production, water management to business and labor management, along with pest, weed, and disease management. This easy-to-use manual contains the photos, tables and clearly written text that make UC ANR's publications the go-to references industry professionals rely upon. Chapters include: Nursery Site Selection and Development Plant Growing Structures Mechanization and Automation Soils and Container Media Nutrition and Fertilization Irrigation Management Practices Controlling Runoff and Recycling Water, Nutrients, and Waste Plant Propagation Controlling Plant Growth Diagnosing Plant Problems Integrated Pest Management Plant Diseases Insects, Mites, and Other Invertebrate Pests Integrated Weed Management Vertebrate Pest Management Invasive Pests Business Management Marketing Considerations Increasing Labor Productivity

Handbook of Advanced Industrial and Hazardous Wastes Treatment

CRC Press Most industrial and hazardous waste management resources cover the major industries and provide conventional in-plant pollution control strategies. Until now however, no book or series of books has provided coverage that includes the latest developments in innovative and alternative environmental technology, design criteria, managerial decision met

Handbook of Research on Sustainable Development Goals, Climate Change, and Digitalization

IGI Global In recent years, the world has been changing considerably. Within the many obstacles, barriers, and opportunities, three significant challenges should be considered for the future planning of our territories and cities: seeking to achieve Sustainable Development Goals (SDG), facing climate change, and performing a shift towards digitalization. Considering these three challenges, we can work toward a more sustainable future for the environment. The Handbook of Research on Sustainable Development Goals, Climate Change, and Digitalization elaborates on sustainability issues in the planning and development field regarding the environment. This text promotes understanding about the dynamics, challenges, and opportunities for the new decade regarding our common future planning. Covering topics such as circular economy, economic-ecological principles, and sustainable resilience, this book is essential for academicians, researchers, policymakers, environmentalists, scientists, technicians, decision makers, practitioners, and students.

Design and Management for Energy Conservation

A Handbook for Energy Managers, Plant Engineers, and Designers

Pergamon Energy and materials; Scope of energy management; Fundamental concepts; Rules for the efficient conservation of energy and materials; Technologies for energy conservation; Design for the conservation of energy and materials.

Towards 100% Renewable Energy Techniques, Costs and Regional Case-Studies

Springer This volume collects papers presented at the International 100% Renewable Energy Conferences (IRENEC) from 2011 to 2015. Given the time span, the chapters have been updated to ensure they are timely, and pertinent. These proceedings are the outcome of an international group of research scientists and experts contributing to energy solutions within their research, development, and implementation. This book is aimed at researchers and decision makers who are working on problems and issues within energy efficiency. Tables, graphs, and diagrams accompany the text promoting 100% renewable energy as the solution in solidarity with energy end-use efficiency and renewable energy storage. In this manner, Towards 100% Renewable Energy offers leaders considering the transition from fossil problems to alternative solutions new food for thought and incentives for action.

Energy Conservation Program Guide for Industry and Commerce (EPIC)

Instrument and Automation Engineers' Handbook

Process Measurement and Analysis, Fifth Edition - Two Volume Set

CRC Press The Instrument and Automation Engineers' Handbook (IAEH) is the Number 1 process automation handbook in the world. The two volumes in this greatly expanded Fifth Edition deal with measurement devices and analyzers. Volume one, Measurement and Safety, covers safety sensors and the detectors of physical properties, while volume two, Analysis and Analysis, describes the measurement of such analytical properties as composition. Complete with 245 alphabetized chapters and a thorough index for quick access to specific information, the IAEH, Fifth Edition is a must-have reference for instrument and automation engineers working in the chemical, oil/gas, pharmaceutical, pollution, energy, plastics, paper, wastewater, food, etc. industries.

Handbook of Research on Advances and Applications in Refrigeration Systems and Technologies

IGI Global In recent years, the sustainability and safety of perishable foods has become a major consumer concern, and refrigeration systems play an important role in the processing, distribution, and storage of such foods. To improve the efficiency of food preservation technologies, it is necessary to explore new technological and scientific advances both in materials and processes. The Handbook of Research on Advances and Applications in Refrigeration Systems and Technologies gathers state-of-the-art research related to thermal performance and energy-efficiency. Covering a diverse array of subjects—from the challenges of surface-area frost-formation on evaporators to the carbon footprint of refrigerant chemicals—this publication provides a broad insight into the optimization of cold-supply chains and serves as an essential reference text for undergraduate students, practicing engineers, researchers, educators, and policymakers.

Document Drafting Handbook

Pollution Prevention

Sustainability, Industrial Ecology, and Green Engineering, Second Edition

CRC Press This new edition has been revised throughout, and adds several sections, including: lean manufacturing and design for the environment, low impact development and green infrastructure, green science and engineering, and sustainability. It presents strategies to reduce waste from the source of materials development through to recycling, and examines the basic concepts of the physical, chemical, and biological properties of different pollutants. It includes case studies from several industries, such as pharmaceuticals, pesticides, metals, electronics, petrochemicals, refineries, and more. It also addresses the economic considerations for each pollution prevention approach.

Handbook of Water and Wastewater Treatment Plant Operations, Third Edition

CRC Press Handbook of Water and Wastewater Treatment Plant Operations the first thorough resource manual developed exclusively for water and wastewater plant operators has been updated and expanded. An industry standard now in its third edition, this book addresses management issues and security needs, contains coverage on pharmaceuticals and personal care products (PPCPs), and includes regulatory changes. The author explains the material in layman's terms, providing real-world operating scenarios with problem-solving practice sets for each scenario. This provides readers with the ability to incorporate math with both theory and practical application. The book contains additional emphasis on operator safety, new chapters on energy conservation and sustainability, and basic science for operators. What's New in the Third Edition: Prepares operators for licensure exams Provides additional math problems and solutions to better prepare users for certification exams Updates all chapters to reflect the developments in the field Enables users to properly operate water and wastewater plants and suggests troubleshooting procedures for returning a plant to optimum operation levels A complete compilation of water science, treatment information, process control procedures, problem-solving techniques, safety and health information, and administrative and technological trends, this text serves as a resource for professionals working in water and wastewater operations and operators preparing for wastewater licensure exams. It can also be used as a supplemental textbook for undergraduate and graduate students studying environmental science, water science, and environmental engineering.

Fundamentals of Public Utilities Management

CRC Press Fundamentals of Public Utilities Management provides practical information for constructing a roadmap for successful compliance with new and ever-changing regulatory frameworks, upgrading and maintenance, and general management of utilities operations. It describes current challenges faced by utility managers and offers best practices. In an effort to maximize the usefulness of the material for a broad audience, the text is written in a straightforward, user-friendly, conversational style for students and practicing professionals alike. Features: Presents numerous illustrative examples and case studies throughout Examines environmental compliance and how to best work with continually changing regulations Frames the discussions in a context of energy conservation and ongoing sustainability efforts Fundamentals of Public Utilities Management is designed to provide insight and valuable information to public utility sector managers and prospective managers in water operations (drinking water, wastewater, storm water), and to serve the needs of students, teachers, consulting engineers, and technical personnel in city, state, and federal public sectors.

Biotrade Trading Manual

Crops for the Future Provides an overview on global biotrade: concepts and definitions, benefits and risks, biopiracy, international biotrade frameworks, enabling factors, examples of implementation.

Handbook of Water Use and Conservation

Provides estimated water savings, benefits and costs for measures. Includes tables, charts, photos, eight appendices, glossary, and index.

Handbook of Brewing

CRC Press With a foreword written by Professor Ludwig Narziss—one of the world's most notable brewing scientists—the Handbook of Brewing, Third Edition, as it has for two previous editions, provides the essential information for those who are involved or interested in the brewing industry. The book simultaneously introduces the basics—such as the biochemistry and microbiology of brewing processes—and also deals with the necessities associated with a brewery, which are steadily increasing due to legislation, energy priorities, environmental issues, and the pressures to reduce costs. Written by an international team of experts recognized for their contributions to brewing science and technology, it also explains how massive improvements in computer power and automation have modernized the brewhouse, while developments in biotechnology have steadily improved brewing efficiency, beer quality, and shelf life.

Energy Management and Conservation Handbook, Second Edition

CRC Press This second edition includes chapters from leading experts on the economics and fiscal management of energy, with a focus on efficiency and conservation measures. The handbook contains updated coverage of energy storage technologies, energy audits for buildings and building systems, and demand-side management. It also provides appendices with fully updated data.

A Practical Approach to Water Conservation for Commercial and Industrial Facilities

Elsevier Industry and commerce use vast amounts of water and in some parts of the world water is becoming a scarce commodity. We need to take more care in our future use of water, and this book is a 'best practice' manual for industrial and commercial users world-wide. It offers a practical account of the measures which can be taken to re-educate industrial and commercial users in the techniques of water saving and re-use anywhere in the world. The principles are covered in detail and supported by examples from specific industries and commercial operations. Author Mohan Seneviratne is Manager

of Sydney Water's 'Every Drop Counts Business Program', which won the prestigious 2006 Stockholm Industry Water Award in recognition of how the utility is working in partnership with business, industry and government to help ensure the long-term sustainability of Sydney's water supply. * The first book to cover water conservation for industrial users from processing plants to pubs and clubs * Provides practical advice on implementing water conservation for users in various industry sectors * Written by a practicing water conservation consultant

Handbook of Mathematics and Statistics for the Environment

CRC Press A thorough revision of the previous "Environmental Engineer's Mathematics Handbook," this book offers readers an unusual approach to presenting environmental math concepts, emphasizing the relationship between the principles in natural processes and environmental processes. It integrates the fundamental math operations performed by environmental practitioners for air, water, wastewater, solid/hazardous wastes, biosolids, environmental economics, stormwater operations, and environmental health, safety, and welfare. New material includes quadratic equations, Quadratic equations, Boolean algebra, statistics review, fundamental fire science, basic electricity for environmental practitioners, and environmental health computations and solutions.

Energy Footprints of the Food and Textile Sectors

Springer This book addresses energy footprints in the food and textile sectors. Each footprint case study presents essential background information and discusses the scientific consensus, methodological framework, assessment checklist, calculation tools and techniques, applications, challenges and limitations. More importantly, the book explores the application of each indicator/framework in various industrial sectors and the associated challenges, as well as outlooks for the future – essential considerations, given that energy consumption and conservation are the primary elements in any industry's sustainability strategy.

An Evaluation of Japanese Environmental Regulations

Quantitative Approaches from Environmental Economics

Springer Focusing on air pollution, energy efficiency and climate change, this book provides an introduction to Japan's environmental policies and regulations, and offers economic analyses and RIAs (Regulatory Impact Analysis) of environmental regulations implemented or planned by the national and local governments. The opening chapter reviews environmental economics and outlines the current status of RIAs in Japan. Chapter 2 analyzes the NOx-PM Act, which prohibits the use of old and polluting vehicles in metropolitan areas. Chapter 3 examines a Tokyo metropolitan government regulation which requires installation of pollution control equipment in older trucks that fail to meet emission standards. Chapter 4 traces the impact of the NOx-PM Act on the used car market and used vehicle exports. Chapter 5 presents an economic analysis of a highway toll reduction, revealing an unexpected negative social impact: it increased traffic congestion and associated environmental problems. The final three chapters address policies and regulations related to energy efficiency and climate change. Chapter 6 evaluates the effectiveness of Japan's Energy Conservation Act, originally introduced in 1979 and amended numerous times to address climate change. Chapter 7 anticipates the impact of a proposed economy-wide carbon tax, using input-output analysis to assess short-term economic impacts in each sector. Also presented here is an examination of the effectiveness of a reduced carbon tax for energy-intensive industries, with a discussion of the impact of the proposal on households. The final chapter discusses the role and limitations of economic models for evaluating Japan's mid-term GHG (Greenhouse Gas) emission target during the post-Kyoto period. This is the first book to evaluate Japanese environmental policies from an economic perspective, using a variety of current quantitative approaches. Its findings and suggestions will benefit students, policy makers and government officials in developing and developed countries where the public faces similar environmental problems.

Metric Handbook

Routledge "An essential reference resource for any architect or architect student, the Metric Handbook is the major handbook for planning and design data. For each building type, the book gives basic design requirements, principal dimensional data and details of relevant building regulations. The book also contains information on broader aspects of design applicable to all building types, such as materials, acoustics and lighting, and data on human dimensions and space requirements. Significantly updated, the new edition of this work focuses on sustainable design practice to make projects competitive within a green market. As well as a full revision, including additional new building types and the latest updates to regulation and practice, the book features an improved new layout with color images and text to make it easier to find vital information quickly. Metric Handbook is a tried and tested, authoritative reference for solving everyday planning problems - it is a must have for every design office desk and drawing board".

Computational Modelling in Industry 4.0

A Sustainable Resource Management Perspective

Springer Nature This book addresses the different problems, practices, challenges and opportunities in sustainable resource management with the help of decision-making techniques to showcase the relevance of computational modelling approaches in sustainable management and Industry 4.0. It aims to address the inherent complexity of managing ecosystems, particularly with respect to involvement of multi-stakeholders, lack of information and uncertainties. Critical analyses are made to point out the need for, and propose a call to, a new way of thinking about sustainable resource management. This book will be useful for academicians, researchers, and industrialists in the field of industrial and production engineering.

Decarbonisation and the Energy Industry

Law, Policy and Regulation in Low-Carbon Energy Markets

Bloomsbury Publishing This timely collection of essays examines the legal and regulatory dynamics of energy transitions in the context of emerging trends towards decarbonisation and low-carbon energy solutions. The book explores this topic by considering the applicable energy law and policy frameworks in both: (i) highly industrialised and major economies such as the US, EU, China and Australia; (ii) resource-rich developing countries such as Nigeria and regions like Southern Africa. Comprising 16 chapters, the book delves into the tradeoffs and regulatory complexities of carbon-constraints in conventional energy supply systems, while maintaining a reliable and secure energy system that is equally sustainable (ie decarbonised). It highlights the importance of ensuring affordable access to energy services in developing economies as the energy transitions unfold and explores the potentials of emerging technologies such as hydrogen networks, power-to-gas and Carbon Capture and Storage. Additionally, the book also considers the international investment law implications of energy decarbonisation. Focusing on the nexus between law, regulation and institutions, it adopts a contextual approach to examine how and to what extent institutions can effectively facilitate more reliable, sustainable and secure energy supply systems in the twenty-first century. This book portrays the conventional hydrocarbon-based energy supply industry in a largely international and interconnected context. It highlights the costs, benefits and losses that may arise as the transition towards decarbonisation unfolds depending on the pathways and solutions adopted. With chapters written by leading experts in energy law and policy, the reader-friendly style and engaging discussions will benefit an international audience of policymakers, academics, students and advisers looking for a more incisive understanding of the issues involved in energy transitions and the decarbonisation of energy systems.