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Innovation for a Low Carbon Economy *Foundations for a Low-Carbon Energy System in China* **Achieving a Just Transition to a Low-Carbon Economy** *Living in a Low-Carbon Society in 2050* **How to Live a Low-Carbon Life** Technological Learning in the Transition to a Low-Carbon Energy System **Electricity: Humanity's Low-carbon Future - Safeguarding Our Ecological Niche** *The Business Leader's Guide to the Low-carbon Economy* **Achieving a Just Transition to a Low-Carbon Economy** *Introduction to Climate Change Management* *How to Live a Low-Carbon Life* Transition to a Low-Carbon Economy Public Goals and Corporate Practices Managing the Transition to a Low-Carbon Economy The Economical Environmentalist Aligning Policies for a Low-carbon Economy Unlocking Energy Innovation *Energy and Environmental Policy in China* How to Live a Low-carbon Life **The Economics of Climate Change in China** *China's Long-Term Low-Carbon Development Strategies and Pathways* *Turning the Right Corner* Cities and Low Carbon Transitions **How to Live a Low-carbon Life** **Moving Towards Transition Energy Issues and Transition to a Low Carbon Economy** **Low Carbon Nation?** Financing for Low-carbon Energy Transition **Low Carbon Transitions for Developing Countries** Investment Opportunities for a Low Carbon World *How to Develop a Low Carbon Scenario for a Country? A Study in Vietnam* The Political Economy of Low Carbon Transformation Designing Climate Solutions **How to Garden the Low Carbon Way** **Energy Justice in a Changing Climate** **Sustainable Energy and Green Finance for a Low-carbon Economy** *The Low-Carbon Cookbook & Action Plan* **Low Carbon City Development Program Guidebook From the Paris Agreement to a Low-Carbon** **Bretton Woods Handbook of Low Carbon Concrete**

Decarbonisation and the Energy Industry

Global climate change is one of the greatest challenges of our times and in order to tackle this carbon emissions need to be mitigated. China and India have recently become some of the world's largest greenhouse gas emitters. Transitions to low carbon energy, for reducing emissions that lead to climate change, are therefore an urgent priority for China and India and at a global level. This is the first book focusing on low carbon energy transitions for emerging economies such as China and India, assessing the opportunities and barriers for transitions to renewable and low carbon energy as climate change mitigation options. It uses energy modelling to assess the China's power sector, the economy of Beijing and rural Indian households that do not have access to electricity. The research evaluates the environmental, technical, socio-economic and policy implications of these low carbon transitions, concluding that they are possible in China and India and they can considerably contribute to climate change mitigation. This interdisciplinary book will be of interest to scholars, students, practitioners and policy-makers working in the fields of energy and development, energy policy, energy studies and modelling, climate policy, climate change mitigation, climate change and development, low carbon development, sustainable development, environment and development and environmental management. Current societies face unprecedented risks and challenges connected to climate change. Addressing them will require fundamental transformations in the infrastructures that sustain everyday life, such as energy, water, waste and mobility. A transition to a 'low carbon' future implies a large scale reorganisation in the way societies produce and use energy. Cities are

critical in this transition because they concentrate social and economic activities that produce climate change related emissions. At the same time, cities are increasingly recognised as sources of opportunities for climate change mitigation. Whether, how and why low carbon transitions in urban systems take place in response to climate change will therefore be decisive for the success of global mitigation efforts. As a result, climate change increasingly features as a critical issue in the management of urban infrastructure and in urbanisation policies. Cities and Low Carbon Transitions presents a ground-breaking analysis of the role of cities in low carbon socio-technical transitions. Insights from the fields of urban studies and technological transitions are combined to examine how, why and with what implications cities bring about low carbon transitions. The book outlines the key concepts underpinning theories of socio-technical transition and assesses its potential strengths and limits for understanding the social and technological responses to climate change that are emerging in cities. It draws on a diverse range of examples including world cities, ordinary cities and transition towns, from North America, Europe, South Africa and China, to provide evidence that expectations, aspirations and plans to undertake purposive socio-technical transitions are emerging in different urban contexts. This collection adds to existing literature on cities and energy transitions and introduces critical questions about power and social interests, lock-in and development trajectories, social equity and economic development, and socio-technical change in cities. The book addresses academics, policy makers, practitioners and researchers interested in the development of systemic responses in cities to curb climate change. Climate change is the greatest challenge facing humanity: drastic reduction of carbon emissions is vital if we are to avoid a catastrophe that devastates large parts of the world. Governments and businesses have been slow to act and individuals now need to take the lead. The Earth can absorb no more than 3 tonnes of carbon dioxide emissions each year for every person on the planet if we are to keep temperature and rainfall change within tolerable limits. Yet from cars and holiday flights to household appliances and the food on our plates, Western

consumer lifestyles leave each of us responsible for over 12 tonnes of carbon dioxide a year - four times what the Earth can handle. Individual action is essential if we want to avoid climate chaos. How to Live a Low-Carbon Life shows how easy it is to take responsibility, providing the first comprehensive, one-stop reference guide to calculating your CO₂ emissions and reducing them to a sustainable 3 tonnes a year. Drawing on an innovative project exploring current mobility transition policies and practices in 14 countries around the world, including key institutions such as the European Union and the United Nations, this book provides a critique of current transitions, mobility and transport policies. The authors consider how our mobility futures have been imagined, what they will potentially look and feel like, what lives we might live in them and what choices we might have to make to get there. What does the transition to a Low Carbon Britain mean for the future development of cities and regions across the country? Does it reinforce existing 'business as usual' or create new transformational opportunities? Low Carbon Nation? takes an interdisciplinary approach to tackle this critical question, by looking across the different dimensions of technological, scientific, social and economic change within the diverse city and regional contexts of the UK. Hodson and Marvin set out how the transition to low carbon futures needs to be understood as a dual response to the wider financial and economic crisis and to critical ecological concerns about the implications of global climate change. The book develops a novel framework for understanding how the transition to low carbon is informed by historical legacies that shape the geographical, political and cultural dimensions of low carbon responses. Through a programme of research in Scotland, Wales, the North East of England, Greater London, and Greater Manchester, the authors set out different styles of low carbon urban and regional response. Through in-depth illustration of this in newly devolved nations, an old industrial region, a global city-region and in an entrepreneurial city, international lessons can be drawn about the limits and the unrealised opportunities of low carbon transition. This book is key reading for students on geography, economics, planning and social science degrees, as well as

those studying sustainability in related contexts trying to understand the urban and regional politics of low carbon transition. It is also an essential resource for policymakers, public officials, elected representatives, environmentalists and business leaders concerned with shaping the direction and type of transition. China faces many modernization challenges, but perhaps none is more pressing than that posed by climate change. China must find a new economic growth model that is simultaneously environmentally sustainable, can free it from its dependency on fossil fuels, and lift living standards for the majority of its population. But what does such a model look like? And how can China best make the transition from its present macro-economic structure to a low-carbon future? This ground-breaking economic study, led by the Stockholm Environment Institute and the Chinese Economists 50 Forum, brings together leading international thinkers in economics, climate change, and development, to tackle some of the most challenging issues relating to China's low-carbon development. This study maps out a deep carbon reduction scenario and analyzes economic policies that shift carbon use, and shows how China can take strong and decisive action to make deep reductions in carbon emission over the next forty years while maintaining high economic growth and minimizing adverse effects of a low-carbon transition. Moreover, these reductions can be achieved within the finite global carbon budget for greenhouse gas emissions, as determined by the hard constraints of climate science. The authors make the compelling case that a transition to a low-carbon economy is an essential part of China's development and modernization. Such a transformation would also present opportunities for China to improve its energy security and move its economy higher up the international value chain. They argue that even in these difficult economic times, climate change action may present more opportunities than costs. Such a transformation, for China and the rest of the world, will not be easy. But it is possible, necessary and worthwhile to pursue. This book argues that the transition to low-carbon transport ensures lower transport costs and a stronger development impetus of the sector for the future. The report shows how policies can be organized to generate revenues that can cover

much or all of the transition cost. Drastic reduction of carbon emissions is vital if we are to avoid a catastrophe that devastates large parts of the world. Governments and businesses have been slow to act - individuals need to take the lead now if we are to avoid climate chaos. Each Westener is responsible for an average 10 - 20 tonnes of carbon emissions each year (depending on where you live). In *How to Live a Low-Carbon Life*, Chris Goodall shows how easy it is to take responsibility, providing a comprehensive, one-stop reference guide to calculating your CO2 emissions and reducing them to a more sustainable 2 tonnes a year. This fully revised and expanded new edition takes into account new government targets on emissions reductions and includes up-to-date calculations and extensive graphics clearly laying out the path to a low-carbon life. Using the principles of responsible business conduct identified in the OECD Guidelines for Multinational Enterprises, this report reviews three key areas of corporate action accounting for greenhouse gas emissions, achieving emissions reductions and engaging suppliers, consumers and others. This report produced in co-operation with the International Energy Agency (IEA), the International Transport Forum (ITF) and the Nuclear Energy Agency (NEA) identifies the misalignments between climate change objectives and policy and regulatory frameworks across a range of policy domains. The ambition of most countries across the world is to develop a low-carbon economy, evidenced by the fact that the vast majority of countries have signed the Paris COP21 agreement. This book contends that this global societal transition to a low-carbon economy must be just. As such, it will be an invaluable and accessible reference for scholars from all research disciplines who aim in their research to see a fairer, more equitable and inclusive world where sustainability is at the fore and climate targets are achieved. This is the first in-depth and original analysis to explore the central importance of law in achieving a just transition to a low-carbon economy. In addition, it advances the JUST framework, a unique framework for assessing the just transition. This important research and theoretical tool provides a practical perspective as it ensures the geographical space and timelines of development are factored into

analysis. The research also provides analysis on the just transition movement around the world and the influence of international institutions. Through several case studies on Just Transition Commissions and Critical Mineral Development, the book details and demonstrates key elements of justice, including distributive, procedural, restorative, recognition, and cosmopolitan justice. It is clear from the analysis that while these are vast areas for analysis, if applied in practice, they all centrally contribute to ensuring society will advance in achieving a just transition to a low-carbon economy. This book is the first comprehensive assessment of the state of low-carbon investments in Asia, analyzing the rationales, mandates and public-private financing activities. Based on the experiences of several regional initiatives wherein public financing is catalyzing private investments in low-carbon infrastructure, this book proposes a framework that can be used as a tool to identify factors that influence private investment decisions and policy instruments that can scale up the private capital. Placing the Asian economies onto a low-carbon development pathway requires an unprecedented shift in investments. This book addresses this situation by asking questions such as: • What is the central role of private finance in achieving the Paris Agreement targets? • What key policy levers and risk mitigation can governments use in an effort to unlock the potentials of private capital? • How can regionally coordinated actions hold significant promise for scaling up private investments? The ambition of most countries across the world is to develop a low-carbon economy, evidenced by the fact that the vast majority of countries have signed the Paris COP21 agreement. This book contends that this global societal transition to a low-carbon economy must be just. As such, it will be an invaluable and accessible reference for scholars from all research disciplines who aim in their research to see a fairer, more equitable and inclusive world where sustainability is at the fore and climate targets are achieved. This is the first in-depth and original analysis to explore the central importance of law in achieving a just transition to a low-carbon economy. In addition, it advances the JUST framework, a unique framework for assessing the just transition. This important research and

theoretical tool provides a practical perspective as it ensures the geographical space and timelines of development are factored into analysis. The research also provides analysis on the just transition movement around the world and the influence of international institutions. Through several case studies on Just Transition Commissions and Critical Mineral Development, the book details and demonstrates key elements of justice, including distributive, procedural, restorative, recognition, and cosmopolitan justice. It is clear from the analysis that while these are vast areas for analysis, if applied in practice, they all centrally contribute to ensuring society will advance in achieving a just transition to a low-carbon economy. The book provides readers with essential insights into key issues in connection with planning, developing and financing sustainable energy projects in China that are relevant for practitioners, investors and developers involved in the emerging sustainable energy sector. It offers readers a deeper understanding of these contemporary issues by drawing on the lessons learned in real-world sustainable energy and green finance development activities in China, which are driven by central planning and policy implementation and complemented by investments and finances from public-private partnerships. Asia must be at the center of the global fight against climate change. It is the world's most populous region, with high economic growth, a rising share of global greenhouse gas emissions, and the most vulnerability to climate risks. Its current resource- and emission-intensive growth pattern is not sustainable. This study recognizes low-carbon green growth as an imperative—not an option—for developing Asia. Asia has already started to move toward low-carbon green growth. Many emerging economies have started to use sustainable development to bring competitiveness to their industries and to serve growing green technology markets. The aim of this study is to share the experiences of emerging Asian economies and the lessons learned. The book assesses the low-carbon and green policies and practices taken by Asian countries, identifies gaps, and examines new opportunities for low-carbon green growth. Climate change is a key problem of the 21st century. China, as the largest emitter of greenhouse

gases, has committed to stabilize its current emissions and dramatically increase the share of electricity production from non-fossil fuels by 2030. However, this is only a first step: in the longer term, China needs to aggressively strive to reach a goal of zero-emissions. Through detailed discussions of electricity pricing, electric vehicle policies, nuclear energy policies, and renewable energy policies, this book reviews how near-term climate and energy policies can affect long-term decarbonization pathways beyond 2030, building the foundations for decarbonization in advance of its realization. Focusing primarily on the electricity sector in China - the main battleground for decarbonization over the next century - it provides a valuable resource for researchers and policymakers, as well as energy and climate experts. Without energy, there is no well-functioning economy, besides facing social risks. This book provides a systemic approach to energy in Mexico and its relations to the USA arising from the energy reform of the former. It covers the transition from fossil fuels to a low-carbon economy, relying heavily on renewable sources and mitigating climate change risks. Several human knowledge disciplines and topics are covered in the book, including public policy, economics, transboundary issues, electricity and thermal energy, residual biomass use, distributed energy systems and its management, and decision-making tools. An analysis is considered regarding energy issues interaction in the Mexican-USA border, which differ in both countries from pricing and policy, and the work and research that has been developed for transboundary energy trade. The international community recognises the need to reduce the world's greenhouse gas emissions by half by 2050 in order to limit an increase in atmospheric temperature up to two degrees centigrade. In Asia, where economic growth is rapid and continuous, it is necessary to create a sustainable and low-carbon society, while promoting significant reductions of emissions. This book aims to introduce tools and methodology to explore a low carbon development path for a country. It presents an example of developing a low carbon society in Vietnam covering energy, and agriculture, forestry and land use sectors. With the effects of climate change already upon us, the need to cut global greenhouse gas emissions

is nothing less than urgent. It's a daunting challenge, but the technologies and strategies to meet it exist today. A small set of energy policies, designed and implemented well, can put us on the path to a low carbon future. Energy systems are large and complex, so energy policy must be focused and cost-effective. One-size-fits-all approaches simply won't get the job done. Policymakers need a clear, comprehensive resource that outlines the energy policies that will have the biggest impact on our climate future, and describes how to design these policies well. Designing Climate Solutions: A Policy Guide for Low-Carbon Energy is the first such guide, bringing together the latest research and analysis around low carbon energy solutions. Written by Hal Harvey, CEO of the policy firm Energy Innovation, with Robbie Orvis and Jeffrey Rissman of Energy Innovation, Designing Climate Solutions is an accessible resource on lowering carbon emissions for policymakers, activists, philanthropists, and others in the climate and energy community. In Part I, the authors deliver a roadmap for understanding which countries, sectors, and sources produce the greatest amount of greenhouse gas emissions, and give readers the tools to select and design efficient policies for each of these sectors. In Part II, they break down each type of policy, from renewable portfolio standards to carbon pricing, offering key design principles and case studies where each policy has been implemented successfully. We don't need to wait for new technologies or strategies to create a low carbon future—and we can't afford to. Designing Climate Solutions gives professionals the tools they need to select, design, and implement the policies that can put us on the path to a livable climate future. Energy justice is one of the most critical, and yet least developed, concepts associated with sustainability. Much has been written about the sustainability of low-carbon energy systems and policies - with an emphasis on environmental, economic and geopolitical issues. However, less attention has been directed at the social and equity implications of these dynamic relations between energy and low-carbon objectives - the complexity of injustice associated with whole energy systems (from extractive industries, through to consumption and waste) that transcend national boundaries and the social, political-economic and material

processes driving the experience of energy injustice and vulnerability. Drawing on a substantial body of original research from an international collaboration of experts this unique collection addresses energy poverty, just innovation, aesthetic justice and the justice implications of low-carbon energy systems and technologies. The book offers new thinking on how interactions between climate change, energy policy, and equity and social justice can be understood and develops a critical agenda for energy justice research. Handbook of Low Carbon Concrete brings together the latest breakthroughs in the design, production, and application of low carbon concrete. In this handbook, the editors and contributors have paid extra attention to the emissions generated by coarse aggregates, emissions due to fine aggregates, and emissions due to cement, fly ash, GGBFS, and admixtures. In addition, the book provides expert coverage on emissions due to concrete batching, transport and placement, and emissions generated by typical commercially produced concretes. Includes the tools and methods for reducing the emissions of greenhouse gases Explores technologies, such as carbon capture, storage, and substitute cements Provides essential data that helps determine the unique factors involved in designing large, new green cement plants This book provides climate students with the basic scientific background to climate change management. Students will learn about international and national approaches to climate change management defined in voluntary initiatives as well as in national law and international agreements. The book describes mitigation and adaptation measures, monitoring and reporting of greenhouse gas emissions, and strategies for achieving a low-carbon economy, including green finance. This book combines theory and practice, introducing students to the conceptual background but also taking a professional and technical approach with case studies and low carbon toolkits. Filled with didactic elements such as concept schemes, tables, charts, figures, examples, as well as questions and answers at the end of the chapters, this book aims to engage critical thinking and the discussion of important topics of our days. The low-carbon strategy is one of the answers to limiting the greenhouse effect on our planet. This strategy is to minimize

the overall carbon consumption in the life cycle of the products we consume, from the extraction of raw materials to the end of their life. The future is being built today. This book will guide its readers along the path of imagining and realizing a low-carbon economy." This book investigates the existing and possible links between the concept of a Carbon Club and the Paris Agreement. In doing so the book defines those criteria that may lead to an effective establishment of a Carbon Club acting within the mandate of the Paris Agreement and identifies the key questions that such an option may help to tackle: Which low-carbon pathways are compatible with the new temperature targets set by the Paris Agreement? Can new entities like the Carbon Club have a decisive role in guaranteeing the alignment of the aggregate mitigating actions with the global objectives identified within the Paris Agreement? What role will be played by market and non-market approaches within the proposed framework? How can economic, social, and environmental sustainability be ensured during the implementation of the Agreement? How can justice and equity be encouraged between the Parties and all the involved actors as required by the Agreement? Which instruments can be designed and adopted to provide the expected degree of transparency for the new system? To respond to these questions the book adopts a holistic approach, able to emphasize the strong interrelations. The book discusses the opportunity to develop a Carbon Club within the Article 6 framework, and provides a feasible roadmap for its means of implementation, rules and governance structure. The final result is a feasible policy proposal that takes into account all the key issues introduced by the questions, and draws a roadmap towards a 'low-carbon Bretton Woods'. Drastic reduction of carbon emissions is vital if we are to avoid a catastrophe that devastates large parts of the world. Governments and businesses have been slow to act - individuals need to take the lead now if we are to avoid climate chaos. Each Westener is responsible for an average 10 - 20 tonnes of carbon emissions each year (depending on where you live). In How to Live a Low-Carbon Life, Chris Goodall shows how easy it is to take responsibility, providing a comprehensive, one-stop reference guide to calculating your CO2

emissions and reducing them to a more sustainable 2 tonnes a year. This fully revised and expanded new edition takes into account new government targets on emissions reductions and includes up-to-date calculations and extensive graphics clearly laying out the path to a low-carbon life. Summary: "Providing insights from leading global experts from the environmental technology and finance sectors, under the guidance of Will Oulton, Director of Responsible Investment at FTSE Group, this important book looks at the prospects for low carbon technologies and services which are fundamental to mitigating climate change. The book also shows how the fast developing global environmental technology sector can provide excellent long term, sustainable and superior investment opportunities." -- Back cover. First Published in 2007. Routledge is an imprint of Taylor & Francis, an informa company. This open access book introduces a multi-disciplinary and comprehensive research on China's long-term low-carbon emission strategies and pathways. After comprehensively considering China's own socioeconomic conditions, policy design, energy mix, and other macro-development trends and needs, the research team has proposed suggestions on China's low-carbon development strategies and pathways until 2050, with required technologies and policies in order to realize the goals of building a great modern socialist country and a beautiful China. These achievements are in conjunction with the climate goals set in the Paris Agreement alongside Global Sustainable Development. The authors hope that the research findings can serve as a reference for all sectors of Chinese society in their climate research efforts, offer support for the formulation and implementation of China's national low-carbon development strategies and policies, and help the world to better understand China's story in the general trend of global green and low-carbon development. Technological Learning in the Transition to a Low-Carbon Energy System: Conceptual Issues, Empirical Findings, and Use in Energy Modeling quantifies key trends and drivers of energy technologies deployed in the energy transition. It uses the experience curve tool to show how future cost reductions and cumulative deployment of these technologies may shape the future mix of the

electricity, heat and transport sectors. The book explores experience curves in detail, including possible pitfalls, and demonstrates how to quantify the 'quality' of experience curves. It discusses how this tool is implemented in models and addresses methodological challenges and solutions. For each technology, current market trends, past cost reductions and underlying drivers, available experience curves, and future prospects are considered. Electricity, heat and transport sector models are explored in-depth to show how the future deployment of these technologies--and their associated costs--determine whether ambitious decarbonization climate targets can be reached - and at what costs. The book also addresses lessons and recommendations for policymakers, industry and academics, including key technologies requiring further policy support, and what scientific knowledge gaps remain for future research. Provides a comprehensive overview of trends and drivers for major energy technologies expected to play a role in the energy transition Delivers data on cost trends, helping readers gain insights on how competitive energy technologies may become, and why Reviews the use of learning curves in environmental impacts for lifecycle assessments and energy modeling Features social learning for cost modeling and technology diffusion, including where consumer preferences play a major role This pioneering book provides a comprehensive, rigorous and in-depth analysis of China's energy and environmental policy for the transition towards a low-carbon economy. This unique book focuses on concrete, constructive and realistic solutions to China's unprecedented environmental pollution and rising greenhouse gas emissions from burning fossil fuels and energy security as a result of steeply rising oil imports. It provides an up-to-date factual analysis of China's efforts and commitments to improve energy efficiency, to cut pollutants and to increase the use of renewable energy to create a low-carbon economy. The author explores many of the policies and measures that China has put in place to save energy and reduce emissions, as well as examines new policies and measures in order for China to be successful. Energy and Environmental Policy in China will prove to be of great value to practitioners and policymakers,

as well as to academics and students in the areas of economics, environmental studies, Asian studies, regional and urban studies, law, political science and sociology. Climate change is no longer deniable. Neither is the fact that greenhouse gas emissions due to human activities need to be mitigated. The question is how to rapidly transit to an increasingly low-carbon world while essentially sustaining the quality of life of the fortunate and providing better lives for the less fortunate. The challenge is to decarbonize both energy consumption and production with electricity at the core of energy systems. Perhaps *Energia*, a fictitious country whose 50 million inhabitants endorse climate change objectives and that embodies the energy mutations proposed by the authors, has the answers. Along with *Energia*, four families living in Africa, America, Asia and Europe who represent us, the consumer, set the stage for the book's discussions. On the user front, the presentation primarily focuses on energy consumption at home and for transport. On the energy production front, the focus shifts to the integration of renewables with fossil and nuclear energy. The book's coverage includes crucial systemic issues related to energy storage, electric power systems and multi-energy systems. In a dedicated chapter, the authors put forward their energy and environmental public policy observations and proposals, including a carbon fee scheme. Electricity is written for readers interested and concerned by the environmental and energy challenges we face, and who seek to participate, as well-informed citizens, in discussions on future energy-related options. The book provides a balanced, factual and unemotional presentation of readily available energy systems and technologies which, when widely deployed, can contribute, both short and long term, toward a low-carbon and electricity-centered world. Experts outline a plan to overhaul the U.S. energy innovation system for accelerated, large-scale adoption of reliable, low-cost, low-carbon energy technologies. Energy innovation offers us our best chance to solve the three urgent and interrelated problems of climate change, worldwide insecurity over energy supplies, and rapidly growing energy demand. But if we are to achieve a timely transition to reliable, low-cost, low-carbon energy, the U.S. energy

innovation system must be radically overhauled. *Unlocking Energy Innovation* outlines an up-to-the-minute plan for remaking America's energy innovation system by tapping the country's entrepreneurial strengths and regional diversity in both the public and private spheres. "Business as usual" will not fill the energy innovation gap. Only the kind of systemic, transformative changes to our energy innovation system described in this provocative book will help us avert the most dire scenarios and achieve a sustainable and secure energy future. 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. Use your dining room table to help you combat climate change. When you go to the supermarket to buy groceries, you probably don't think much about how everything got to the store. There are the farmers, the harvesting machines, the delivery trucks, the stockers, and countless other people involved in getting meats and produce and ice cream from where they're made to your kitchen. But there are many real costs involved--and most of them involve impacts to the environment more than to bank accounts. Food production contributes one-fourth of our global greenhouse gas emissions. This is a significant number that's part of the climate change conversation. But you can take a few small steps to help lower that number--and *The Low-Carbon Cookbook* will show you how. This book will include science-backed information on how to make the most-climate friendly choices--from examining the impact of the supply chain for the foods that end up on our plates to evaluating the carbon footprint of various plant-based options we have. *The Low-Carbon Cookbook* will also feature 140 plant-based recipes made almost exclusively with locally sourced ingredients. If you're looking for a way to combat climate change from your kitchen, this book will help you with your goals. Reducing your carbon emissions in an economic down-turn can be challenging, but saving the planet doesn't have to cost you more. Tough economic times need not relegate concerns for the planet to the back burner. The author is an environmental economist trying to live a low-carbon life in London. He worked for 15 years in the UK's Office of Climate Change, the Prime Minister's Strategy Unit and the Department of the Environment. So far so good. But he has kids. A family to visit in India. A hectic job. In distilling and building on his own experience of trying to live a low carbon life, he helps us navigate the choices that confront us all - families, singletons, pensioners - when making decisions about what to eat, what to buy, how to travel and how to keep warm in the era of climate change and economic turmoil. He works out the sums and lets us know which choices will make the biggest difference, and which are false

savings. His book is an irreverent but seriously rigorous reference guide to low-cost, low-carbon living for everyone - in any location - in tough times. It's brimming with up-to-date information on current and future technologies, tips and ideas for every budget on how to spend the least for the biggest carbon reduction gain and insight from the experiences of people trying to live low-carbon lives. Combining theory, case studies and speculative fiction, a range of contributors, from leading UK academics to pioneering renewable activists, create a compelling picture of the potential perks and pitfalls of a low carbon future. Innovation for a Low Carbon Economy analyses the interplay of technological, institutional, market and management factors in the dynamics of energy systems. The book aims to inform national and international policies to promote low carbon innovation. Create a beautiful home garden while reducing your carbon footprint along the way Transform your outdoor space into a low-impact, carbon-absorbing sink with this fantastic gardening guide, packed with ideas to grow a climate-friendly garden that will help protect the planet. Keen on starting your own garden but unsure about your environmental impact? This guide will give you practical advice on which soil to use, plants that are best for absorbing carbon dioxide, low-carbon fertilizers, and cutting out single-use plastic. What's more, this garden book is completely backed by scientific research! Share in the delight of eco-conscious gardening when you start using *How to Garden the Low Carbon Way* as your guide. Explore the benefits of no-dig gardening, how to use fewer plants, using hedges instead of fences, how to grow shrubs that support wildlife, and more! This green gardening book will make growing your own garden easy, enjoyable, and eco-friendly and includes sections on; - How to grow plants that reduce your carbon footprint - Creating a garden that considers the local wildlife - Tips on setting up your garden, low-impact plants, and best fertilizers to use *Green Gardening: Low environmental impact* This fantastic gardening book is a simple, step-by-step guide to learn about gardening or to reference as your garden grows. You'll quickly become acquainted with the benefits of growing a garden that positively contributes to the environment. Plus, you'll have all the fun,

rewards a gardening hobby has to offer. Deep reductions in energy use and carbon emissions will not be possible within political economies that are driven by the capitalist imperatives of growth, commodification and individualization. As such, it has now become necessary to understand the relationship between capitalism and the emergence of high energy habits. Using the examples of home energy, transport and food, *The Political Economy of Low Carbon Transformation* articulates the relationship between the politics of economic expansion and the formation of high-energy habits at the level of family and household. The book elaborates a theory of habit and how it can contribute to this relationship. It critiques mainstream green economy and green energy prescriptions for low carbon transformation that take economic growth for granted and ignore habits formed in a material world designed and built for high energy use. The book explores the growing number of communities around the world that are engaged in collaborative efforts to reform their community and household habits in ways that are less environmentally intrusive. It assesses their potential to make an impact on national and urban low carbon political agendas. The book is aimed at a large and growing interdisciplinary audience interested in the

relationship between political economy, consumption and sustainability. Rising energy prices and concerns about climate change are driving us towards a new kind of economy - a low-carbon economy. What will this low-carbon economy be like, and what does your business have to do to prosper in this new business environment? Larry Reynolds shows how successful organisations are already learning to be more energy efficient, manage their carbon footprint, adapt to climate change and become truly sustainable. As well as explaining how to future-proof your organisation against possible threats, *The Business Leader's Guide to the Low-carbon Economy*, tells you how to make the most of the many opportunities that the low-carbon economy will bring, especially in growing profits from new products and services. It is your guide to creating an organisation that will thrive in the twenty-first century. While there are plenty of published books about 'going green', there are none which explain the low-carbon economy and how to thrive in it. This book will fill that important gap. Drawing on examples from across industries, including businesses such as Asda, BT, Cargill, Coca Cola, Co-operative Group, Eurostar, Marks and Spencer, Tesco, Tesla, Walker's Crisps, Walmart and ZipCar, Larry Reynolds shows how today's successful organisations are already benefiting from the coming low-carbon economy.