

Energy In Europe Special Issue Energy In Europe

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Explore the critical dynamics of energy in Europe with this comprehensive special issue. Delve into the latest European energy trends, analyze the evolving Europe energy market, and understand the implications for European energy policy. This publication offers deep insights into energy security Europe and future energy outlook Europe, making it essential reading for anyone interested in the continent's power landscape.

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Energy in Europe

This volume addresses renewable energy communities, and in particular renewable energy cooperatives (REScoops), in the context of the revised EU Renewables Directive. It provides a comprehensive account of the history and development of the renewable energy community movement in over six different countries of continental Europe. It addresses their visions, strategy, organisation, agency, and more particularly the challenges they encounter. This is of particular importance to gain more understanding into how renewable energy communities fare in domestic energy markets where they are confronted with regime institutions, structures and incumbents' agency that tend to favour maintaining of the status quo while blocking attempts to empower and institutionalise renewable energy communities as market entrants having a disruptive, radical green and localist agenda. This volume will be an invaluable reference for academics and practitioners with an interest in social innovation in sustainable transitions, the role of community energy in energy markets, their agency, as well as an outlook to the impact that the EU Renewables Directive may have to change national legislation and policy frameworks to create a level playing field that is essentially more fair and beneficial to renewable energy communities.

Energy in Europe

In the context of multiple crises, EU Energy and Climate policy is often identified as one of the few areas still exhibiting strong integration dynamics. However, this domain is not exempt from contestation and re-nationalization pressures. This collection seeks to understand those contradictory integration and disintegration tendencies by problematizing the notion of authority: When, why, and by whom

is EU authority in Energy and Climate policy conferred and contested? What strategies are used to manage authority conflicts and to what effect? These questions are examined in some of the knottiest aspects of EU energy and climate policy, for example, the adoption of the landmark Governance of the Energy Union Regulation, the long-drawn-out attempts to complete the EU's internal energy market, the struggle to achieve ambitious EU targets in renewable energy and energy efficiency beyond 2020, the blurring of economic and security instruments in external energy policy, or the heated discussions over the Nord Stream 2 gas pipeline. The chapters in this book were originally published as a special issue of the Journal of European Integration.

Energy in Europe

This book examines energy transition issues within the Central and Eastern European (CEE) region. The European Union is aiming for an almost complete decarbonization of its energy sector by 2050. However, the path towards a carbon-free economy is full of challenges that must be solved by individual EU members. Across 18 chapters, leading researchers explore challenges related to energy transition and analyse individual EU members from Central and Eastern Europe, as well as the region as a whole. To further explore this complex issue, the volume also includes several countries from South East Europe in its analysis. As perspective members, these countries will be important contributors to the EU's mid- and long-term climate and energy goals. The focus on a variety of issues connected to energy transition and systematic analyses of the different CEE countries make it an ideal reference for anyone with a general interest in the region or European energy transition. It will also be a useful resource for students looking for an accessible overview of the field.

Renewable Energy Communities and the Low Carbon Energy Transition in Europe

Originally published in 1986. Energy economics emerged in the 1970s as one of the most controversial and critical aspects of European economic and political development. This book provides a fully comprehensive but easily accessible guide to the key issues of energy policy, placing them in a European context. As well as discussing oil price movements and their effects on European prosperity, it assesses the role of energy conservation and pricing policies. The chapters discuss the economic, political and social impact of nuclear power programmes, North Sea oil and gas discoveries, Soviet gas imports, and coal field closures, and go on to forecast possible future developments. This is for all those concerned with European and energy studies, especially political scientists, geographers, economists, and environmental and resource specialists.

Renegotiating Authority in EU Energy and Climate Policy

This edited collection details and analyses the dramatic changes that the international political economy of energy has undergone in the past decade. This change began with the increasing assertiveness of Russia when the oil price rose above the \$100 mark in 2008. This, combined with the rise of shale oil and gas, made the USA all but self-sufficient in terms of fossil fuels. The collapse of the oil price in 2014-15, Saudi Arabia's new strategy of defending its market share and the increasingly tense and controversial relationship between the West and Russia all worked to further strengthen the geopolitical dimension of energy in Europe. The global result is a world in which geopolitics play a bigger part than ever before; the central question the authors of this volume grapple with is how the EU – and European small states – can deal with this. Chapter 4 of this book is available open access under a CC BY 4.0 license at link.springer.com

Special Issue: EU Climate and Energy Governance in Times of Crisis

The book adopts an innovative analytical approach to agenda setting by not only presenting successful cases in which energy issues were addressed by means of public policy, but by also analyzing failed attempts to make issues part of the European policy agenda. Another outstanding feature of the book is its use of the latest empirical data on a broad range of energy issues. When are energy issues likely to find their way to the agenda of European policymakers? This is the key research question guiding this collection of empirical studies, which will shed light on both successful and unsuccessful attempts to include energy issues in the European agenda. The multi-level political system of the European Union represents a particularly fruitful setting for addressing this question due to the multiple institutional access points it provides for different groups of actors. The book has three key benefits. First, it provides a theory-informed analysis of agenda setting processes in general and in the European Union in particular. Second, it presents an overview of the most important and emerging dimensions

on European energy policy, and third, it helps to develop a research agenda for future research in the field.

European Electricity Liberalisation

This book provides a comprehensive exploration of some of the most critical issues regarding the EU's Energy Union policy. Applied European energy policies face a number of challenges ranging from the geopolitics of energy and energy regulation, to climate change, advancing renewable and gas technologies, and consumer empowerment structures. This book takes a multi-dimensional look into some of these vital issues regarding the European energy sector with a special focus on the effects the Energy Union policy has in two sensitive regional systems, Southeastern Europe and the Eastern Mediterranean. Energy, being by definition a multi-disciplinary field, presents a challenge for readers of any specific disciplinary background that need to grasp an overall understanding of the various aspects of this exciting sector. This book's objective is to offer the opportunity for readers to get a quality, hands-on overview of the Energy Union by the professionals and academics that interact with it on a daily basis.

Annual Energy Review. 1996

This third volume of EU Energy Law and Policy Issues presents an overview of some of the most recent developments taking place in the EU energy sector at a time when the Third Energy Package is likely to be, or has been, implemented in the EU Member States. In this respect, the reader will find a number of contributions which offer detailed and critical views on some of the main issues tackled by the Third Energy Package. Aside from this, the relationship between sector-specific regulation and the rules of general competition law is examined in the second section of the book. This section also contains particular contributions on access regimes in gas and electricity markets, as well as an innovating analysis on the methods for allocating allowances under the EU emissions trading scheme and the interaction of such methods with EU State aid rules. Just like the previous volumes of the book, the third section offers a deep insight into the external aspects of EU energy policy. Accordingly, the role of the Lisbon Treaty in promoting EU energy policy in the international arena is scrutinized, in addition to the most recent evolutions on the topical issue of the Energy Charter Treaty. This section is completed with a daring contribution about the need to adopt a comprehensive theory of legal harmonization between the EU and third partners, which is presented using the specific case of the EU-Russia Energy Dialogue. Some fundamental issues regarding the environmental aspects of EU energy policy undergo an in-depth study in the final section of the book. Not only is the legal regime of energy efficiency in energy-related products examined, but also the issue of carbon constraining policies under WTO law. Finally, the electricity industry's viewpoint on the 2020 targets rounds off this third volume with judicious comments. (Series: ELRF Collection - Vol. 3)

From Economic to Energy Transition

Recent upheaval in the global energy system – dramatic increases in demand led largely by developing countries, significant decreases in supply as a result of local or regional conflicts, and the growing nexus between the burning of hydrocarbons and climate change – has unsettled long-held notions of energy security. For many years, transatlantic cooperation helped undergird the system's stability, but Europe and North America have drifted apart in several key ways, potentially undermining the search for energy sufficiency, surety, and sustainability. Will the transatlantic partners continue on separate paths in the face of dramatic change in the global energy system, or does the breadth and depth of the challenges they confront compel them to work more closely together? In this edited volume, experts from across Europe and North America – including advisors to the executive and legislative branches of both the EU and the United States, to senior military commanders, and to major international organizations and companies – examine the most salient facets of the transatlantic energy relationship and discern whether that relationship is characterized by growing convergence or divergence. This book was based on a special issue of the Journal of Transatlantic Studies.

Energy in Europe

EU-Russian energy dialogue represents a policy issue that forces us to take a serious look at several crucial questions related to the present and future of Europe such as: how can the EU area ensure its future energy security when it is running out of its own energy resources and at the same time incorporating new members who are also dependent on energy imports? This book not only outlines

the overall characteristics of the energy dialogue, but also illustrates the involved policy implementation challenges by paying special attention to the regional context of northern Europe. The study contributes to diverse fields such as international relations and political science, European studies, studies on energy politics, international political economy, post-Soviet politics, and literature on regionalization and regionalisms, with a special reference to northern Europe.

Energy in Europe

Europe's Energy Transition: Insights for Policy Making looks at the availability and cost of accessing energy and how it significantly affects economic growth and competitiveness in global markets. The results in this book, from a European Commission (EC) financed project by INSIGHT_E, provide an overview of the most recent analyses, focusing on energy markets and their implications for society. Designed to inform European policymaking, elements of this book will be integrated into upcoming EC policies, giving readers invaluable insights into the cost and availability of energy, the effect of price increases affecting vulnerable consumer groups, and current topics of interest to the EC and ongoing energy debate. INSIGHT_E provides decision-makers with unbiased policy advice and insights on the latest developments, including an assessment of their potential impact. Presents answers to strategic questions posed by the European Commission Coherently assesses the energy transition, from policies to energy supply, markets, system requirements, and consumer needs Informed the EC "Clean Energy for All Europeans" package from end of 2016, e.g., regarding aspects of energy poverty Endorsed by thought leaders from within and outside of Europe, including utilities, energy agencies, research institutes, journal editors, think tanks, and the European Commission

Energy in Europe a View to the Future Special Issue

Examining the current status, potential and trends in renewable energy sources, this book focuses on the technology, costs, industry characteristics and market development issues associated with each form of renewable energy.

Compendium of Legislation and Other Instruments Relating to Energy

... this volume comes across as one of the most profound sources on the specifics of European electricity market restructuring. Competition and Regulation in Network Industries The SESSA study on the Internal Energy Market was an important and influential contribution towards the Commission's proposal for a third package of proposals, intending to bring more effective competition and better security of supply to Europe's energy markets. This volume, based on the results of the study is an important and welcome contribution to the ongoing debate on these proposals. Andris Piebalgs, Commissioner for Energy at the European Commission The chapters in this book are written by the leading European scholars who have studied the structure, behavior and performance of liberalised electricity markets in many European countries as well as in other regions of the world. Both the analyses and the policy recommendations contained in this volume are well worth careful consideration by policymakers in Europe, as well as by policymakers in other countries that are seeking to adopt successful electricity sector liberalisation programs. From the foreword by Paul L. Joskow, Massachusetts Institute of Technology, US Dynamism or dissipation? Competition or national champions? Will enlargement promote or delay reform? Energy economists contemplate the challenges posed by the restless and discontent European Commission. Stephen Littlechild, University of Birmingham and Judge Institute for Management Studies, University of Cambridge, UK The challenge of European electricity reform is being met, although gradually, delays notwithstanding. This book provides precious help in spotting where the necessary further efforts should be directed. In the US mistakes and delays have occurred, no less than in Europe, but an aggressive federal regulator (absent in Europe) is working to overcome them. Electricity markets do not happen, they have to be built. Here are suggestions for a workable European market design. No ideology, just competence and wisdom from both theory and experience. Will Europe learn? Pippo Ranci, Università Cattolica del Sacro Cuore, Italy The realisation of a European internal market for energy is still a work in progress. Written by leading European scholars and discussed with major energy stakeholders, this book presents a thorough analysis of the motives and methods needed to achieve a single European energy market. The authors discuss the critical issues surrounding an internal European energy market including: market design, competition and market power, sustainable energy versus the market, regulation and harmonisation, benchmarking and indicators, modelling of competition, market prices and energy forecasts. They provide a multi-disciplinary assessment of the best way to build the market base of a future European

energy policy. Electricity Reform in Europe will be of great interest to decision makers and managers in the energy industry or business sector as they will be able to see the whole European energy policy picture beyond their own corporate interests. The book will also appeal to national and European energy administrations, regulatory bodies and policy makers providing a synthesis of all relevant policy issues.

New Political Economy of Energy in Europe

In a multipolar world with growing demand for energy, not least by Emerging Powers such as Brazil, India, China or South Africa (BICS), questions of EU external energy governance would at first hand appear to be a high-priority. Yet, reality tells a different story: the EU's geographical focus remains on adjacent countries in the European neighbourhood and on issues related to energy security. Despite being Strategic Partners and engaging in energy dialogues, it seems that the EU is lacking strategic vision and is not perceived as a major actor in energy cooperation with the BICS. Thus, political momentum for energy cooperation and joint governance of scarce resources is vanishing. Resulting from three years of international, interdisciplinary research cooperation among academics and practitioners in Europe and the BICS countries within a project funded by the Volkswagen Foundation, this volume addresses one of the greatest global challenges. Specific focus lies on the bilateral energy dialogues and Strategic Partnerships between the EU and Emerging Powers regarding bilateral, inter- and transnational energy cooperation. Furthermore, the analysis provides policy recommendations in order to tap the full potential of energy cooperation between the EU and Brazil, India, China and South Africa.

Energy Policy Making in the EU

This book is the first of its kind to paint a comprehensive picture of the manner in which the European Union (the EU) interacts with transnational policy networks (TPNs). The TPNs covered are those in a variety of fields including: conflict-prone natural resources, health, energy security, migration, human trafficking, combating of terrorism financing and climate change. The chapters are developed around six main lines of inquiry. The lines of inquiry articulated are: modalities through which the EU influences TPNs around the world, TPNs' influence of policy and decision-making within the EU, conditions under which engagement between the TPNs and the EU may be regarded as successful, the identity and location of the TPNs and finally the added value or futility of a strategy developed in Brussels to weaken or fortify interactions with the networks studied. The importance of TPNs should be approached from the angle of the heightened attention now placed on informal modes of decision making. Increasingly there is a sense that many international decisions are adopted and internalized through networks that can be efficient yet wanting in transparency. The book unveils complex debates on the inter-phase between inter-governmental / supranational entities like the EU, on the one hand, and networks, on the other. The physiognomy of this inter-phase matters not only for the EU but also for other such inter-governmental/ supranational bodies as well as networks. This book was previously published as a special issue of Contemporary Politics.

Aspects of the Energy Union

La 4e de couverture indique : "Since the introduction a quarter-century ago of market-based investments in the production of electricity and other critical services, our awareness of the underlying issues affecting the supply and consumption of energy has changed radically. No longer can Europe (or any region) rely on over-capacity of electricity generation and inexpensive primary energy fuels, or disregard the signs of potentially catastrophic climate change. The author of this timely and sharply focused book shows that, in the light of our current knowledge, ensuring new investments - and the right investments - in electricity generation constitutes an urgent energy policy challenge facing the EU over the coming decades. He accordingly makes the case for a serious reconsideration of the market facilitation and market intervention rules under electricity market legislation in the EU. In the first detailed legal analysis of the EU's internal electricity market framework for investments in electricity generation facilities from the perspective of security of supply, this book cover such legal issues as the following in precise detail : applicability of the Treaty on the Functioning of the European Union (TFEU) ; security of supply as a ground for exemption on the basis of public security ; justifications of public intervention ; the applicability of EU State aid provisions to investments in energy security ; requirements imposed by EU law on Member States for ensuring cost-efficient investments in European supply security ; facilitation of renewable energy sources and cogeneration in the environmental interest ; the Court of Justice's approach to Member State interventions ; the Court's decisions on restrictions on free

movement in the environmental interest ; Member States' right to launch tendering procedures for new generation capacity ; Member States' right to impose public service obligations in the general economic interest on certain undertakings ; and relationship between the provisions of the TFEU and those of the Euratom Treaty in relation to investments in nuclear power generation. Throughout the study, in addition to his analysis of the decisions of the Court of Justice and the Court of First Instance, the author takes into account legal literature and Union reports, preparatory works, and working papers. The book demonstrates convincingly that today's energy supply challenges must be based on a broader balancing of security, competitiveness and sustainability interests. It suggests that the internal electricity market provisions of the Electricity Directive and the Security of Electricity Supply Directive would benefit from focusing more intensely on requiring investments in technologies and primary energy sources that will help mitigate climate change and reduce European energy import dependency, and less on the need for ensuring cost-efficient investments through market-based means. Through its detailed analysis of EU law in an area of great significance to both market participants and the public sector, Investing in EU Energy Security will be welcomed by legal advisors, whether working for the EU electricity industry or public agencies responsible for implementation of internal electricity market measures, as well as by academics in this hugely important field of current research."

EU Energy Law and Policy Issues

This volume addresses renewable energy communities, and in particular renewable energy cooperatives (REScoops), in the context of the revised EU Renewables Directive. It provides a comprehensive account of the history and development of the renewable energy community movement in over six different countries of continental Europe. It addresses their visions, strategy, organisation, agency, and more particularly the challenges they encounter. This is of particular importance to gain more understanding into how renewable energy communities fare in domestic energy markets where they are confronted with regime institutions, structures and incumbents' agency that tend to favour maintaining of the status quo while blocking attempts to empower and institutionalise renewable energy communities as market entrants having a disruptive, radical green and localist agenda. This volume will be an invaluable reference for academics and practitioners with an interest in social innovation in sustainable transitions, the role of community energy in energy markets, their agency, as well as an outlook to the impact that the EU Renewables Directive may have to change national legislation and policy frameworks to create a level playing field that is essentially more fair and beneficial to renewable energy communities. Frans H.J.M. Coenen is Associate Professor within the Faculty of Behavioural, Management and Social sciences of the University of Twente. Over the years, his research particular focused on local and regional sustainable development and capacity development for sustainable development. He takes a special interest in participation in sustainable development in relation to the quality of environmental decision-making. He is specialised in environmental policy planning and in public policy evaluation. At this moment, he is involved in several research projects in the field of renewable energy and the local energy transition. Thomas Hoppe holds a Master's degree in Public Administration specializing in Public Policy and Environmental Policy, and a PhD in Public Policy at the University of Twente. He is currently Associate Professor within the Faculty of Technology, Policy and Management at Delft University of Technology. His research line is about governance of energy transition in cities and regions, focusing on low carbon cities, policy and social innovation. This more specifically includes community energy and co-creation. Dr. Hoppe has been involved in multiple European Union research projects and has co-edited eight special issues in academic journals. He is chairman of the Platform of Social Innovation in the Energy Transition, and is in the Editorial Board of Energy, Sustainability and Society.

Transatlantic Energy Relations

This publication looks at the pattern of energy production and consumption both in Europe and the world. As well as providing statistical data it also analyses the information and highlights the key trends. The sections examine : the world; the European Union; European Union enlargement; other OECD countries; central and eastern Europe; CIS; Africa; Middle East; Asia; Latin America.

1991

The present book maximizes reader insights into the current and future roles to be played by different types of renewable energy sources and nuclear energy for the purpose of electricity generation in the European region as a whole and in a select group of European countries specifically. This book includes

detailed analysis of the different types of renewable energy sources available in different European countries; the pros and cons of the use of the different types of renewables and nuclear energy for electricity generation; which energy options are available in the different European countries to expand their energy sector in the coming years; the impact on the climate and the environment; levels of production and consumption and the level of electricity generated by these energy sources, amongst others. Designed to inform government officials, economists, scientists and the private and public power industry of the key issues surrounding the future role of different renewable energy sources and nuclear energy in the production of electricity within the European region, this book will also describe in detail the evolution of the electrical energy sector in the chosen European region and the problems that several countries are now experiencing in the face of increasing demand for electricity.

The EU-Russian Energy Dialogue

This CERRE report analyses the possible evolution of the European electricity market under different levels of variable renewable energy penetration towards 2025. The EU's multiple efforts for decarbonisation with its long term strategy for a climate neutral economy by 2050, and the heated negotiations between the European Parliament, Council and Commission for a new market design highlight the many issues Europe is facing for defining the right electricity market. In this context, the authors of this new study have modelled and analysed the possible evolution of the electricity market under different variable renewable energy (VRE) penetration scenarios. They have looked at the necessary adaptation that these imply to the electricity market. Overall, the report highlights the challenges for the current market design in moving towards self-financing VRE. It also observes a likely continuation of the difficulties faced by generators in financing their investments on the basis of wholesale power prices alone, with only some partial mitigation should commodity prices rise, as expected by the IEA, or with substantial improvements in interconnection across Europe. "If the current market design is to deliver a decarbonised European electricity system, lower renewables costs and higher carbon prices will play a critical role," said CERRE Academic Director Michael Pollitt and Chi Kong Chyong, the authors of the report. "In the absence of these favourable conditions for VRE, long term subsidy mechanisms in the form of auctions would need to continue in order to meet European renewable electricity targets." The results of the modelling show the need for many of the existing fossil fuel power plants to remain on the system to support intermittent renewable electricity, hence the importance of the development of ancillary service markets. However, these markets are challenging to design, and the investments they support will likely have higher costs of capital given the volatile and difficult to predict income streams that they give rise to. The report's results also raise two central questions for the electricity market design: - Will a radical market redesign be necessary by 2025? Given that EU member states have accepted to live with largely subsidised new electricity generation from 2005 to 2018, this seems unlikely. - Will market designs converge across Europe? The issue is whether different local circumstances will cause continuing or increasing divergence in market arrangements. Ireland, Spain, the UK, Greece and Germany could have significantly different market configurations by 2025 given their different ability to absorb increased amounts of VRE.

Europe's Energy Transition

The European Parliament in the Contested Union provides a systematic assessment of the real influence of the European Parliament (EP) in policy-making. Ten years after the coming into force of the Treaty of Lisbon, which significantly empowered Europe's only directly elected institution, the contributions collected in this volume analyse whether, and under what conditions, the EP has been able to use its new powers and shape decisions. Going beyond formal or normative descriptions of the EP's powers, this book provides an up-to-date and timely empirical assessment of the role of the EP in the European Union, focusing on key cases such as the reforms of the EU's economic governance and asylum policy, the Brexit negotiations and the budget. The book challenges and qualifies the conventional view that the EP has become more influential after Lisbon. It shows that the influence of the EP is conditional on the salience of the negotiated policy for the Member States. When EU legislation touches upon 'core state powers', as well as when national financial resources are at stake, the role of the EP – notwithstanding its formal powers – is more constrained and its influence more limited. This book provides fresh light on the impact of the EP and its role in a more contested and politicised European Union. Bringing together an international team of top scholars in the field and analysing a wealth of new evidence, The European Parliament in the Contested Union challenges conventional explanations on the role of the EP, tracking down empirically its impact on key policies and processes. It will be of great interest to scholars of the European Union, European politics and

policy-making. The chapters were originally published as a special issue of the Journal of European Integration.

Renewable Energy in Europe

Although the energy sector is of key socio-economic importance, energy production and consumption also has considerable environment effects, including contributing to climate change, damaging natural ecosystems, and causing harm to human health. This report assesses how effectively environmental concerns are being integrated with EU energy policies, based on a range of indicators which examine performance in the EU as a whole and in individual member states. The indicators examine trends over the period 1990-99 and compare these with baseline projections to 2010. The report finds that EU energy consumption is rising, mainly because of transport growth, with energy efficiency improving slowly. Renewable energies need to expand by at least double the current rate if targets for boosting their market shares by 2010 are to be reached.

Electricity Reform in Europe

Energy transitions and environmental sustainability does not occur overnight as it may take years of policy debates both from within domestic jurisdictions and from international organisations. It often requires energy saving technology innovations to drive appropriate investment decisions that can then allow energy transition to occur. There is no one global solution. Countries progress in their energy transition goals by taking small steps as demonstrated in this special issue, "Energy Transition and Environmental Sustainability". This Special Issue provides thirteen interesting papers showing examples of projects undertaken or challenges encountered in various countries, such as: Legal reforms for energy transition in Taiwan and Japan; Transition towards solar PV in South Korea; Transition to electricity driven buses in Central Europe; Vehicle transition and the development of electric car production in the United States, the European Union and Japan; Cooling solutions for buildings in Pakistan; Projects in Ecuador to replace fossil fuel use with Hydropower; The Role of Electrification in the Decarbonization of Central-Western Europe; Energy technology innovation through the application of new technologies in oil resource development; Wastewater treatment challenges in Poland; Increased climate change litigation facing Australian Energy Companies; Renewable energy solution to a Childcare facility in Tokyo; and Canadian policies to support renewable gas production from organic waste. This Special Issue provides global perspectives and uncertainties on energy transition and will appeal to all levels of readers.

Challenges of European External Energy Governance with Emerging Powers

Energy markets are already undergoing considerable transitions to accommodate new (renewable) energy forms, new (decentral) energy players, and new system requirements, e.g. flexibility and resilience. Traditional energy markets for fossil fuels are therefore under pressure, while not-yet-mature (renewable) energy markets are emerging. As a consequence, investments in large-scale and capital intensive (traditional) energy production projects are surrounded by high uncertainty, and are difficult to hedge by private entities. Traditional energy production companies are transforming into energy service suppliers and companies aggregating numerous potential market players are emerging, while regulation and system management are playing an increasing role. To address these increasing uncertainties and complexities, economic analysis, forecasting, modeling and investment assessment require fresh approaches and views. Novel research is thus required to simulate multiple actor interplays and idiosyncratic behavior. The required approaches cannot deal only with energy supply, but need to include active demand and cover systemic aspects. Energy market transitions challenge policy-making. Market coordination failure, the removal of barriers hindering restructuring and the combination of market signals with command-and-control policy measures are some of the new aims of policies. The aim of this Special Issue is to collect research papers that address the above issues using novel methods from any adequate perspective, including economic analysis, modeling of systems, behavioral forecasting, and policy assessment. The issue will include, but is not be limited to: Local control schemes and algorithms for distributed generation systems Centralized and decentralized sustainable energy management strategies Communication architectures, protocols and properties of practical applications Topologies of distributed generation systems improving flexibility, efficiency and power quality Practical issues in the control design and implementation of distributed generation systems Energy transition studies for optimized pathway options aiming for high levels of sustainability

The European Union's Engagement with Transnational Policy Networks

The Future of European Union Environmental Politics and Policy investigates the trajectory of European Union (EU) environmental policy and reflects on how this hugely vital policy area of the EU has evolved over the decades. Gathering together a selection of the leading scholars working on European environmental policy, the volume assesses the extent to which change has occurred in important dimensions of EU environmental policy research. These dimensions include the EU's values and approaches; the provision of leadership; the possibilities of Brexit and the dismantling of policies; policy instruments and climate change; policy implementation and enforcement; and policy evaluation. The contributors situate their research in the context of current developments and conditions, including the global economic challenges and the rise of political challenges to both European governance and integration. Each chapter reviews the EU environmental policy over the long term and assesses the implications of current developments for the future health of European environmental policy, European integration and the environment itself. The Future of European Union Environmental Politics and Policy will be of great interest to scholars of environmental politics, environmental governance and EU policy. The chapters were originally published as a special issue of Environmental Politics.

Investing in EU Energy Security

Collective Securitisation and Security Governance in the European Union presents an integrated theory of collective securitisation – a theoretical foundation for explaining how the process of collective securitisation sustains and makes effective an identifiable system of regional security governance. The volume demonstrates the empirical utility of collective securitisation in the EU security space through a set of structured case studies focusing on the collective securitisation of terrorism, cyberspace, migration, energy, health and climate change. The contributions to this collection address three questions: Under what conditions does collective securitisation occur? How does collective securitisation affect the scope and domains of EU security governance? And how does collective securitisation explain the emergence of the EU system of security governance? This volume breaks new ground in the field of EU security studies and provides a theoretical orientation that contributes to our understanding of how and why the EU has developed as a security actor in the 21st century. Developing and testing the theory of collective securitisation with reference to some of the most pressing contemporary security issues, Collective Securitisation and Security Governance in the European Union will be of great interest to scholars of the European Union and Security Studies. The chapters were originally published as a special issue of West European Politics.

Renewable Energy Communities and the Low Carbon Energy Transition in Europe

This volume investigates nuclear energy policies in Western Europe over the entire post-war period, but with special attention to the two most recent decades. The comparative analytical perspective draws on the interplay between voters' attitudes, challenging movements, party competition, and coalition formation. Spanning more than 60 years and 16 countries, the researchers examine the underlying causal processes leading to the observed varieties of Western European nuclear energy policies. Based on a mixed methods approach using both structured case studies as well as quantitative analyses, the study shows that the nature of party competition under given institutional contexts is a key-driver for, as a rule, tactically motivated governmental policy changes and stability, respectively. Part I introduces the practical and theoretical relevance of the topic. It outlines the reasoning of the major scientific contributions with regard to nuclear energy policies, and offers a theoretical alternative to the previous literatures that has been predominantly movements-oriented. Additionally, it provides core economic and political indicators of the changing role of nuclear energy in the countries. Part II consists of seven in-depth case studies where the outlined theoretical perspective is applied. Part III consists of a general summary, short narratives of the countries not covered in case studies, qualitative comparison and an assessment of the factors for policy change from multivariate analysis.

2000 - Annual Energy Review

Low-Carbon Energy Security from a European Perspective draws on the European Commission's funded project MILESECURE-2050. It considers low-carbon energy security and energy geopolitics in Europe, with a focus on four thematic clusters: challenging the energy security paradigm; climate change and energy security objectives (the components of a secure and low-carbon energy system); energy security in a geopolitical perspective, as it relates to economics, resource competition, and availability; and the influence of large scale renewable energy projects on energy security and shifting

geopolitical alliances. An overarching narrative is that optimizing the energy system simultaneously across different objectives may be impossible, i.e., lowest cost, least environmental impact, minimal downtime, regional supply. This book explores these charged topics through insights from a series of novel, new energy project case studies, and demonstrates the need for difficult political conversations within Europe and beyond by posing fundamental yet new questions about the energy security paradigm. Offers a unique perspective on low-carbon energy security by considering the assumptions behind current energy security needs Suggests the benefit of envisioning energy security through out-of-the-box scenario development with respect to the energy system Includes energy in an international scenario with case studies from Africa, Russia, Ukraine, Morocco, China, South America, and Europe Draws on the European Commission's funded project MILESECURE-2050

Electrical Energy Generation in Europe

Europe's electricity market design: 2030 and beyond