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*European Energy and Environmental Law Review* The European Energy and Environmental Law Review invites the submission of unsolicited articles from scholars, practitioners and students of energy and environmental law. The Editors are willing to consider proposals for articles but is unable to make any commitment as to publication prior to submission of the final script. Book reviews are also welcome. Letters in response to articles can only be considered for publication if they do not exceed a maximum of 500 words.

*Aims and Scope* European Energy and Environmental Law Review is a bimonthly journal which presents comprehensive coverage of the latest developments in energy and environmental law throughout Europe. In addition to this, European Energy and Environmental Law Review contains concise, accessible articles which explore and analyse significant issues and developments in energy and environmental law and practice throughout Europe.

European Energy and Environmental Law Review enables the reader to keep abreast of significant and topical aspects of energy and environmental law, including the legal issues relating to renewables, energy security, energy efficiency, energy competition law, energy liberalisation process, electricity and gas markets, climate change; sustainable energy, land, air, fresh water, oceans, noise, waste management, dangerous substances, and nature conservation. Its succinct, practical style makes it ideal for the busy professional, while the authority, scope, and topicality of its coverage make it an invaluable research tool.

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## Book Review

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### Book Review

**Environmental and Energy Law**, edited by *Karen E. Makuch* and *Ricardo Pereira*, published by Wiley-Blackwell, 2012, 676pp., £80.95, hardback

Targeting an audience with a volume in a particular field of law is rarely an issue. The experts in the field, as well as law students, tend to be the main readers that the authors can think of. The edition of a book consisting of diverse academic contributions ends up with a higher or lesser sense of coherence, most of the times ensured by a generic and all-encompassing title. But when legal authors envisage a broader audience, namely by aiming at readers that have hardly ever been initiated into the intrinsic complexity of legal studies, edition-based work becomes the essential, if not the main challenge. And this is what at first caught our eye in reading the volume entitled *Environmental and Energy Law* edited by Karen E. Makuch and Ricardo Pereira.

The particular field of law that this volume deals with is prone to development at an increasing pace. Especially in Europe, with the European Union taking the lead in pushing for ambitious standards on climate change – the existing principles, laws and regulations on both environmental protection and energy efficiency are, even to a lawyer, a dense and sometimes impenetrable web of documents with debatable binding effects and unknown social and economic consequence. Engaging with such discussions without losing sight of more general principles of law normally requires, even to the experienced legal scholars, to have on one side of the table the latest article and on the other the leading volumes on principles of international law. By delivering an extensive volume with a convincing structure and an intelligent system of cross-referencing throughout every one of its parts, *Environmental and Energy Law* manages to remain in a comfortable middle-ground between the legal abstraction of general principles and the details of regulations on technical standards. And this middle ground is precisely what allows the volume to be an interesting option for engineers, economists and even entrepreneurs apart from being a comprehensive source of information for legal scholars and an enjoyable textbook for students (of law or broader environmental studies alike) with exercises and case studies.

To achieve this balance, the editors had to do much more than compiling contributions and being responsible for co-authoring several of the chapters themselves. The book is divided in nine parts, of varying lengths, and each of the twenty-six chapters can be read as an independent article. However, the insertion of a grey box at the start of every chapter indicating its purported objective, combined with the existence, at the end of each part, of a vast list of questions and activities convincingly offers the impression that the

whole book is a unit. And this feature is especially useful for lecturers keen to motivate the students of today.

Content-wise, the volume starts with an introduction that guides the reader through the general principles of law applicable to environmental and energy law. Written by the editors themselves, the chapter plainly presents the key terminology with a language easily accessible to the non-lawyer without becoming overly simplistic. Because some of the chapters of the volume consist of a contribution by scientists, some emphasis is given to what the editors call “the interplay between science and law- and policy-making”. This debate sets the tone for the rest of the volume as it defends the argument that law and science and engineering mutually push at each other’s boundaries, resulting in positive externalities.

The volume then turns towards innovation, sustainability and the law. Panos Markouris offers an introduction to the legal concept of “best available techniques”, a frequent reference in international legal documents, alerting us to the potential and the risks of uncertainty in such a notion. Ricardo Pereira then introduces us to the responsibility of corporations both in the practice of dealing with environmental regulation and in theory, breaking some myths as to the impact of such regulations on competitiveness. And this will not be the last reference to corporations in this book. We are then guided to the ever-increasing debate on technology transfer. By focusing on climate change negotiations, Helena Wright and Ricardo Pereira offer an overview on the legal framework of clean technology transfer and its financial entanglements, especially directed at engineering professionals. Continuing on climate change debates, but now focusing on climate change adaptation technologies, Katrin Glatzel, Helena Wright and Zen Makuch discuss recent EU policies so as to make the case for adaptation and financial support for access to adaptation technology.

The volume then introduces a part on sustainable energy and climate change law. Matthew Leach and Sandip Deshmukh present an overview of EU and UK energy regulation, highlighting the history, debating the underlying policy goals (referred to as “sourcing secure and affordable energy with minimal environmental impact”) and commenting on differences in implementation. Ricardo Pereira and Charlotte Jourdain then introduce us to the international legal framework for tackling climate change as developed under the auspices of the United Nations, discussing implementation at the EU level with a focus on the EU Emissions Trading Scheme Directive. After, and delving into the national level, Karen E. Makuch, Zen Makuch, Ricardo Pereira and Charlotte Jourdain offer an evaluation of UK climate change law and policy, praising its democratic basis but criticizing its sometimes confusing profusion that leads to some incoherence and overlap.

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## Book Review

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Part four of this volume is about exploration and exploitation of energy resources. Ricardo Pereira opens this part with a general overview of the applicable international law and, by adopting a comparative law perspective, he reaches the conclusion that cooperation will be the trend in the future, although private law instruments, such as production sharing contracts, appear to be more widely used among actors today. John Peterson follows with a commonly underestimated issue: occupational health and safety in the oil and gas industry. By focusing exclusively on UK regulation he concludes that relevant applicable rules may well, today, lie outside the realm of environmental law. Then, Isabelle Fellrath and Frank Spoorenberg introduce us to the contractual practices in the energy sector by explaining and giving sense to the *force majeure* and hardship clauses. We learn that energy transactions are subject to a considerable degree of risk, namely of a political nature, and the authors of this chapter conclude as to the usefulness of these remedies for private actors.

The fifth part of the volume is on clean technologies and the clean development mechanism. It starts with an informative, non-legal chapter on carbon capture and storage technologies by Tim Cockerel, necessary for us to understand where the future regulation of this sector may lie. The technicality of the subject becomes accessible with the help of numerous diagrams and, overall, the author convincingly explains the challenges posed to regulators by the deployment of this technology in the market. The applicable law to this technology is then assessed by Zen A. Makuch, Slavina Z. Georgieva and Behdeen Oraee-Mirzamani. By analyzing the liability regime in multiple jurisdictions they bring to our attention the delicate balance between precaution and innovation that regulation must establish. Kenneth Aideloeje, Chuan Tze-Teo, Zen Makuch and Ricardo Pereira then transport us to the world of carbon market transactions. In this chapter on the clean development mechanism, the authors provide both an introduction to the applicable framework and contractual clauses that might be of more interest to actors such as engineers and energy lawyers.

The reader is then invited to a part that encompasses waste, water, air quality management and pollution control. Arturo Castillo-Castillo delivers here a chapter on solid waste management and regulation in which he aims to examine the effect of the existing regulation and makes a case for concerted regulation as a means to achieve objectives such as the diminution of external costs or the encouragement of participation of the community. The topic of the regulatory framework on water management is brought to us by Dieudonné-Guy Ohandja and Alexandra Collins. In this chapter the concept of integrated water management is discussed and illustrated with the technical standards and guidelines applicable in the EU and, again, the balance between

sustainability and socioeconomic welfare emerges as a challenge. Iain MacLean then writes about the industrial emissions directive and the advances it brings about at the European level. His focus is on the integrated pollution and control mechanisms that this document brings about, offering a critical analysis on every aspect of it. Clearly directed at engineers and technical scientists, although very useful for lawyers as well, Zen Makuch and Marilena Karyampa's chapter on the law and practice of air quality management that follows demonstrates the legal requirements a firm would need to comply with in order to avoid statutory breaches in this matter within the EU, focusing on UK implementation as a case example and providing very important suggestions for the industry. Contaminated land has also been an object of regulation in the past few years because of the threat such land poses to the environment and humans. Owen Lewis delivers one chapter on this topic and explores multiple dimensions of this problem through restricting his analysis to UK legislation and so provides the reader with a sense of certainty on the applicable laws, and a clear example of how to manage contaminated land in a particular regime.

The seventh part of this volume is shorter and delves into the regulation of chemicals and laboratory safety. It starts with an overview on the regulation of Nanotechnologies, where Sekai Ngarize, Karen E. Makuch and Ricardo Pereira explore this very recent issue. In very clear and concise terms, it introduces the lawyer to the complexity of nanoscale particles and their potential environmental impact. The authors also alert us to the need for proper regulation both at the international and the national levels, something they originally call "nano-regulation". Finally, and although standards are a frequent reference in the legal jargon, namely regarding the environment, little attention is given to the laws applicable to data collection and standard formulation when we examine other texts. So here, Elizabeth Prichard and Karen E. Makuch fill the void by giving an overview on the procedures followed and on the uniformity of measurement standards that are attempted by EU law on regulating the environment, in the last chapter of this part.

Part eight appears, then, as a miscellany of very interesting debates not held before but highly relevant to ensure the completeness of this volume: it is on governance, impact assessment, compliance and enforcement in environmental law. This part starts with a piece by Martin Birt and Steven Smith on planning, where the authors raise awareness as to how strategic environmental assessments and environmental impact assessments influence the implementation and the design of a project. But, because having access to information is key for all actors involved, Karen E. Makuch further complements previous chapters by presenting and discussing the Aarhus Convention and the legal norms that followed it on regulating access to

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## Book Review

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information, public participation in environmental decision-making and access to justice in environmental matters. On a similar problem, but now focusing on the side of private actors, Nikzad Oraee-Mirzamani and Zen Makuch debate the duty to disclose environmentally relevant information to corporate shareholders. In an age where private actors realize a large part of investments, this approach can reveal itself to be particularly useful to investors and economic analysts. Finally, Ricardo Pereira closes the part with a chapter on compliance and enforcement at all levels – international, European and national. He manages to illustrate well that despite all the challenges the reader found in this volume associated with law drafting and regime compatibility, the fundamental step for sustainable change can be on how states actually make this happen. Accordingly, the author draws an interesting argument for more criminalization of environmental offences, even if for mere dissuasive purposes.

The volume ends with a single chapter part entitled “case studies on environmental law implementation” where Karen E. Makuch briefly goes through her experience with actual students and applies the multiple teachings of the volume to three cases, one on biomass heating for community housing, a second one on cellulose acetate production and third one on stainless steel melting and continuous casting, sometimes reaching unexpected conclusions that force us to revisit some of the previous chapters back again.

All in all, some minor negative critiques could be drawn to this volume. Its reliance on EU law and, at the national level, mostly on the UK’s experience (a reference found on Iran constitutional law in chapter 24 was quite refreshing, and the authors honestly framed it as “and now for something completely different”), reveals the experience of the authors involved in the volume, making it more useful for British students than for students from other parts of the world. Possible developments of this book (a second edition – or, why not, a second volume?) could welcome experiences from other jurisdictions, namely

at the implementation level, not only within the EU but also in other organizations that impose some environmental standards to its members. A second negative note relates to the fact that some part titles end up being misleading; as the authors envisaged giving a sense of coherence to the parts, sometimes chapters hardly combine well together or we end up with the impression they could fit better in another part of the volume. Nonetheless, on the positive side, much can be said. The presence of the editors’ words throughout the volume, authoring or co-authoring many chapters, ensures some degree of coherence to a volume that could easily have drifted, as we said in the beginning, to yet just another collection of isolated articles. This then allows the multiple contributions not to drift apart from the main goal of the text and have the same broad-audience-scope always in mind, keeping the tone of the language from the first to the last page, with very minor exceptions. This option also ensures that everything gets sufficient attention, something that makes the volume very complete, indeed, and useful as a whole and not just for its isolated parts. The introductory intention, that in so many volumes gets forgotten after the introduction itself, that stressed that lawyers would be invited to learn about engineering and scientific developments, preparing themselves for regulatory challenges of the future, is well kept: I could say that as an international lawyer, this volume indeed helped me to have a more accurate glimpse as to the links between environmental law and engineering and science. Indeed, after reaching the last page of this volume, I can affirm that Karen E. Makuch and Ricardo Pereira’s ‘Environmental and Energy Law’ manages to demonstrate, with immediate and actual examples, that policy and regulation can act as major innovation-driving forces, a conclusion that is so important for engineers and investors as it is for all lawyers and students of law.

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