HANDBOOK OF SHALE GAS LAW AND POLICY

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Economics, Access, Law and Regulation in Key Jurisdictions

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PREFACE

The impetus for this edited volume arose out of the information, and often misinformation, regarding shale gas development that has been reported in the media, primarily in the UK, but also in other jurisdictions, including Europe and Australia. The first shale gas exploratory well in the UK to undergo hydraulic fracturing was located at Preese Hall, Lancashire and occurred in 2011. During the hydraulic fracturing operation, seismic activity occurred, and the hydraulic fracture was halted. Soon after a UK government moratorium was implemented, which has since been lifted after scientific and regulatory reviews were undertaken, recommendations made, and those recommendations implemented. Yet the public debate, demonstrations, and division over shale gas extraction, and 'fracking' in particular (as hydraulic fracturing is colloquially known as), remains. What also remains a constant in the media is the impression that shale gas extraction is synonymous with 'fracking', and that it occurs all the time. The role that 'fracking' plays in shale gas extraction is often poorly understood by the public, with references to the US experience in shale gas extraction common. Another common public misconception surrounding shale gas extraction is that of the regulatory framework. Again, the experiences of regulation in the USA are commonly cited, often with mistaken reference to 'poor' or 'bad' laws. It is against this backdrop that the idea of this handbook was born, with it overarching aim to attempt to dispel the myths and misinformation surrounding shale gas extraction through a comprehensive consideration of shale gas law and policy.

This work assembles some of the finest shale gas scholars in the world to provide an academic assessment of the governance of shale gas extraction. Aimed at academics, policy-makers, scholars, NGOs, decision-makers and community groups, this handbook brings together legal academics, geologists, engineers, economists and political scientists to provide a comprehensive overview of the governance framework for shale gas. In doing so there is a focus on three broad jurisdictions: the US, which has experienced shale gas extraction on a massive scale; Europe, and in particular the UK, which is poised on the edge of the shale gas cliff and is trying to decide whether that cliff poses a great threat or a great boom; and Australia, which is the only jurisdiction outside of the US to commercialise unconventional petroleum (in this instance coal seam gas).

In order to provide the reader with a comprehensive study of shale gas law and policy, this book has been divided into five parts.

Utilising the experience of legal academics, geologists and engineers, Part I provides the reader with a background of shale gas development and an overview of the technical aspects of shale gas activities. It covers the geology and geophysics of shale gas activities, well integrity and well response, and risk and response in shale gas operations.

Part II, written by economists and political scientists, focuses on the economic and security aspects of shale gas. It considers the USA experience and explains why the USA experience is not replicable in other jurisdictions. This part also considers the role of shale gas in global markets. The issue of energy security is also addressed in this part, particularly within the European context.

Petroleum company access to shale gas resources is the focus of Part III. Drawing on the expertise of legal academics on three continents, this part examines access to shale gas resources, and associated property law issues, in North America, Australia, and the UK.

Part IV is devoted to the regulation of shale gas. The first two chapters in this part examine broad concepts of regulation: principles of environmental regulation, and global and EU environmental law. These chapters are followed by a consideration of the EU framework and EU issues related to shale gas regulation. The final three chapters in this part are devoted to the law and regulation of shale gas activities in UK, North America, and Australia.

Finally, Part V considers the future aspects of shale gas. It examines these future issues form a legal and regulatory viewpoint, as well as considering the UK in details, focussing on the domestic regulatory challenges.

This handbook has assembled a stellar group of academic contributors from four continents. I wish to thank the authors for their contribution. It has been an absolute pleasure to work with academics from the sciences and social sciences as well as law, located in such far-flung countries as Australia, Russia, the USA and Canada. It has truly been a pleasure to work with each and every academic, and I look forward to working together in the future.

In undertaking this project, I have received much support from colleagues and family, and would like to thank them. I have received a tremendous amount of support from my editor Ann-Christin Maak, and would like to thank her for her unwavering support and hard work to bring this project together. I would also like to thank the University of Eastern Finland and Professor Kim Talus for their support. Finally, I would like to acknowledge the Academy of Finland for research funding from project number 276974, *Impact of shale gas in EU energy law and policy; regulatory and institutional perspective*.

Dr Tina Hunter

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