

# HANDBOOK OF SHALE GAS LAW AND POLICY

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# HANDBOOK OF SHALE GAS LAW AND POLICY

Economics, Access, Law and Regulation  
in Key Jurisdictions

*Edited by*  
Tina HUNTER



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Handbook of Shale Gas Law and Policy. 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 its 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 from 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

# CONTENTS

<i>Preface</i> .....	v
<i>List of Tables and Figures</i> .....	xiii
<i>List of Authors</i> .....	xv

## PART I.

### OVERVIEW AND INTRODUCTION TO SHALE GAS ACTIVITIES

#### **Introduction**

Tina HUNTER .....	3
1. Introduction .....	3
2. Global Shale Gas Resources .....	6
3. The Shale Gas Extraction Lifecycle .....	8
4. Conclusion .....	11

#### **Shales, Shale Gas and Hydraulic Fracturing**

Peter STYLES .....	13
1. Introduction .....	13
2. Hydrocarbon-Based Energy .....	14
3. But First, What is a Shale? .....	15
4. Shale Gas .....	18
5. Issues which Fracking Raises .....	30
6. Summary and Conclusions .....	37

#### **Hydraulic Fracturing in Shale Gas Operations: Risk and Response in Shale Gas Policy**

Hannah J. WISEMAN .....	41
1. The Risks of Unconventional Oil and Gas Development and Regulatory Responses to Risks .....	47
2. Remaining Regulatory Gaps .....	61

PART II.  
 SHALE GAS ECONOMICS AND ENERGY SECURITY

**The US Shale Gas Revolution and its Economic Impacts in the Non-US  
 Setting: A Russian Perspective**

Andrey KONOPLYANIK ..... 65

1. Shale Development and Technological Advances ..... 67
2. Why in the US and not Elsewhere? ..... 70
3. Why not in Europe? Why not in China? Why not Elsewhere? ..... 80
4. Domino Effects of the US Shale Gas Revolution ..... 84
5. Current US Problems: Financial Price to Pay for Shale Revolution ..... 97

**Shale Gas and Global Markets**

Roberto F. AGUILERA and Marian RADETZKI ..... 107

1. Introduction ..... 107
2. Definitions and Technical Characteristics ..... 108
3. US Achievements to Date ..... 111
4. Impact on US and International Energy Markets ..... 113
5. The Shale Revolution: Its General Benefits to the US Economy ..... 116
6. Anticipated Future US Prospects and their Implications ..... 117
7. Will the Revolution Spread Globally? ..... 118
8. Policy Implications of a Successfully Maturing Global Shale  
 Revolution ..... 121

**Shale Gas and Energy Security**

Slawomir RASZEWSKI ..... 123

1. Global Energy Demand ..... 124
2. Conventional Thinking in Energy Security ..... 126
3. Changing Dynamics of Energy Security: Unconventional Gas  
 and its Challengers ..... 128
4. Governance of Energy Markets ..... 131
5. Geopolitics of Energy ..... 133
6. International Oil Companies and Resource Nationalism ..... 134
7. Conclusion ..... 136



## PART III.

## ACCESS TO SHALE GAS RESOURCES

**Granting of Shale Gas Licences, Land Access and Property Rights  
in North America**

Alastair R. LUCAS, QC and Simone FRASER . . . . .	139
1. Introduction . . . . .	139
2. Permits and Licences for Shale Gas Activities . . . . .	140
3. United States Permit Requirements . . . . .	141
4. Canadian Permit Requirements . . . . .	149
5. Property Rights and Hydraulic Fracturing . . . . .	151

**Granting of Shale Gas Licences, Land Access and Property Rights  
in Australia**

Michael WEIR . . . . .	157
1. Introduction . . . . .	157
2. Common Law and Statutory Rights to Ownership of Minerals and Petroleum . . . . .	158
3. Granting of Shale Gas Titles . . . . .	159
4. Land Access for Exploration and Petroleum Production . . . . .	164
5. Conclusion . . . . .	171

**Shale Gas Licensing in the United Kingdom**

Tina HUNTER and Steven LATTA . . . . .	173
1. Introduction . . . . .	173
2. Common Law and Statutory Rights to Ownership of Minerals and Petroleum . . . . .	174
3. Granting of Access to Shale Gas . . . . .	175
4. Land Access and Community Development . . . . .	183
5. Conclusion . . . . .	186

## PART IV.

## SHALE GAS LAW AND REGULATION

**Regulating Hydraulic Fracturing**

David CAMPIN . . . . .	189
1. Introduction . . . . .	189
2. Petroleum Resource Ownership . . . . .	192

3. Environmental Regulatory Focus with Hydraulic Fracturing. . . . .	193
4. Summary. . . . .	210

**Regulating Well Integrity**

Andrew GARNETT. . . . .	213
-------------------------	-----

1. Introduction . . . . .	213
2. What is Well Integrity? . . . . .	218
3. Geology and the Environment in which Wells Operate . . . . .	225
4. Constructing or Installing the Oil and Gas Well: Basics . . . . .	228
5. Differences in Shale Wells . . . . .	229
6. Well Integrity Issues Specific to Hydraulically Fractured Wells . . . . .	230
7. Summary: Key Questions for Regulating Well Integrity . . . . .	231
8. Conclusion . . . . .	234
9. Summary of Key API Shale-Related Guidelines. . . . .	234

**The Environmental Challenges of Shale Gas Extraction**

David M. ONG . . . . .	237
------------------------	-----

1. Introduction: The Challenge of New Technologies for Environmental Law . . . . .	237
2. US State (as Opposed to Federal) Regulation of the Shale Industry . . . . .	241
3. Shale Industry Regulation in Canada: Implications of the Quebec Moratorium . . . . .	246
4. EU Commission Recommendations on Minimum Principles for the Shale Industry . . . . .	248
5. France: Prohibiting the Shale Gas Industry . . . . .	252
6. Poland: Facilitating the Shale Gas Industry at the Expense of Environmental Concerns? . . . . .	254
7. The UK Approach to the Shale Industry: Cautious but Permissive. . . . .	256
8. Conclusions . . . . .	259

**An Overview of Shale Gas Law and Policy**

Slawomir RASZEWSKI . . . . .	261
------------------------------	-----

1. European Position on Shale Gas Exploration and Production . . . . .	262
2. Country Developments: Poland . . . . .	265
3. Country Developments: Romania . . . . .	270
4. Country Developments: Bulgaria . . . . .	273
5. Country Developments: France. . . . .	276
6. Conclusion . . . . .	280

**Shale Gas Law and Regulation in the United Kingdom**

John PATERSON and Tina HUNTER..... 281

- 1. Introduction ..... 281
- 2. Overview of the UK Regulatory Framework for Petroleum Activities... 285
- 3. Health, Safety and Well Integrity ..... 288
- 4. Planning Permission ..... 292
- 5. Environmental Permissioning ..... 296
- 6. Hydraulic Fracturing Permissioning Regime (Drill and Fracture)..... 301
- 7. Conclusion ..... 302

**Shale Gas Law and Regulation in North America**

Allan INGELSON..... 305

- 1. Introduction ..... 305
- 2. Regulation of Shale Gas Development in North America ..... 307
- 3. Hydraulic Fracturing and the Environment..... 313
- 4. Conclusion ..... 338

**Shale Gas Law and Policy in Australia**

Tina HUNTER..... 341

- 1. Introduction ..... 341
- 2. Shale Gas Resources in Australia ..... 342
- 3. Regulation of Shale Gas Activities ..... 345
- 4. Conclusion ..... 365

PART V.

THE FUTURE OF SHALE GAS IN THE UNITED KINGDOM

**Shale Gas and the Energy Policy ‘Trilemma’**

Cristelle MAURIN and Vlado VIVODA ..... 369

- 1. Introduction ..... 369
- 2. Availability ..... 371
- 3. Affordability ..... 373
- 4. Sustainability ..... 374
- 5. Policy Implications ..... 377
- 6. Conclusion ..... 380

**Future Trends in Shale Gas Law and Policy in the United Kingdom**

Tina HUNTER, Emre ÜSENMEZ and John PATERSON..... 383

1. Introduction..... 383

2. Moratoria ..... 385

3. Devolution ..... 386

4. Review and Regulatory Reform..... 388

5. Fiscal Incentives..... 391

6. Conclusion ..... 394

*Index*..... 395

# LIST OF TABLES AND FIGURES

## TABLES

Table 2.1.	Typical constituents of hydraulic stimulation fluid. . . . .	29
Table 4.1.	Shale and traditional oil: key differences of investment cycles . . .	91
Table 5.1.	Speculative non-US shale gas impact, 2015–2035, tcf. . . . .	121
Table 10.1.	List of regulatory rules applied to the control of hydraulic fracturing with examples drawn from across multiple jurisdictions . . . . .	197

## FIGURES

Figure 1.1.	Phases of conventional petroleum extraction. . . . .	8
Figure 1.2.	Stages of development in the extraction of conventional petroleum. . .	9
Figure 2.1.	Global distribution of significant shale gas resources. . . . .	15
Figure 2.2.	A simplified grain size chart for clastic sediment (e.g. sand, silt), and their respective sedimentary rocks (e.g. sandstone, siltstone). . .	16
Figure 2.3.	Clastic rocks in thin section, at magnifications of 40x and 200x. . . .	17
Figure 2.4.	Conventional and unconventional hydrocarbon reservoirs. . . . .	19
Figure 2.5.	The various types of clastic reservoir, which can contain oil and gas. . . . .	19
Figure 2.6.	The great range of invaluable petrochemical products that can be derived from Ethane, a minor constituent of shale gas . . . . .	21
Figure 2.7.	The casing structure and the geometry of a hydraulic stimulation (fracking) process . . . . .	22
Figure 2.8.	Typical four-layer concentric casing and grout completion. . . . .	24
Figure 2.9.	Microseismic clouds for a sequence of stimulations . . . . .	27
Figure 2.10.	Gel fracking versus slickwater fracking. . . . .	28
Figure 2.11.	Postulated routes to environmental impact from the shale gas hydraulic fracturing operations . . . . .	31
Figure 2.12.	Vertical extent of hydraulically stimulated fractures with respect to aquifers and to the casing position (inset) . . . . .	32
Figure 2.13.	Plots of fracture height against volume of fluid injected during the hydraulic stimulation and against depth . . . . .	34
Figure 2.14.	Potential issues with regard to potable water supplies . . . . .	35
Figure 4.1.	Two types of technological advance and the US shale gas revolution . . . . .	67

Figure 4.2.	Top ten states with highest technically recoverable shale gas resources (according to EIA DOE) . . . . .	72
Figure 4.3.	Conventional gas <i>reserves</i> versus shale gas <i>resources</i> . . . . .	72
Figure 4.4.	‘Volume of shale gas resources, potentially, is sufficient to radically change gas market. If you can extract them...’ ( <i>Financial Times</i> ) . . . . .	73
Figure 4.5.	Role of US state financing in stimulating the ‘US shale gas revolution’ (based on MIT study) . . . . .	75
Figure 4.6.	US DOE natural gas research funding history (based on MIT study) . . . . .	75
Figure 4.7.	Role of US state financing in stimulating coalbed methane US production (based on MIT study) . . . . .	76
Figure 4.8.	EU shale gas: where overestimated expectations came from . . . . .	82
Figure 4.9.	US oil output had been declining since early July, yet still was 260 kbd higher year-on-year in end September . . . . .	94
Figure 4.10.	US new-well production per rig . . . . .	95
Figure 4.11.	Shale production is directly proportional to spending but the ratio varies per play. . . . .	98
Figure 4.12.	US shale is not only about production economics but also ability to raise debt . . . . .	99
Figure 4.13.	Energy companies have been borrowing to fuel growth ... making energy debt the biggest component of the US junk bond market. . . . .	100
Figure 4.14.	Resources versus reserves: geology, technology, economics, politics. . . . .	102
Figure 4.15.	Author’s economic interpretation of Hubbert’s curves and US shale revolution . . . . .	105
Figure 4.16.	‘Learning curves’ and the role of state . . . . .	106
Figure 5.1.	US natural gas marketed production (tcf) . . . . .	112
Figure 5.2.	Natural gas prices (nominal \$/mcf 2014) . . . . .	114
Figure 11.1.	Well barrier schematic . . . . .	222
Figure 11.2.	Well integrity status categorisation . . . . .	223
Figure 11.3.	Sub-sets of well integrity status, classification and impact (not to scale) . . . . .	224
Figure 11.4.	Sub-surface pressures versus depth . . . . .	227
Figure 14.1.	Simplified outline of the permissioning process for permission to drill . . . . .	288
Figure 14.2.	Simple bow tie diagram of prevention and response in shale gas extraction . . . . .	289
Figure 16.1.	Overview of gas basins in Australia . . . . .	344
Figure 16.2.	Government agencies responsible for the regulation of the environmental impact of onshore petroleum activities in Western Australia . . . . .	353

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