EUROPEAN ENERGY LAW REPORT IX

Energy & Law Series

- 1. European Energy Law Report I, Martha M. Roggenkamp and Ulf Hammer (eds.)
- 2. *The Regulation of Power Exchanges in Europe*, Martha M. Roggenkamp and François Boisseleau (eds.)
- 3. European Energy Law Report II, Martha M. Roggenkamp and Ulf Hammer (eds.)
- 4. *European Energy Law Report III*, Ulf Hammer and Martha M. Roggenkamp (eds.)
- 5. *European Energy Law Report IV*, Martha M. Roggenkamp and Ulf Hammer (eds.)
- 6. A Functional Legal Design for Reliable Electricity Supply, Hamilcar Knops
- 7. *European Energy Law Report V*, Martha M. Roggenkamp and Ulf Hammer (eds.)
- 8. European Energy Law Report VI, Martha M. Roggenkamp and Ulf Hammer (eds.)
- 9. Electricity and Gas Supply Network Unbundling in Germany, Great Britain and The Netherlands and the Law of the EU, Eckart Ehlers
- 10. *Legal Design of Carbon Capture and Storage*, Martha M. Roggenkamp and Edwin Woerdman (eds.)
- 11. European Energy Law Report VII, Martha M. Roggenkamp and Ulf Hammer (eds.)
- 12. European Energy Law Report VIII, Martha M. Roggenkamp and Ulf Hammer (eds.)

EUROPEAN ENERGY LAW REPORT IX

Edited by Martha M. Roggenкамр Olivia Woolley



Intersentia Publishing Ltd Trinity House | Cambridge Business Park | Cowley Road Cambridge | CB4 0WZ | United Kingdom Tel.: +44 1223 393 753 | Email: mail@intersentia.co.uk

Distribution for the UK:Distribution for the USA and Canada:Hart Publishing Ltd.International Specialized Book Services16C Worcester Place920 NE 58th Ave Suite 300Oxford OX1 2JWPortland, OR 97213UKUSATel.: +44 1865 51 75 30Tel.: +1 800 944 6190 (toll free)Email: mail@hartpub.co.ukTel.: +1 503 287 3093Email: info@isbs.com

Distribution for Austria: Neuer Wissenschaftlicher Verlag Argentinierstraße 42/6 1040 Wien Austria Tel.: +43 1 535 61 03 24 Email: office@nwv.at Distribution for other countries: Intersentia Publishing nv Groenstraat 31 2640 Mortsel Belgium Tel.: +32 3 680 15 50 Email: mail@intersentia.be

The Energy & Law Series

The Energy & Law Series is published in parallel with the Dutch series Energie & Recht. The editors are:

Prof. Dr. Martha M. Roggenkamp, Groningen Centre of Energy Law, University of Groningen, the Netherlands (editor in chief)

Prof. Dr. Kurt Deketelaere, University of Leuven and Honorary Professor at University of Dundee, Secretary-General of the League of European Research Universities

Dr. Tom Vanden Borre, Legal and Regulatory Director for Nuon Belgium nv and affiliated senior researcher at the Institute for Environmental and Energy Law (IMER) of the KU Leuven, Belgium

European Energy Law Report IX Edited by Martha M. Roggenkamp and Olivia Woolley

© 2012 Intersentia Cambridge – Antwerp – Portland www.intersentia.com | www.intersentia.co.uk

ISBN 978-1-78068-079-8 NUR 828

British Library Cataloguing in Publication Data. A catalogue record for this book is available from the British Library.

No part of this book may be reproduced in any form, by print, photoprint, microfilm or any other means, without written permission from the publisher.

CONTENTS

List	of Abbreviations	xiii
List	of Authors and Editors	cvii
Fore	eword	xix
Intr	roduction	xxi
PAI	RT I	
TH	E ROLE OF CASE LAW IN LIBERALISING EU ENERGY MARKETS	
Cha	apter I	
EU	Case Law on the Second Energy Package: a Review	
	Berend Jan Drijber	. 3
1.	Introduction	. 3
2.	Institutional matters	.4
	2.1. Legislative Framework	.4
	2.2. Commission/Sweden	. 6
	2.3. Commission/Belgium I	. 6
	2.4. Commission/Belgium II	. 7
	2.5. Further case-law	. 8
3.	Access to networks	. 9
	3.1. Background	. 9
	3.2. Commission / Slovakia	10
	3.3. Sabatauskas	11
4.	Price intervention	13
	4.1. Background	13
	4.2. Federutility	13
	4.3. ENEL	16
5.	Conclusions and outlook	20
Cha	apter II	
Stat	te Regulation of Supply Prices for Electricity and Gas	
The	e Federutility Case	
	Thomas Deruytter and Frederik Vandendriessche	23
1.	Introduction	23
2.	The "components" of the price of electricity and natural gas	25

3.	PSO relating to natural gas and electricity and State regulation	
	of supply prices	27
	3.1. Introduction	27
	3.2. Price regulation as a mandatory PSO?	29
	3.2.1. Universal service	29
	3.2.2. Consumer protection	30
	3.3. Price regulation as a non-mandatory PSO	34
4.	The Federutility case	35
	4.1. Background	35
	4.2. The price-intervention must be justified in the general	
	economic interest	37
	4.3. Compliance with the principle of proportionality	38
	4.4. The price regulation must be clearly defined, transparent,	
	verifiable, non-discriminatory, and guarantee equal access for	
	EU gas companies to consumers	41
	4.5. Notification to the EC	42
5.	Epilogue	43
Cha Car Cha	ipter III i Foreign Investors in Liberalised Electricity Markets Successfully allenge Price Caps under International Law?	
Cas	Anatole Boure	45
		-15
1	Introduction	45
2	Government interference with electricity prices in AES v. Hungary:	15
2.	the facts	47
3	Claims, defense and findings of the Tribunal	50
	3.1 The fair and equitable treatment standard	50
	3.2. Non-discrimination and the prohibition of unreasonable measures	52
	3.3. Constant protection and security	55
	3.4. Expropriation	55
4.	Critical reflections on AES v. Hungary	56
	4.1. The protection of investors' expectations that markets will be	
	organised on a liberalised basis	56
	4.2. The delicate balance between investors' and consumers' rights	57
	4.3. Interference with the right to sell electricity at free market	
	prices as "partial expropriation"	60
5.	Conclusion	62

PART II

ENERGY AND CARBON MARKETS – TRANSPARENCY AND DESIGN CHALLENGES

Chapter IV

Regi	ulation on Wholesale Energy Market Integrity and Transparency	
	Odd-Harald B. Wasenden and Halvor Aurmo	67
1.	Introduction	67
2.	The REMIT range of application	69
3.	The definition of inside information	71
	3.1. General	71
	3.2. Information	71
	3.3. Of a precise nature	74
	3.4. Not made public	74
	3.5. Significantly affect the prices	75
	3.6. Summary of definition of inside information	75
4.	Disclosure obligations	76
	4.1. Material and personal scope	76
	4.2. How and when to disclose information	78
5.	Prohibition of insider trading	81
6.	Prohibition of market manipulation	83
	6.1. General	83
	6.2. The definition of market manipulation	85
	6.2.1. Overview	85
	6.2.2. Transactions or orders to trade	86
	6.2.3. False or misleading signals as to the supply, demand or price	87
	6.2.4. Secures or attempt to secure the price at an artificial level	88
	6.2.5. Transactions involving fictitious devices/deception	90
	6.2.6. Dissemination of false or misleading information	90
7.	Procedural and institutional matters	91
	7.1. Market monitoring	91
	7.2. Data collection	92
	7.3. Registration of market participants	95
	7.4. Investigation and enforcement	95
8.	Conclusion	96

Contents

Cha	apter V	
Tra	nsparency in the Upstream Gas Market	
	Jeppe Danø	99
1.	Introduction	99
2.	Upstream regimes in the North Sea	101
3.	Energy market integration and transparency	104
4.	The Danish Case	105
	4.1 Development of the Danish gas market	105
	4.2 DERA report	106
5.	The European context	107
6.	Challenges in the light of REMIT	109
7.	Conclusion	110
Cha	apter VI	
End	I-User Emissions Trading: What, Why, How and When?	
	Suryapratim Roy and Edwin WOERDMAN	111
1	Introduction	111
1. 2	What is and user emissions trading?	112
2.	what is end-user emissions trading:	113
	2.1. Personal carbon trading	113
	2.2. Other proposed schemes	114
2	2.5. Towards an end-user emissions trading scheme	115
3.	why do we need an end-user emissions trading scheme:	11/
	3.1. Rationalising sustainable engagement	118
	3.2. Regulating onset markets	120
	3.3. Capping uncapped sectors	122
	3.4. Energy efficiency through the backdoor?	125
4.	How is such a scheme to be designed?	12/
	4.1. Allocation and distributional equity	12/
	4.2. The issue of integration	130
	4.3. Choosing an enforcement mechanism	130
	4.4. Legal framework	132
	4.4.1. Defining different instruments	132
_	4.4.2. Voluntary markets and ex-post enforcement	134
5.	When could we see such a scheme being translated to policy?	135
	5.1. Political acceptability	135
	5.2. Public acceptability	137
6.	Conclusion	139

PART III

DEVELOPING EU ENERGY INFRASTRUCTURE – NEW GRIDS AND REGULATORY INSTRUMENTS

Chapter VII

Dev	eloping a Competitive European Energy Market:
The	infrastructure challenge
	Sylvia Elisabeth Beyer 143
1.	Introduction 143
2.	Background – Energy infrastructure priorities for 2020 and beyond 146
3.	The priorities for energy infrastructure development 149
	3.1. Remaining bottlenecks condition future priorities 149
	3.2. The obstacles to investment 155
4.	The proposal on guidelines for trans-European energy infrastructure. 157
	4.1. Legal instrument 157
	4.2. Identifying projects of common interest 159
	4.3. The permit granting regime 161
	4.4. Enabling cross-border investment 164
	4.5. Financial support under the future EU budget 2014–2020 166
5.	Conclusion 167
Cha	pter VIII
Ove	rcoming Legal Challenges for Offshore Electricity Grid Development:
a Ca	se Study of the Cobra and Kriegers Flak Projects
	Olivia Woolley 169
1.	Introduction

1.	Introduction	109
2.	Connecting offshore wind farms	174
3.	Support schemes for offshore wind energy	178
4.	Recovering the costs of grid development	182
5.	Priority grid access for renewable energy	187
6.	Obtaining authorisation for offshore development	191
7.	Conclusion: from modular developments to regional offshore grids	193

PART IV SECURING ENERGY SUPPLY - RESOURCE AND TREATY DEVELOPMENTS

Chapter IX

Cha	pter IX	
The	Introduction of Unconventional Gas in Europe: Opportunities and	
Cha	llenges	
	Anne-Sophie Corbeau	199
1.	Introducing unconventional gas.	199
2.	Abundant resources	200
3.	Current unconventional gas production	202
4.	Market impact of the US unconventional gas revolution	203
5.	International evolution	205
6.	What are the challenges?	206
	6.1. Introduction	206
	6.2. Geological factors	207
	6.3. Costs	208
	6.4. Company factors	209
	6.5. National and regulatory issues	209
7.	A recent trend: an increased opposition to unconventional gas	211
8.	Conclusion	212
Cha	pter X	
The	Draft Convention on Ensuring International Energy Security –	
A Sı	accessor of the Energy Charter Treaty?	
	Sergey Seliverstov, Martha Roggenkamp and Graham Coop	213
1.	Introduction	213
2.	The Energy Charter Treaty	214
	2.1. Background	214
	2.2. Trade and investment	215
	2.3. Dispute settlement mechanisms	216
3.	The Draft Convention on Energy Security	217
	3.1. Introduction	217
	3.2. Motives and justifications for the Draft Convention	218
	3.2.1. The opposition	218
	3.2.2. Economic developments	219
	3.2.3. EU developments	219

	3.3. Basic provisions of the Draft Convention 223
	3.3.1. Draft Convention versus Energy Charter Treaty 223
	3.3.2. Goals and definitions 223
	3.3.3. Investments, transit and trade 224
	3.3.4. Competition and state monopolies 227
	3.3.5. Gaps and missing elements. 227
4.	European Union views
	4.1. Regulating security of supply 228
	4.2. Platform for negotiations
	4.3. Some specific comments on certain proposed provisions 230
	4.4. Final observations
5.	Conclusions

Annex

Draft Convention on Ensuring Internation	al Energy Security 23	33
--	-----------------------	----

LIST OF ABBREVIATIONS

ACER	Agency for the Cooperation of Energy Regulators
ATEL	Aare-Tessin Ltd. (electricity company based in Switzerland)
AEEG	Autorità per l'energia elettrica e il gas (Italian regulator)
BANANA	Build Absolutely Nothing Anywhere Near Anything (or
	Anyone)
bcm	billion cubic meters
BEMIP	Baltic Energy Market Interconnection Plan
BBL	Balgzand Bacton Line
CBM	CoalBed Methane
CDM	Clean Development Mechanism
CEER	Council of European Energy Regulators
CEF	Connecting Europe Facility
CNOOC	China National Offshore Oil Corporation
CRAGs	Carbon Rationing Action Groups
CREG	Commission for Electricity and Gas Regulation (Belgian regu-
	lator)
CERs	Certified emissions reduction
DEFRA	Department for Environment, Food and Rural Affairs
DERA	Danish Energy Regulatory Authority
EAC	Environmental Audit Committee
EC	European Community
ECJ	European Court of Justice
ECT	Energy Charter Treaty
EEA	Economic European Area
EEPR	European Energy Programme for Recovery
EET	End-user Emissions Trading
EEZ	Exclusive Economic Zone
EFTA	European Free Trade Association
EIA	Energy Information Administration
EMS	European emissions trading scheme
ENEL	Ente Nazionale per l'Energia Elettrica
E&P	Exploration and Production
ENTSO	European Network of Transmission System Operators
EPA	Environmental Protection Agency
ERGEG	European Regulators' Group for Electricity and Gas
ERUs	Emission Reduction Units

List of Abbreviations

EU ETS	The European Union Emissions Trading Scheme
EURELECTRIC	Union of the Electricity Industry (association for the European
	energy sector)
FID	Final Investment Decision
FSU	Former Soviet Union
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GFZ	German Research Centre for Geosciences
GGP	Guidelines for Good Practice
GSGI	Global Shale Gas Initiative
GTS	Gas Transport Services (Dutch TSO)
HH	Henry Hub
ICSID	International Centre for the Settlement of Investment Disputes
IEA	International Energy Agency
IOCs	International Oil Companies
IPPR	Institute for Public Policy Research
ISO	Independent System Operator
ITO	Independent Transmission System Operator
LGTT	Loan Guarantee Instrument for TEN-T projects
LNG	Liquefied Natural Gas
MAD	Market Abuse Directive
MiFID	EU Markets in Financial Instruments Directive
MBtu	One thousand British Thermal Units
NIMBY	Not in my backyard
NOCs	National Oil Companies
NRAs	National regulatory authorities
NSCOGI	North Sea Countries Offshore Grid Initiative
PCI	Projects of Common Interest
PCT	Personal Carbon Trading
PEEREA	Energy Charter Protocol on Energy Efficiency and Related
	Environmental Aspects
PIP	Priority Interconnection Plan
PPA	Power Purchase Agreements
PPS	Public-Private-Partnership
PSO	Public Service Obligations
RAB	Regulated Asset Base
REIO	Regional Economic Integration Organizations
REMIT	Regulation of Energy Market Integrity and Transparency
RSFF	Risk-Sharing Finance Facility
SER2	Second Strategic Energy Review
SGEI	Services of General Economic Interest
tcm	trillion cubic meters
TEN	Trans-European Networks

TEN-E	Trans-European Energy Networks
TEQ	Tradable Energy Quota
TFEU	Treaty on the Functioning of the European Union
TSO	Transmission System Operators
TTE	Transport, Telecoms and Energy Council
TYNDP	Ten-Year Network Development Plan
UK	United Kingdom
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNICTRAL	United Nations Commission on International Trade Law
WACC	Weighted Average Cost of Capital
WTO	World Trade Organization

LIST OF AUTHORS AND EDITORS

Halvor Aurmo

Senior Associate at Wiersholm, Mellbye & Bech Law Firm, Oslo, Norway. E-mail: haau@wiersholm.no

Sylvia Elisabeth Beyer

European Commission DG Energy, Unit B1: Internal Market: Regional initiatives & energy networks, Brussels, Belgium. E-mail: Sylvia-Elisabeth.Beyer@ec.europa.eu

Anatole Boute

PhD, Lecturer School of Law, University of Aberdeen, Scotland. E-mail: a.boute@ abdn.ac.uk

Graham Coop

General Counsel of the Energy Charter Secretariat until 2011 and currently independent international energy and arbitration lawyer, Brussels, Belgium. E-mail: grahamhcoop@gmail.com

Anne-Sophie Corbeau

Senior gas expert, International Energy Agency, Paris, France. E-mail: Anne-Sophie.Corbeau@iea.org

Jeppe Danø

Director, Danish Energy Regulatory Authority, Copenhagen, Denmark. E-mail: JD@energitilsynet.dk

Thomas Deruytter

Trainee Stibbe law firm and affiliated researcher at the Centre for Environmental and Energy Law of the University of Ghent, Belgium. E-mail: Thomas.Deruytter@ Stibbe.com

Berend Jan Drijber

Partner of Pels Rijcken & Drooglever Fortuijn, The Hague, the Netherlands. E-mail: bj.drijber@pelsrijcken.nl

Martha Roggenkamp

PhD, Professor of Energy Law, Director of the Groningen Centre of Energy Law, University of Groningen, Groningen, The Netherland. E-mail: m.m.roggenkamp@rug.nl

Suryapratim Roy

PhD Researcher, Groningen Centre of Energy Law, Department of Law and Economics, University of Groningen, Groningen, the Netherlands. E-mail: surya. roy@rug.nl

Sergey Seliverstov

PhD, Partner of Sokolov, Maslov and Partners, Associate Professor at MGIMO-University, Moscow, Russia. E-mail: sergey.seliverstov@smplawyers.ru

Frederik Vandendriessche

PhD, Partner of Stibbe Law firm and affiliated professor at the Universities of Ghent and Antwerp, Belgium. E-mail: Frederik.Vandendriessche@Stibbe.com

Odd Harald Wasenden

PhD, Partner of Wiersholm, Mellbye& Bech Law Firm, Oslo, Norway. E-mail: ohw@wiersholm.no

Edwin Woerdman

PhD, Associate Professor of Law and Economics, Co-Director of the Groningen Centre of Energy Law, University of Groningen, Groningen, the Netherlands. E-mail: e.woerdman@rug.nl

Olivia Woolley

PhD, Post-doctoral Legal Researcher of the Groningen Centre of Energy Law, University of Groningen, Groningen, the Netherlands. E-mail: o.a.woolley@ rug.nl

FOREWORD

The editors are very pleased to present the *European Energy Law Report IX*. The *European Energy Law Report* is an initiative of the organisers of the European Energy Law Seminar which has been held on an annual basis since 1989 at Noordwijk aan Zee in the Netherlands. The aim of this seminar is to present an overview of the most important legal developments in the field of International, EU and national energy and climate law. Whereas the first seminars concentrated on the developments at EC level that followed the establishment of an Internal Energy Market, the focus has now gradually switched to the developments at the national level following the implementation of the EU Directives with regard to the internal electricity and gas markets. This approach can also be found in these reports.

Similarly to the previous editions of *European Energy Law Report*, all of which are based on papers presented at the preceding European Energy Law Seminar, this Report is the result of the papers presented at the seminar which was held on 11 and 12 April 2011. The current report contains four sections representing the following topics: "The Role of Case law in Liberalising EU Energy markets", "Energy and Carbon Markets – Transparency and Design Challenges", "Developing EU Energy Infrastructure – New Grids and Regulatory Instruments" and "Securing Energy Supply – Resource and Treaty Developments".

We are grateful to the speakers at the seminar for their support and co-operation in rewriting their papers for the purpose of this book. We also would like to thank the authors and co-authors who did not speak at the seminar, but who were nevertheless willing to participate in this project so that we are able to provide you with a "complete" picture of all topics discussed. Finally, we would like to acknowledge the help and support of the publisher in publishing this book. We are confident that these reports will be part of an excellent long-term tradition.

Martha Roggenkamp and Olivia Woolley Groningen, 8 March 2012

INTRODUCTION

Martha Roggenkamp and Olivia Woolley

The European Energy Law Report IX presents an overview of the most important developments in international, EU, and national energy and climate change law as discussed at the 24th European Energy Law Seminar, which was held on 11 and 12 April 2011 in Noordwijk aan Zee in the Netherlands. This book is divided into four parts, each of which covers a different development in the energy sector. The order and content of these sections do not necessarily mirror those of the papers as they were presented at the seminar.

THE ROLE OF CASE LAW IN LIBERALISING ENERGY MARKETS

Since the 1988 EU working document "Toward an Internal Energy Market",¹ it is clear that the establishment of an internal market relies on a combination of *ex ante* and *ex post* approaches. Whereas *ex ante* provisions are a part of secondary EU law such as, for example, the Internal Energy Market Directives and Regulations, *ex post* developments are based on primary EU law, i.e. the Treaty on the Functioning of the European Union, and thus driven by judicial interpretations of relevant Treaty provisions on free movement and competition. The importance of the latter for giving definition to the internal market and clarifying relationships between market actors was illustrated clearly in the Energy Sector Inquiry of 2007.² This European Energy Law Report makes clear that the number and impact of cases applying to the energy sector that are coming before the European Court of Justice as well as national courts and arbitral tribunals is increasing. Market liberalisation is indeed approaching through the backdoor and via *ex post* regulation.

Berend Jan Drijber presents in Chapter I an overview of EU case law relating to the second energy package, i.e. the Electricity and Gas Market Directives of 2003.

¹ COM (88) 238 final.

² See also Marc van der Woude, "The Application of Antitrust Rules in the Energy Sector: Action Time", in: Martha M. Roggenkamp and Ulf Hammer (eds.), *European Energy Law Report VI*, Intersentia 2009, pp. 3–17 and Marco Slotboom, "Recent Developments of Competition Law and the Impact of the Sector Inquiry", in: Martha M. Roggenkamp and Ulf Hammer (eds), *European Energy Law Report VI*, Intersentia 2010, pp. 97–114.

Introduction

His examination of this case law is grouped into three categories: institutional matters, access to networks and price intervention. The first group of cases involves defects in the implementation of the 2003 Directives. The European Court of Justice (ECJ) held, for example, that the regime providing for a methodology for calculating network tariffs had not been correctly transposed into national law by Sweden. Other case law involves the designation of system operators and the independence of national regulators (i.e. the division of powers between regulators and government). The court ruled in two cases that Belgium had not adequately transposed those provisions of the 2003 Directives concerning these matters into national law. Thereafter, the author discusses two cases relating to third-party access to energy networks and facilities. Such access should be based on the principles of transparency and non-discrimination. Increasingly, however, it seems that reasons may be found for some degree of discrimination. In the case Commission/Slovakia the Court assessed the extent to which third party access may be restricted in order to protect network investments. Another network access case, "Sabatauskas", involved an assessment of the distinction between the wording "access to the system" and "connection to the system". The court upheld that, although the Directive provides parties with a non-discriminatory access right, Member States may decide about the connections and where they should be made. The final part of this chapter deals with price intervention. As a basic rule, the energy liberalisation process entails that suppliers and consumers are free to decide about price and service conditions. However, the Italian Government has been involved in some sort of price control in two cases: the *Federutility* case and the ENEL case. The Court ruled that intervention of this nature could be legitimate in certain circumstances and under certain conditions. The author concludes that more case law can be expected following the implementation of the Third Energy Package as many of its provisions are unclear and touch upon technically complex issues.

The next chapter, written by Thomas Deruytter and Frederik Vandendriessche, discusses in more detail the above-mentioned *Federutility* case (C-265/08). The authors begin by acknowledging that there may be a tension between the need to liberalise markets and the need to maintain "services of general economic interest". The ECJ has ruled in several cases on the extent to which services of general economic interest may provide a reason not to apply the Treaty provisions on free movement and competition. The Electricity and Gas Directives specifically refer to the possibility that Member States may restrict liberalisation if necessary to carry out services of general economic interest, also referred to as public service obligations (PSO).³ In the *Federutility* case the ECJ assessed the extent

³ See also Roberto Malaman and Luca Lo Schiavo, "Improving Continuity of Electricity Supply through Economic Incentive Regulation", in: Martha M. Roggenkamp and Ulf Hammer, *European Energy Law Report III*, Intersentia 2006, pp. 111–125.

to which energy prices (= supply or commodity prices) may be regulated, and whether such regulation can be considered as a PSO. It confirms that such price regulation may be possible, but only under strict conditions and whilst applying strict procedures.

Anatole Boute continues the discussion of price regulation in Chapter III. As with the preceding chapter, the author begins by stating that, in a liberalised energy market, there should be no room for government intervention in energy pricing and that market prices should give the right incentive for investments in electricity production. Government interference in energy prices may also have a negative effect on investments. Governments introducing price caps may create a situation where investors will not be able to get a return on their investments as originally scheduled. The author analyses whether international investment protection standards and treaties like the Energy Charter Treaty may provide investors with a sufficient guarantee of protection in such situations. The case AES versus Hungary is used as an illustration. It involves the modernisation of electricity generators by a foreign investor on the basis of a commitment of the Hungarian government that the investor was guaranteed a reasonable return. Following Hungary's accession to the EU and the consequent process of energy market liberalisation, free market prices were introduced. When these prices were considered to be excessive, the Hungarian government introduced a system of fixed pricing. According to the investors such price regulation amounted to a violation of international investment protection standards. The arbitral tribunal did not follow this argument as the price regulation did not deprive the investors of their investment. The outcome is based on an assessment of international investment laws and their impact on electricity markets that are changing as a result of the liberalisation process.

ENERGY AND CARBON MARKETS – TRANSPARENCY AND DESIGN CHALLENGES

Part II of this book concentrates on the issue of market design and market transparency. The energy sector has been in a process of market liberalisation since the 1990s, and this has led to a reorganisation of the market. This reorganisation has been based on some important general principles such as non-discrimination and transparency. In this regard, the first two chapters in Part II analyse newly introduced rules for increasing market transparency. The reorganisation of the energy market is also closely connected with advancing the climate change goals of the EU, i.e. the need to reduce CO_2 emissions. So far, the obligation to reduce CO_2 emissions has fallen primarily on primary large-scale CO_2 emitters such as fossil fuel power plants. However, it is increasingly acknowledged that consumers can play an important role in achieving these CO_2 emission reduction goals.

Introduction

One of the options to be examined is the introduction of an emissions trading regime for households, although this would give rise to significant market design challenges.

Chapter IV of this book analyses Regulation (EU) 1227/2011 on wholesale energy market integrity and transparency (REMIT). Odd-Harald Wasenden and Halvor Aurmo discuss this new Regulation, which aims at ensuring that consumers and other market parties have confidence in the integrity of the energy market, that wholesale market prices reflect a fair and competitive interplay between supply and demand and that no profits are made as a result of market abuse. More market transparency may lead to more competition in the wholesale market. This chapter presents the main elements of the Regulation. It starts with examining the type of information to which the transparency rules apply and what type of information needs to be disclosed. It then considers the provisions dealing with the prohibition of insider trading and market manipulation. Finally, these transparency and integrity rules will require and lead to more intense market monitoring and data collection. Market participants will publish a wide range of data and information. It could be questioned whether more information in the end will result in more transparency. A surplus of information may even have the opposite effect.

Jeppe Danø presents in Chapter V an analysis of how these transparency rules may affect the upstream gas market. The REMIT regulation also applies to the exploitation of upstream gas pipelines. Important parts of these pipelines are situated offshore and are operated by private parties (e.g. oil companies). The Gas Directives of 1998, 2003 and 2009 provide some rules involving third party access to upstream pipelines, but these rules impose a very limited extent of regulation. How does this relate to the transparency rules in REMIT? This question is analysed on the basis of the Danish experience. The author discusses the history of the Danish gas sector⁴ and how the offshore Danish gas grid is connected to the onshore EU gas network. The regulation of the Danish upstream gas sector is then discussed and compared with the other "national" regimes in the North Sea area.⁵ This analysis shows that the regimes differ greatly, especially as regards unbundling and access. The least unbundled systems are also the least transparent. The Danish government is therefore introducing a pilot which aims at creating more transparency in the Danish upstream gas sector. Whatever

⁴ See also Anita Rønne, "Merging the Danish System Operators for Gas and Electricity into One State-Owned Company", in: Ulf Hammer and Martha M. Roggenkamp, *European Energy Law Report III*, Intersentia, 2006, pp. 217–229 and Anita Rønne, "State Participation in Danish Oil and Gas Licences – A New Role for the State", in Martha M. Roggenkamp and Ulf Hammer (eds), *European Energy Law Report VI*, Intersentia, 2009, pp. 277–286.

⁵ See for an analysis of the reorganisation of the Norwegian upstream gas market Are L. Brautaset, "The New Framework for Gas Transportation in Norway", in Martha M. Roggenkamp and Ulf Hammer (eds), *European Energy Law Report I*, Intersentia 2004, pp. 5–27.

the outcome of this pilot, another question remains to be answered involving the status and qualification of upstream pipelines. Is it still valid to distinguish between upstream pipelines and transmission pipelines or should the EU and/ or national legislators aim at treating these pipeline systems in a similar way and thus also apply one regulatory scheme? Introducing such a scheme would lead to interesting design challenges.

Another type of design challenge is discussed in Chapter VI written by Survapratim Roy and Edwin Woerdman. They discuss the possibilities and drawbacks of introducing a scheme of end-user emissions trading in the EU. The EU has set itself ambitious climate targets, the principal goal being a 20% CO₂ emissions reduction in 2020. Part of this target can be achieved by using more renewable energy sources and more energy efficiency instruments, but a CO₂ emission cap-and-trade mechanism is also central to the EU's strategy for reducing emissions. So far this mechanism has only been introduced at the level of major emitters such as electricity generators and refineries. These major emitters are awarded annually a specific amount of credits which reflect specific quantities of CO₂. If they emit more CO₂ than permitted levels, these emitters need to buy credits on the market and, vice versa, if they emit less then they can sell credits on the open market. This chapter discusses the possibility of introducing such a cap-and-trade regime in another part of the energy chain; at the level of household consumers. Household consumers are often not aware of the extent to which they emit CO₂. Introducing a cap-and-trade and emissions trading scheme would create awareness, transparency and the direct involvement of end-users. Introducing such a scheme at the end-user level would, however, mean a redesign of the end-user market and require corresponding changes to the EU's emissions trading scheme. The authors describe the challenges of bringing consumers within emissions trading systems by answering the following questions: What would such a trading scheme entail? Why should end-user emissions trading be introduced? How should we design such a scheme? And when (if at all) would it be feasible to implement end-user emissions trading given the need for political and public acceptance if this is to be established?

DEVELOPING EU ENERGY INFRASTRUCTURE – NEW GRIDS AND REGULATORY INSTRUMENTS

It is essential for the long-term security of energy supply that networks of cables and pipelines connecting producers with consumers are capable of carrying sufficient gas and electricity to meet demand for these commodities. This, in itself, makes it necessary that grid infrastructure is continuously maintained and upgraded, and where required, that new pipelines and cables are constructed. In addition, the transition to a low-carbon energy supply will involve both the Introduction

extensive development of new infrastructure to transmit electricity generated from renewable sources whose locations may be far distant from existing transmission systems, and the modification of networks both to accommodate small-scale renewable generators and to allow for enhanced demand-side management of electricity consumption. The chapters in Part III examine some of the key challenges currently facing the European Union and its Member States in connection with providing adequate energy infrastructures and the possible role of law in addressing them.

In Chapter VII, Sylvia Elisabeth Beyer provides a detailed account of the policy and legal responses of European institutions to serious concerns over the adequacy of the EU's energy infrastructure. The chapter discusses the review of European policy on energy infrastructure (as embodied in the framework for Trans-European Energy Networks) during the period 2007-2010, and goes on to outline the priorities for energy infrastructure development identified in this review, identified as well as possible obstacles to obtaining the investment necessary to achieve these priorities. These include complex permit-granting procedures, public opposition to energy development, national regulatory regimes that are not designed to support transboundary infrastructure projects and the difficulty with raising finances during an economic crisis. The author examines the European Commission's proposals for overcoming these obstacles (as set out in its draft regulation on "Guidelines for trans-European energy infrastructure" of 2011) by establishing mechanisms for identifying projects of common interest for Member States, by requiring national authorities to establish regulatory practices that better support decision-making on transboundary infrastructure projects, and by making access available to European funding for a limited number of projects (whilst making it clear that market funding should remain the norm). The proposed regulation has only recently commenced its progress through the European legislative process, and it remains to be seen whether, if adopted, it will address the barriers to renewing Europe's energy infrastructure that the chapter identifies.

In Chapter VIII, Olivia Woolley explores legal difficulties raised by the need to construct new infrastructure to accommodate energy from offshore renewable resources. An explosion of offshore wind energy generation in the North and Baltic Seas is anticipated during this and the following decade as part of national strategies for meeting European commitments to increase renewable energy generation and reduce carbon emissions as well as to enhance national and European energy security.⁶ The desirability of interstate collaboration both on exploiting offshore

⁶ See for an overview of the earlier legal developments in North Sea wind energy regulation part II of European Energy Law Report I, eds. Martha M. Roggenkamp and Ulf Hammer, Intersentia, 2004, pp. 91–173. This part presents an overview of the offshore legal developments in the Netherlands, Belgium, the United Kingdom, Denmark and Germany.

wind energy resources and constructing offshore infrastructure in connection with this has been widely canvassed by commentators and politicians alike, and the chapter focuses on legal issues raised by two of the early proposals for offshore infrastructure projects that would combine new electricity interconnectors between states with connections for offshore wind farms: the COBRA cable between Denmark and the Netherlands with the possibility of attaching German offshore wind farms that may be constructed to it as it passes through waters subject to Germany's jurisdiction; and the Kriegers Flak project between Germany and Denmark combining interconnections between them with three wind farms. The chapter outlines the several problems that have arisen for these projects as a result of differing national regulations on matters including wind farm connection to onshore transmission systems and financial support for renewable energy. It also examines possible legal responses to these difficulties with a particular focus on cooperation between states and the agreement of treaties by them that lay down specific legal regimes for individual projects or for governing regional grid development.7

SECURING ENERGY SUPPLY – RESOURCE AND TREATY DEVELOPMENTS

The chapters in Part IV explore two aspects of a perennial question in European energy policy and law: how can sufficient energy supplies for the European Union be secured without undermining the pursuit of other European objectives (and particularly that of market liberalisation)? The first is the difficulty of balancing the need to ensure energy security with advancing the EU's environmental goals including a European-wide improvement of water quality and the progressive reduction of carbon emissions. The second is the geopolitical anxieties raised by heavy reliance on gas imports from Russia, and the role of the Energy Charter Treaty in relieving them by creating a stable legal framework for EU/Russian energy relations.

In Chapter IX, Anne-Sophie Corbeau considers the significant global interest during the last decade in the exploitation of unconventional gases, and, in particular, the exponential growth of the shale gas sector in the U.S. She explores the enormous impact that increased production of unconventional gases has had on the international gas market. There is currently no exploitation of shale gas

⁷ The establishment of arrangements for governing the development and operation of upstream gas infrastructure has been discussed in earlier European Energy Law Reports. See, for example, H. Musaeus, "Introduction of the Framework Agreement entered into between Norway and the United Kingdom concerning cross-boundary co-operation", and Peter D. Carter, "The New UK Infrastructure Code of Practice", in: Martha M. Roggenkamp and Ulf Hammer, *European Energy Law Report III*, Intersentia 2006, pp. 233–252.

Introduction

in the EU (although some exploratory wells have been authorised), but it is of great strategic interest because the EU's energy security could be substantially enhanced (including by a corresponding diminution in reliance on Russian supplies) if projections of gas reserves prove well-founded. However, proposals for extracting shale gas and other unconventional gases are highly controversial because of concerns that "fracking", the technique by which access to these resources is gained, could have significantly negative effects on the environment and public health including by contaminating water supplies. The chapter explains what the fracking process involves and examines the range of possible barriers for countries (including Member States of the European Union) with an interest in exploiting unconventional gases. Last but not least, it provides an overview of why the fracking process and the prospect of unconventional gas drilling in general have generated strong public concerns, and, in some cases, outright opposition.

In Chapter X, the authors examine a significant development in energy relations between the European Union and Russia. The Energy Charter Treaty (ECT) is specifically intended to facilitate exploitation of the vast energy resources of the former Soviet Union by providing a stable legal framework for investment. Russia, having been involved with drafting the treaty, has subsequently failed to ratify it for a range of reasons,8 but without openly rejecting it. However, it has now gone beyond this by presenting a draft of a new convention on "Ensuring International Energy Security", the key provisions of which are discussed in this chapter. The proposed Convention is unsurprisingly weighted toward Russian interests, although the authors note that, curiously, it does not capture some of Russia's key priorities in energy-related negotiations with the European Union during the past twenty years. Developing a stronger legal framework for energy relations with Russia than currently exists would clearly be of interest for the EU, but the chapter identifies a number of respects in which the proposed treaty is likely to be unacceptable to it. In any event, it is questionable, in view of the significant overlap between the subject matter of the proposed treaty and the ECT, whether either Russia's or the EU's interests would be best served by starting afresh rather than seeking to negotiate changes to the ECT within the context of an ongoing modernisation of the framework for investment and the processes for interaction between state parties to the treaty that this establishes. The authors conclude with the suggestion that the latter route would provide the most viable approach to ongoing EU and Russian negotiations on energy, although it is by no means clear given its presentation of the draft treaty that Russia will be willing to work within the ECT framework.

⁸ One of the reasons concern the provision on transit in the ECT. See also Kaj Hobér, "Russian Energy Policy and Dispute Settlement" and Jan Gerrit Westerhof, "The Transit Conflict between Russia and Ukraine from a Legal Perspective", in: Martha M. Roggenkamp and Ulf Hammer (eds), *European Energy Law Report VII*, Intersentia, 2010, pp. 235–275.